U.S. Department of Homeland Security

United States Coast Guard

AUXILIARY OPERATIONS PROCESS GUIDE: VOLUME II: AIR OPERATIONS

16798.32A
August 2023

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U.S. Department of Homeland Security
United States Coast Guard

Commandant
United States Coast Guard

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AOPG 16798.32A
01 AUG 2023

AUXILIARY OPERATIONS PROCESS GUIDE: VOLUME II – AIR OPERATIONS – AOPG 16798.32A

Subj: AUXILIARY OPERATIONS POLICY MANUAL, VOLUME II – AIR OPERATIONS

Ref:
a. *Auxiliary Operations Process Guide: Volume I,* AOPG 16798.31 *(series)*
b. *Coast Guard Air Operations Manual,* COMDTINST M3710.1 *(series)*
c. *Auxiliary Training Handbook – Aviation.* 16794.53 *(series)*
d. *Auxiliary Manual,* COMDTINST M16790.1 *(series)*
e. *Risk Management (RM)*, COMDTINST 3500.3 (series)
f. *Safety and Environmental Health Manual,* COMDTINST M5100.47 (series)
g. *Ordnance Manual,* COMDTINST M8000.2 (series)
h. *Communications Manual,* COMDTINST M2000.*3 (series)*
i. *Coast Guard Aviation Life Support Equipment (ALSE) Manual,* COMDTINST M13520.1 (series)
j. *Aviation Life Support Equipment Systems Process Guide*, CGTO PG-85-00-310-A
k. *Rescue and Survival Systems Manual,* COMDTINST M10470.10 (series)
l. *Coast Guard Aviation Medicine Manual,* COMDTINST M6410.3 (series)
m. *Mishap Response and Reporting Tactics, Techniques, and Procedures (TTP,* CGTTP 1-03.2 (series)
n. *Administrative Investigations Manual,* COMDTINST M5830.1(series)

1. PURPOSE.
   a. This Process Guide prescribes overarching procedures for all Auxiliary air operations in conjunction with references (a) through (d). It applies to all members of Coast Guard Forces who are involved with Coast Guard Auxiliary Aviation Operations, including Auxiliarists, and military and civilian personnel.
   b. Every effort has been made to make this Process Guide useful and applicable to all aspects of Auxiliary air operations. In situations where this Process Guide does not address a specific organizational construct or relationship and the application of a particular provision is unclear, users should seek clarification from their reporting senior and advise the Office of Auxiliary and Boating Safety, Commandant (CG-BSX), through their unit's chain of command to clarify the provision in question.

2. ACTION. All Coast Guard unit commanders, commanding officers, officers-in-charge, deputy/assistant commandants, chief of headquarter directorates must comply with the policies contained.

3. AUTHORIZED RELEASE. Internet Release is authorized.

4. DIRECTIVES AFFECTED. The following directives are hereby cancelled;
   a. Annex 1, 2 and 3 in Auxiliary Operations Policy Manual, COMDTINST M16798.3D (series)
   b. Auxiliary Aviation Program, COMDTINST 16798.1

5. DISCUSSON. This Process Guide provides doctrinal guidance to Auxiliary air, including Coast Guard Air Stations. This Process Guide shall be used as a guide for Auxiliary air operational missions, planning and requirements. No provision in this Process Guide relieves personnel of their duty to use sound judgment or to take such emergency action as the situation may demand. When the need arises, the Office of Auxiliary and Boating Safety, Commandant (CG-BSX) with technical concurrence from the Office of Aviation Forces, Commandant (CG-711), may issue special instructions or waivers.

6. DISCLAIMER. This guidance is not a substitute for applicable legal requirements, nor is it itself a rule. It is intended to provide administrative guidance for Coast Guard personnel and is not intended nor does it impose legally binding requirements on any party outside the Coast Guard.

7. MAJOR CHANGES.
   a. This document updates the Auxiliary Operations Policy Manual, COMDTINST M16798.3E Annex 1, 2 and 3.
   b. Additionally, it consolidates information contained in COMDTINST 16798.1, Auxiliary Aviation Program, BSX Policy Letters, and other directives relative to Air Operations.

8. ENVIRONMENTAL ASPECT AND IMPACT CONSIDERATIONS. The Office of Auxiliary and Boating Safety, Commandant (CG-BSX) reviewed this Process Guide and the general policies contained within and determined that this policy falls under the Department of Homeland Security (DHS) categorical exclusion A3. This Process Guide will not result in any substantial change to existing environmental conditions or violation of any applicable federal, state, or local laws relating to the protection of the environment. It is the responsibility of the action proponent to evaluate all future specific actions resulting from this policy for compliance with the National Environmental Policy Act (NEPA), other applicable environmental requirements, and the U.S. Coast Guard Environmental Planning Policy, COMDTINST 5090.1 (series).

9. DISTRIBUTION. No paper distribution will be made of this Process Guide. An electronic version will be located on the Office of Auxiliary and Boating Safety (CG-BSX) SharePoint intranet site: https://uscg.sharepoint-mil.us/sites/cg-bsx/cgbsx1/SitePages/Home.aspx and posted on the Chief Director of Auxiliary section of the Coast Guard Auxiliary web site: https://wow.uscgaux.info/content.php?unit=BX-GROUP. All web sites in this guide are the most current available. If the cited web link does not work, then access should be attempted by copying and pasting or typing the web site address into the user's internet browser.

10. RECORDS MANAGEMENT CONSIDERATIONS. Records created as a result of this Process Guide, regardless of format or media, must be managed in accordance with the records retention schedules located on the Records Resource Center SharePoint site at: https://uscg.sharepoint-mil.us/sites/cg61/CG611/SitePages/Home.aspx .

11. FORMS/REPORTS. The Coast Guard forms called for in this Process Guide are available on the intranet at https://play.apps.appsplatform.us/play/e/default-369ba0d5-02cb-4d2f-94fd-9212cc24b78c/a/449d74ad-9685-44e3-934b-46c72a05e1a2?tenantId=369ba0d5-02cb-4d2f-94fd-9212cc24b78c&source=portal
Coast Guard Auxiliary forms can be found at http://forms.cgaux.org/

/T. P. Glendye/
Captain, U.S. Coast Guard
Chief, Office of Auxiliary and Boating Safety

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CHAPTER 1
Introduction

Introduction

Auxiliary Aviation (AUXAIR) is a Coast Guard Auxiliary operational program assigned to support the Coast Guard in all missions authorized by the Commandant.

AUXAIR offers various aircraft types and models to perform operational and logistical roles, providing a variety of choices to tailor aviation support efficiently for different requirements, including cargo and passenger transportation. AUXAIR is highly flexible and can be employed quickly to respond to emergent situations.

Using Auxiliary Aviation, in conjunction with Coast Guard Aviation, will increase the capability of any Coast Guard District, Sector, or Air Station. It is a force multiplier for Coast Guard Aviation. In this regard it is helpful to review the Auxiliary Aviation Mission Statement:

"Assist the Coast Guard in all areas authorized by the Commandant by performing any Coast Guard function, power, duty, role, or operations authorized by law. It shall be the responsibility of the Coast Guard Auxiliary to provide aircraft which meet all current Federal Aviation Regulations along with trained and qualified crews to accomplish these tasks."

In this Chapter

This chapter contains the following sections:

Section A. Purpose of this Process Guide

Introduction

This process guide is one of a series of directives that support Auxiliary Operations. This process guide prescribes policy applicable to all aircraft operated by the Coast Guard Auxiliary. It can be used as a guide to mission planning and execution, as well as for the exercise of professional judgment by those in aviation and those whose programs require aviation support.

The chapters and appendices to this process guide provide guidance to manage Auxiliary aviation and are directive in nature. No provision of this process guide relieves personnel of their duty to use sound judgment, or to take such emergency action as the situation demands.

Auxiliary Leadership and Air Station Commanding Officers are empowered to use sound judgment to identify and implement additional training or techniques not addressed herein to best satisfy unique mission requirements of their units.

In this Section

This section contains the following information:

A.1. Procedures

Successful operations require the exercise of sound leadership principles, good judgment, and common sense at all levels of command. When the need arises, the Office of Auxiliary and Boating Safety, Commandant (CG-BSX-1) with technical concurrence from the Office of Aviation Forces, Commandant (CG-711), may issue special instructions or waivers. However, in the operational environment, mission demands may require on scene deviation from prescribed Instructions or Policy when, in the judgment of the Pilot-in-Command (PIC), such deviation is necessary for flight safety or the saving of human life. Such deviation must not be taken lightly and must be tempered by maturity and a complete understanding of the aircraft, mission, and crew.

In situations where this process guide does not address a specific organizational construct or relationship and the application of a particular provision is unclear, users should seek clarification though their Chain of Leadership and Management (COLM) to the Office of Boating Safety and Auxiliary, Commandant (CG-BSX) to clarify the provision in question.

A.2. Generalization	Because of the need to generalize, wording such as normally, etc., usually, and such as is employed throughout this process guide. Words or clauses of this nature shall not be used as loopholes, nor shall they be expanded to include a maneuver, situation, or circumstance which should not be performed or encountered.
A.3. Updates and Changes to this Process Guide	Proposed changes to this process guide shall be submitted to the Air Operations Division of the Response Directorate via the requesting squadron's COLM. CG-BSX has ultimate approval authority.

Section B. How to Use this Process Guide

Introduction

Each chapter that follows in this process guide includes its own table of contents which is divided into sections.

In this Section

This section contains the following information:

B.1. Chapter Layout

(01) The first page of each chapter includes an *Introduction* and an *in this Chapter.*

(02) The first page of each section includes an *Introduction*, an *in this Section*, as applicable.

(03) In the left column of each page are block titles, which provide a descriptive word or phrase for the corresponding block of text to the right.

B.2. Warnings, Cautions, and Notes

The following definitions apply to "Warnings, Cautions, and Notes" found throughout the process guide.

WARNING **Operating procedures or techniques that must be carefully followed to avoid personal injury or loss of life.**

CAUTION ! **Operating procedures or techniques that must be carefully followed to avoid equipment damage.**

NOTE **An operating procedure or technique that is essential to emphasize.**

B.3. Should vs. Shall

To clarify guidance in this Process Guide revision, the terms "should" and "shall" are applied meticulously, so that – when applied in phrases of direction – "should" indicates a recommended course of action, whereas "shall" indicates a mandatory course of action. Personnel shall consider the full contextual circumstances in any paragraphs that contain these words.

B.4. Forms

Various Coast Guard forms and reports required for Auxiliary operations may be found and printed at: Auxiliary Forms Warehouse (cgaux.org). This summary does not include forms required for other agencies, such as the FAA, to meet Auxiliary operational standards. See reference (a) for list of forms.

CHAPTER 2
Aircraft Facilities

Introduction

This chapter outlines the requirements for Offer for Use, inspections, and Auxiliary aircraft requirements.

In this Chapter

This chapter contains the following sections:

Section A. Aircraft Requirements

Introduction

This section details requirements of the facility and owner(s).

In this Section

This section contains the following information:

A.1. Capabilities

Auxiliary aircraft consist of various types and models, with a wide range of capabilities. These aircraft are typically the property of individual members and are usually based at civilian airports located around the district. Auxiliary members owning or controlling the aircraft volunteer them to be used on missions. Auxiliary aircraft range from single engine to multi engine cabin class, to multi engine turbofan aircraft and helicopters. Auxiliary aircraft must have either a standard or an SLSA (factory built light sport) airworthiness certificate.

To be fully mission capable for any mission, an aircraft is expected to be able to fly VFR and IFR, during the day and at night. Aircraft not equipped with instruments for IFR flight are limited to those missions approved for flight in VMC only.

A.2. Ownership(s)

Details on ownership(s) can be found in Chapter 5 of reference (a).

A.3. Responsibilities of Facility Owners

Responsibilities of facility owners can be found and is detailed in Chapter 3 of reference (a).

A.4. Reauthorization of Offer for Use

To reauthorize a facility, offer for use, the facility owner should create a new facility inspection in AUXDATA II prior to expiration of the current authorization. Any changes in facility, the offer for use, non-owner use, or facility should be included as files attached to the facility inspection using procedures specified by the Director for that district.

The submitted inspection will be approved or rejected by each approver and the DIRAUX office. And the Director’s office will then update the facility records in AUXDATA II as needed

A.5. Condition

Squadron aircraft should be clean, well maintained and present a professional and orderly appearance. Auxiliary aircraft and flight crew appearance and behavior reflect on the Coast Guard and the Coast Guard Auxiliary. Aircraft should be equipped with high resolution photographic capability and the capability to e-mail photos to Sector in real time or near time.

Section B. Offer and Acceptance of Facilities (Aircraft)

Introduction

The requirements outlined in this section must be followed in order for the Auxiliary to officially obtain use of a facility (aircraft) offered for operations.

In this Section

This section contains the following information:

B.1. Offer for Use Form and Facility Inspections

Auxiliarists offering facilities (aircraft) must complete, sign, and submit in AUXDATA II the current Auxiliary Aircraft Facility Inspection and Offer for Use Form (ANSC-7005) (see reference (a)). The submitted inspection will be approved or rejected by each approver and Director's office.

A facility shall be deemed to have a current inspection if no more than one year plus 45 days (410 days) have lapsed since passing its last inspection, unless specifically revoked by the owner.

NOTE

Offers for use may not be accepted from retired Auxiliarists.

B.2. Authorized Inspectors

Any IP-FE, or an AC specially designated by the Director or Air Station Commanding officer, may perform aircraft facility inspections. If a qualified Auxiliarist is not available to conduct the facility inspection, a qualified Coast Guard aviator, familiar with Federal Air Regulations, designated in writing by the Air Station Commanding officer, may fill in.

NOTE	**Aircraft facility inspections shall, if practical, be conducted by a member of the Auxiliary aviation program who has a current FAA airframe and power plant (A&P) mechanics license. If the designated facility inspector has an A&P license, he/she need not be an AC, IP, or FE. In the absence of an A&P mechanic, facility inspections may be conducted in accordance with the paragraphs above.**
B.3. Unauthorized Inspections	Auxiliarists may not inspect their own aircraft, aircraft of which they are partial owners, or aircraft owned by members of their immediate family.
B.4. FAA Annual Inspection	The FAA annual inspection determines the airworthiness of the aircraft, and the airworthiness certificate grants authorization to operate the aircraft in flight. No person may operate an Auxiliary aircraft facility under orders unless the facility has a current annual FAA inspection or uses an approved progressive maintenance program and has been approved for flight in accordance with 14 CFR 91.409. The FAA annual inspection logbook signoff shall be scanned and uploaded in AUXDATA II, and the expiration date tracked.
B.5. Major Repair and Alteration	Any major repair and alteration to the airframe, powerplant, propeller, or appliance under 14 CFR Part 43 requires the submission of a completed FAA Form 337. The form shall be uploaded in the facility inspection section of AUXDATA II, and approval of the DSO-AV is required before the aircraft can be returned to service and used to execute orders.
B.6. Aircraft Equipment Requirements	Each aircraft must meet the minimum equipment requirements before the Director may accept the aircraft as a facility. Equipment requirements can be found on the Auxiliary Aircraft Facility Inspection and Offer for Use Form (ANSC-7005) and including (but not limited to) having equipment onboard listed in Chapter 10 of this process guide:
B.6.a. Communications Equipment	Required communications equipment includes: • VHF-FM transceiver with at least channels 16, 22A, and district required channels with an antenna mounted external to the aircraft. Composite aircraft may use a fixed mount antenna internal to the aircraft, upon approval of the District Flight Examining Board and Director. A vertically polarized dipole antenna, or a ½ wave No Ground Plane (NGP) whip are recommend for composite aircraft. • VHF-AM transceiver with at least 121.5, 123.1, and 122.9 MHz. See Chapter 9, Section B for addition communication equipment.

B.7. Call Signs	See Chapter 9, Section C for assigning aircraft call signs.
B.8. Aircraft Display	Only facilities with a current inspection may display any Auxiliary flag, insignia, or decal. See reference (a), Chapter 6 for details on flag and insignia display.
B.9. Summaries of Offer for Use Form	Offer for Use forms shall be uploaded into the facility (air) record as specified by the Director. Paper copies of Offer for Use form may be retained by the local Director's office.

Section C. Readiness Status

Introduction

This section discusses the readiness status of an Auxiliary aircraft.

In this Section

This section contains the following information:

C.1. Alpha (A)

Aircraft is in ALPHA (operating status) when performing an ordered mission or task (e.g., an aircraft engaged in a specific search and rescue, law enforcement support, administrative, patrol, training, test, ferry, logistics, or other operation). An Auxiliary aircraft or vessel facility is not considered to be in ALPHA status solely because of absence from its home station (e.g., an aircraft or vessel temporarily deployed from its assigned station for operational reasons).

C.2. Bravo Zero

Ready to proceed without delay. An aircraft in B-0 readiness status is said to have been "cocked" when the pre-engine start portion of an approved rapid response checklist has been completed, but take-off is not necessarily imminent. This is done to minimize launch time. The crew of an aircraft in BRAVO ZERO status need not be kept in the immediate vicinity of the aircraft. The crew shall be readily available so that the aircraft can proceed within 30 minutes from the time of notice.

C.3. Bravo (B-X)

An Auxiliary aircraft is in BRAVO status (readiness/standby/potential working status) when under orders, but not in ALPHA status. An aircraft in Readiness Status shall be ready to proceed within a status period after receipt of orders or information requiring its movement. The OIA determines level of BRAVO status. A facility in BRAVO status must be ready to proceed within the stated period.

C.4. Charlie (C)

Aircraft is in maintenance, repair, or storage status and not available to execute a mission.

Section D. Aircraft Maintenance

Introduction

Auxiliary aircraft are required to participate in a Spectrographic Oil Analysis Program and report their results to the Coast Guard

In this Section

This section contains the following information:

D.1. Piston Aircraft

No person may operate a piston engine Auxiliary aircraft facility under orders unless, within the preceding 100-hours of time in service, the owner/operator has submitted an oil sample as part of a Spectrographic Oil Analysis Program (SOAP), with trend monitoring. Prior to operation under orders, the SOAP reports will be reviewed by an FAA licensed Airframe and Powerplant mechanic (A&P) and documented in the aircraft's maintenance log.

D.2. Turbine Aircraft

No person may operate a turboprop or turbojet Auxiliary aircraft facility under orders unless, during the lessor of, (1) the proceeding 300-hours of time in service, or (2) the interval recommended by the manufacturer, the owner/operator has submitted an oil sample as part of a Spectrographic Oil Analysis Program (SOAP), with trend monitoring. Prior to operation under orders, the SOAP reports will be reviewed by an FAA licensed Airframe and Powerplant mechanic (A&P) and documented in the aircraft's maintenance log.

D.3. One Time Extension

The limits specified in paragraphs D.1 and D.2 are not to be exceeded during any mission, however, a one-time exemption for exigent circumstances may be granted at the discretion of the Air Station Commanding Officer.

Section E. Documentation and Reporting

Introduction

Auxiliary aircraft are required to participate in a Spectrographic Oil Analysis Program and report their results to the Coast Guard. The annual FAA aircraft inspection and Auxiliary inspection are also tracked

In this Section

This section contains the following information:

E.1. Maintenance Logs

Prior to operation under orders, the SOAP reports will be reviewed by an FAA licensed Airframe and Powerplant mechanic (A&P) and documented in the aircraft's maintenance log.

"Aircraft Logs" as used in this process guide, is an inclusive term which applies to the aircraft logbook and all supplemental records concerned with the aircraft. For example, the "Maintenance Log" records may be contained in a supplemental 3-ring binder.

E.2. Prior to Flight

Prior to each flight under orders, the pilot shall make a pre-launch call to the Air Station and provide the maintenance status of the aircraft, including time until the next scheduled maintenance event is due (i.e., annual inspection / SOAP), any aircraft limitations, along with any other required items.

This information will be provided to a responsible party in a duty status or designated position, who will document the information and provide verbal confirmation to the Air Station Operations Officer or designated representative.

E.3. District Reports

Pilots should update the maintenance status (aircraft time since last annual or progressive inspection) to their appropriate district aviation staff officers, prior to each proposed mission or sets of missions. The owner shall submit copies of logbook entries for the SOAP review and annual or progressive inspections to the ADSO-AVM to upload in the district records.

ADSO-AVMs are to notify the DSO-AV if an aircraft facility is not current for inspection and/or maintenance and that aircraft shall not be assigned orders.

The ADSO-AVM shall maintain these records for three years and send copies of the relevant logbook entries confirming annual inspection completions, SOAP reports, and their supplemental reports, to be developed in the future, to Air Station Commanding Officers, Command Representatives, or DIRAUX upon request. These reports may be submitted electronically by email, facsimile, etc.

E.4. National Report

Auxiliary Air (AUXAIR) quarterly reports detail those Auxiliary aircraft facilities and the most recent verified inspections and/or oil analysis completed. The BC-RAP will consolidate information for the entire active fleet and submit to the Air Stations, Response Directorate, and CG-BSX.

CHAPTER 3
Overview of Coast Guard Auxiliary Air Operations

Introduction

AUXAIR aviators volunteer their aircraft for use as Coast Guard aircraft and qualify as an Auxiliary pilot. Many AUXAIR aviators are accomplished pilots with several thousands of hours of military and civilian flight time. Members offer a wide range of aircraft for use, including single engine, multi-engine, turboprop, twin jet, and helicopters.

Auxiliary aircraft can offer increased range and, in many cases, can be on station as quickly as active-duty aircraft. They act as a significant force multiplier for the Air Station Commanding Officer.

This chapter describes the overview of Coast Guard Auxiliary air operations in supporting Coast Guard missions.

In this Chapter

This chapter contains the following sections:

Section A. Authority and Control of Flights

Introduction

The use of the Auxiliary in supporting Coast Guard missions is essential. This section describes the authority and control of flights of the Auxiliary in carrying out their roles and responsibilities within the Coast Guard organization.

In this Section

This section contains the following information:

A.1. Coast Guard Authority

The basic authority for the Coast Guard to operate aircraft is contained in 14 U.S.C. §§ 2, 88 and 93. This authority is further embodied in the Federal Travel Regulations, codified at 41 CFR Chapters 300-304. Authority is also delegated under this process guide and other Coast Guard policies. 14 U.S.C. § 3909 states “While assigned to authorized Coast Guard duty, any aircraft shall be deemed to be a Coast Guard aircraft”. “Subject to provisions of §§ 3904 and 3912 of this title, while assigned to duty, qualified Auxiliary pilots shall be deemed to be Coast Guard pilot”.

This process guide is the primary regulation governing the employment of Coast Guard Auxiliary aircraft. The Coast Guard Air Station Commanding Officer has the sole order-issuing-authority (OIA) to assign Coast Guard Auxiliary aircraft to necessary missions.

A.2. FAA Authority

The Federal Aviation Administration (FAA) is the authority that licenses Auxiliary pilots and grants authorization to operate aircraft in flight. Coast Guard policies supplement, rather than supersede, other governing directives such as the Federal Aviation Regulations (FARs). Auxiliarist may use a Coast Guard Auxiliary aircraft on any authorized mission with the approval of the Air Station Commanding Officer. Auxiliarist participating in air operations are required to understand the Coast Guard regulations contained the applicable manuals and policy letters and the FAA regulations contained in the Federal Aviation Regulations (FARs), Advisory Circulars (AC), etc.

A.3. Auxiliary Aviation Liaison Officer (AUXLO)

The AUXLO represents the Air Station Commanding Officer and the Director, providing oversight and mentoring of the Auxiliary squadron, including the IP-FEs.

A.4. Clearance

A PIC receives clearance for a flight from the Air Station Commanding Officer, Operations Officer, Auxiliary Liaison Officer (AUXLO) or their designee. For scheduled flights, this is accomplished through the Air Station flight schedule. Non-scheduled flights obtain the permission of the Air Station Commanding Officer or their designee, prior to departure. When this is not possible, such flights may be authorized at a lower level. Guidance is contained in Chapter 4 of this process guide.

Either the Air Station Commanding Officer (or designee) or the PIC may delay a mission if, in the opinion of either, conditions are not safe. The PIC has final responsibility for the safe conduct of the mission. Specific guidance as to authority for flights is contained in this chapter.

In the case of flights involving transportation of passengers or cargo, guidance is contained in Chapter 8 of this process guide.

Coast Guard Auxiliary aviators, with the requisite qualifications and certifications for a given mission and flight environment, may pilot Coast Guard Auxiliary aircraft under orders. The terms “pilot-in-command (PIC),” “pilot,” and “operator” all refer to the Auxiliary pilot listed on the orders. Coast Guard Auxiliary aircraft under orders may fly only under the command of the pilot authorized by those orders. Air Station Commanding Officers may authorize active-duty aviators to fly Coast Guard Auxiliary aircraft as PIC or second pilot.

A.5. Orders

Refer to reference (a) for procedure on orders. The Coast Guard Air Station Commanding Officer has the sole Order-Issuing Authority (OIA) to assign Coast Guard Auxiliary aircraft and flight crews to necessary missions. When Coast Guard aviation missions are assigned to other than active-duty resources, Coast Guard Auxiliary aircraft will be given priority.

Section B. National Staff

Introduction

The Air Operations Division is part of the Response Directorate and responsible to develop and recommend policy and aviation regulations to the Chief Director of Auxiliary (CG-BSX).

In this Section

This section contains the following information:

B.1. Division Chief - Air Operations

Division Chief of Air Operations (DVC-RA) is responsible to oversee the Auxiliary national aviation program, promote the aviation program and the operational use of aircraft facilities in all districts, and provide advice, information, and coordination on the aviation program to cognizant headquarters commands through CG-BSX.

B.2. Branch Chief - Flight Standards

Branch Chief for Flight Standards (BC-RAF) leads the Flight Standardization Team to establish flight rules and standards, survival gear, and qualification standards for flight crews and aircraft.

B.3. Branch Chief - Flight Safety

Branch Chief for Flight Safety (BC-RAS) serves as the National Flight Safety Officer advises the Auxiliary and the Coast Guard in matters pertaining to flight safety.

B.4. Branch Chief - Aviation Management

Branch Chief for Aviation Management (BC-RAM) manages all aspects of Auxiliary administrative support and creates a standard program to handle records management.

B.5. Branch Chief - Aircraft Standards	Branch Chief for Aircraft Standards (BC-RAP) recommends policy for aircraft equipment and maintenance and monitors compliance of the fleet.
B.6. Branch Chief - Aviation Training	Branch Chief for Aviation Training (BC-RAT) is responsible to develop and maintain a standardization and training program similar to the one used in the active duty Air Operations Program.
B.7. Branch Chief - IP/FE Liaison	Branch Chief for IP/FE Liaison (BC-RAL) will stablish and maintain a continuing relationship with all Instructor Pilot - Flight Examiners (IP-FE), serve as the Chief IP-FE of the Auxiliary and facilitate sharing of best practices, recommendations, and issues throughout the IP-FE community.
B.8. Auxiliary Flight Surgeon	Auxiliary Flight Surgeon (BC-RAA) provides guidance on establishing and maintaining aeromedical standards and practices for Auxiliary aviators and flight crewmembers.

Section C. District and Squadron Organization

Introduction

Air Operations is a District Program and does not operate at the Flotilla or Division level. The section will discuss the District organizational structure. As well as the District Aviation Board (DAB).

In this Section

This section contains the following information:

C.1. District Organization

Table 3-1 provides a standard organization for Auxiliary squadrons. Air units are authorized to make additions and deletions of functions and duties where necessary.

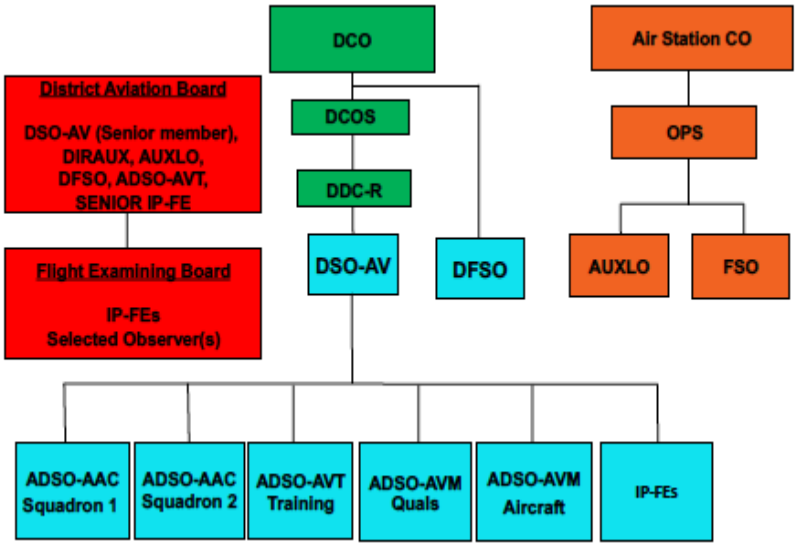

Table 3-1
AUXAIR District Organization

C.2. District Aviation Board

Each Director of Auxiliary (DIRAUX) will establish a District Aviation Board (DAB) whose function will be to advise the director of Auxiliary and the District Commodore on matters pertaining to the district aviation program, standardization aircraft, recommendations for instructor pilots - flight examiners, crew performance, flight crew appeals, mishaps, non-compliant aviators, and other related topics.

The District Aviation Board should meet in person at the Air Station at least once a year. This is an excellent opportunity for Auxiliary and Air Station Leadership to review the program, squadron's performance, set goals for the following year and communicate information. The Air Station Commanding Officer (CO), Executive Officer (XO) and Operations Officer (OPS) should be invited. If the Air Station agrees, it is an excellent opportunity to invite the Sector Commanding Officer and Auxiliary Sector Coordinator (ASC) to attend a portion of the meeting and improve their understanding of the Auxiliary squadrons' capability and performance.

The District Aviation Board (DAB) shall consist of, but not limited to, the following:

Members:

- District Staff Officer for Aviation (DSO-AV) – senior member
- Assistant District Staff Officer for Aviation Training (ADSO-AVT)
- District Flight Safety Officer (DFSO)
- Senior Member of the Flight Examining Board (IP-FE)
- Auxiliary Aviation Coordinator (AAC)
- Auxiliary Aviation Liaison Officer (AUXLO)
- District Commodore (DCO)
- DIRAUX

Responsibilities:

- Review Auxiliary squadron performance and capability with Air Station Leadership
- Determine the need for additional flight crewmembers, including IP/FEs
- Goals and expectations
- Flight crew personnel, determine requirements/issues
- Review the Flight Safety Program
- Flight crew appeals
- Mishaps
- Aviation Standardization
- Air Station future needs – flight crew, aircraft, missions, etc.
- Non-compliant aviators
- Enhance the relationship between AUXAIR and the Air Station

C.3. Flight Examining Board

The Flight Examining Board (FEB) is a subset of the District Aviation Board, chaired by the District's Senior IP-FE. The FEB shall meet at least quarterly and provide a written report of each meeting to the DSO-AV. The Flight Examining Board (FEB) shall consist of, but not limited to, the following:

Members:

- District IP-FEs
- Senior Observer or Aircrew

Responsibilities:

- Ensure adherence to standard operating procedures.
- Evaluation of the flight crew training program.
- Provide initial, upgrade, requalification, and refresher training.
- Enhance the professional knowledge and capability of pilots, aircrew, and observers.
- Recommend personnel eligible for qualification to the DSO-AV.
- Ensure squadron members are progressing in upgrade training.
- Recommend plans to improve performance of members not meeting expectations.
- Notify the DAB of performance issues and non-compliant aviators.

Ensure that the squadron understands and is operating in compliance with all Coast Guard and FAA rules and regulations.

C.4. Aviator Evaluation Board

If the Air Station, DIRAUX or Auxiliary leadership develop serious doubts as to a pilot or other flight crewmember's performance, potential, or motivation, he or she shall convene the District Aviator Evaluation Board (AEB) to make a thorough investigation. The AEB will function in an advisory capacity to the convening authority and will recommend appropriate action to ensure only those aviators who can satisfactorily perform the duties required are continued in a flying status. The AEB shall report the results of the investigation, and recommendation to Auxiliary and Air Station leadership.

The Board is not a disciplinary agency in any respect; any action resulting from board recommendation is not disciplinary in nature, but rather is intended solely to support the safety of flight operations. An AEB is mandatory for any class A mishap and is optional for other mishap classes or multiple mishaps.

A Coast Guard Auxiliary Aviator Evaluation Board will consist of two Auxiliary aviators and at least one active-duty aviator. The Auxiliary aviator members should be senior to the aviator whose performance is under evaluation and should be familiar with the category and type of aircraft involved. Unless otherwise directed by the commanding officer, the District Senior IP-FE should act as the senior member of the board.

Where events leading to board action also require disciplinary action, the DIRAUX, acting with the advice of the Air Station Commanding Officer and Auxiliary District Leadership, will make that determination. Any disciplinary action will be taken as specified in reference (d).

The Aviator Evaluation Board (AEB) shall consist of, but not limited to, the following:

Members:

- District Senior IP-FE (senior member of the Board)
- DSO-AV
- Auxiliary aviator (senior to the aviator under evaluation)
- Active-duty aviator
- Any other active-duty officer requested by the Air Station CO.

Responsibilities:

- Investigate flight crew member(s) performance, capability, potential, professionalism, or motivation if requested by the Air Station, DIRAUX, or Auxiliary Leadership.
- Advise the convening authority.

Recommend appropriate action to ensure only those members who can satisfactorily perform the duties required are continued in a flying status.

C.5. District Staff Officer – Aviation (DSO-AV)

District Staff Officer for Aviation (DSO-AV) is responsible to lead the district Auxiliary aviation program and function as the senior member of the District Aviation Board. The DSO-AV ensures effective support for the Air Station(s) and maintains a close liaison with Air Station Leadership.

C.6. Auxiliary Aviation Coordinator (AAC)

Auxiliary Aviation Coordinator (AAC) functions as the squadron Operations Officer and leads the Auxiliary squadron's day to day flight operations. The AAC is a member of the District Aviation Board (DAB) and maintains a close liaison with the AUXLO and OPS.

C.7. District Flight Safety Officer (DFSO)	District Flight Safety Officer (DFSO) implements the Aviation Safety Program within the District. Communicate details of the program to the divisions and flotillas with aircraft facilities. Advise the District Commodore (DCO) and DSO-AV on all aviation safety matters and shall report directly to the DCO. The DFSO promotes, monitors, and reports on safety matters and maintains a close liaison with the FSO.
C.8. Assistant District Staff Officer -Aviation Training (ADSO-AVT)	Assistant District Staff Officer for Aviation Training (ADSO-AVT) functions as the Squadron Training Officer, oversees the District's aviation standardization and training program and is a member of the District Aviation Board.
C.9. Assistant District Staff Officer -Aviation Management (ADSO-AVM)	Assistant District Staff Officer for Aviation Management (ADSO-AVM) functions as the Squadron Administrative Officer and is responsible to implement the district/squadron's process to record and track flight crewmember's and aircraft facility records. Work closely with the ADSO-AVT to support the district's aviation standardization and training program. Districts/squadrons may appoint multiple ADSO-AVMs.

Section D. Training and Standardization

Introduction

Training, qualification, proficiency, and readiness are essential to the successful completion of all aviation missions. Flight crew members must maintain high levels of psychomotor skills to operate complex platforms safely and successfully. Such skills rapidly deteriorate if not regularly exercised. Through a combination of formal initial and upgrade training qualification syllabi, annual proficiency training, annual check flights, and recurrent training, flight crew members maintain a high level of effectiveness and performance. Flight crew qualification, certification and training requirements are contained in reference (c).

In this Section

This section contains the following information:

D.1. Standardization of Training and Procedure

AUXAIR incorporates standardized training and procedures to ensure that flight operations are conducted in the safest possible manner consistent with mission requirements. By adhering to an approved set of standard procedures for repetitive, routine tasks, aviators create a discipline that ensures critical details are not overlooked. Necessary precautions are always taken to ensure the well-being of the crew and the aircraft.

D.2. Standardization and Crew Formation

Standardization permits randomly selected aviators to form a disciplined, coordinated crew on any aircraft in which they have been qualified and in any mission in which they have been qualified.

D.3. Standardization – Aviation Training Center

The Aviation Training Center develops and promulgates standardized Risk Management (RM) and Crew Resource Management (CRM) training.

D.4. Air Qualifications

An Auxiliary air qualification verifies that a pilot, air crew, or air observer has gained the training, experience, advanced knowledge, skills, abilities necessary and has completed the required syllabus to perform specific missions in Coast Guard Auxiliary aircraft. Authorized Auxiliary air qualifications are contained in reference (c).

D.5. Air Certification	Auxiliary flight crew members are not authorized to fly Coast Guard missions under orders until the Director of Auxiliary (DIRAUX) has certified their qualification and entered this into AUXDATA II.

CHAPTER 4
Flight Authorization and Clearance

Introduction

This chapter describes who has the authority to authorize use of Auxiliary aircraft and their responsibilities.

In this Chapter

This chapter contains the following information:

Section A. Authority to Approve, Direct, and Initiate Flights

Introduction

This section describes who has the authority to approve, direct, and initiate flights

In this Section

This section contains the following information:

A.1. Commanding Officers

Commanding Officers of units with tactical control of aircraft (Air Stations) have authority to approve flights for Mission Requirements Use. This approval is embodied by signing the squadron flight schedule. This authority can be delegated no lower than the assigned Operations Officer or Auxiliary Aviation Liaison Officer (AUXLO). Flights may be initiated in accordance with local procedures when prior approval is not practicable (e.g., Search and Rescue missions). Such flights shall be approved by the assigned AUXLO, Operations Officer or higher authority as soon as possible.

A.2. Passenger Transportation Flights

Transportation authority guidance is provided in Chapter 8 of this process guide for passengers and cargo. When Auxiliary aviation assets are requested for official travel Air Station Commanding Officers (or designee), as the sole order issuing authority (OIA) of Coast Guard Auxiliary aircraft, are responsible for approving Auxiliary transport missions.

Section B. Personnel Authorized to Command Auxiliary Aircraft

Introduction

This section defines personnel authorized to command Auxiliary aircraft and responsibilities.

In this Section

This section contains the following information:

B.1. Authorized Command Personnel

A Coast Guard Auxiliary aircraft shall be flown only under the command of the pilot authorized to make the flight. Normally, authorization is granted by the Commanding Officer of the Air Station to which the aircraft is assigned. When a Coast Guard Auxiliary aircraft is temporarily located at another Coast Guard unit, the Commanding Officer of that unit may deviate from this requirement when the aircraft's use is deemed essential and fully qualified flight crewmembers are available. The Commanding Officer of the unit to which the aircraft is permanently assigned shall be advised of the aircraft's status and the estimated duration of the requirement.

B.2. Pilot-in-Command

The Pilot-in-Command (PIC) is defined as the pilot who has been assigned, by proper authority, to take charge of the aircraft and be responsible for a specific flight or mission

B.2.a. Responsibilities

The PIC is responsible for the professional, safe, orderly, efficient, and effective performance of the aircraft, flight crew and passengers during the entire mission, whether it is a single sortie from home station or many sorties while deployed away from home station. This responsibility exists from the time the PIC first enters the aircraft with intent for flight, until leaving it upon completion of the mission.

B.2.b. Authority	To carry out this responsibility, the PIC has the authority to direct all aircraft and flight crew activities during the mission, including periods between sorties. The PIC has flight clearance authority as described in this Chapter as well as the authority to modify planned missions to provide for the safety of the crew and the airframe. It is imperative that all members of the flight crew be aware of the PIC's identity and authority. The successful completion of the mission or the safety of the crew and aircraft may be jeopardized if any crewmember does not know who is in command or fails to recognize the PIC's authority and act accordingly.
B.2.c. Exceptions	The authority and responsibility of the PIC of a Coast Guard aircraft are independent of Auxiliary office or seniority in relation to other persons taking part in that flight, unless otherwise specified by the Air Station Commanding Officer.
B.3. Flight Crewmember Status	The status and crew position assignment of each individual participating in a flight must be clearly understood by the entire flight crew before the flight.

Section C. Flight Clearance Authority for Auxiliary Aircraft

Introduction

Clearance, as used in this section, is defined as military permission to execute a definite aircraft movement. It is not to be confused with Air Traffic Control clearance.

In this Section

This section contains the following information:

C.1. Basic Clearance

Clearance for flights of Coast Guard aircraft is based on the nature of the mission, condition of the aircraft and crew, and the actual/expected weather and other conditions at all points in the proposed flight

C.1.a. Authority

Clearance authority for aircraft flights is granted to Air Station Commanding Officers of units with aircraft assigned and to the PIC for assigned missions. Air Station Commanding Officers can delegate authority for clearance to officers under their command.

C.1.b. Restrictions

The Commanding Officer of a Coast Guard unit with aircraft assigned shall not permit a Coast Guard Auxiliary aircraft to depart when he or she believes the safety of the proposed flight is unduly jeopardized by the weather, condition of the aircraft or other known factors, or when such departure would constitute a violation of regulations.

C.1.c. Delay of Missions

The final decision to delay a mission may be made by either the Air Station Commanding Officer or PIC when, in the opinion of either individual, conditions are not safe to start or continue a mission. Final responsibility for the safe conduct of the mission rests with the PIC. If the assigned PIC refuses a mission, it will not depart until that PIC is satisfied that conditions have improved, or such necessary corrective actions have been taken that the mission can proceed safely. Another PIC and crew shall not be assigned to take the same mission under the same conditions without the specific approval of the Commanding Officer of the aviation unit to which the PIC is assigned. This authority may not be delegated. Due consideration must be given to the urgency of the mission and the new crew's ability to proceed safely on the mission under the existing conditions before a change in PIC and crew may be approved.

C.2. Precautionary Landings

In the event a precautionary landing is made for observed or suspected aircraft malfunctions or damage, the PIC will conduct a preliminary inspection/analysis upon landing, contact the Air Station Operations Officer (OPS) and discuss the situation.

OPS will determine if (1) the mission is allowed to continue, (2) the aircraft should be flown back to the home field, or (3) the aircraft requires repairs to be performed by an FAA licensed Airframe and Power plant (A&P) mechanic.

A precautionary landing is a "premeditated landing on or off an airport when further flight is possible but inadvisable." Examples of conditions that may call for a precautionary landing include deteriorating weather, gradually developing engine trouble, and other causes of concern for aircraft and/or flight safety.

Further flight under orders without the approval of the Air Station, is prohibited. In the event the mission is cancelled, OPS will determine the mode of transport to return the flight crew to the home airport. The Air Station will record the closing of the mission with a note indicating "continued flight under orders was not permitted." When repairs are made by an A&P, the PIC is responsible to inform the Air Station of the outcome.

This includes any suspected aircraft malfunctions or damage discovered during the aircraft pre-flight or pre-take off checks.

CHAPTER 5
Pre and Post Mission Planning and Flight Crew Requirements

Introduction

Effective missions begin with the planning phase and a thorough understanding of mission objectives. This chapter will discuss pre and post mission planning procedures and flight crew requirements.

In this Chapter

This chapter contains the following information:

Section A. Pre-Mission Planning Procedures

Introduction

This section will discuss all pre-mission planning requirements

In this Section

This section contains the following information:

A.1. Preflight Planning Requirements

At a minimum, the PIC shall be familiar with applicable performance data at all intended and alternate airfields, weather for the route of flight, fuel reserve requirements, aircraft weight and balance, Notices to Airmen (NOTAM), Temporary Flight Restrictions (TFR), special use airspace, Air Defense Identification Zones, and foreign clearance requirements relevant to the mission.

Prior to any flight, the PIC will ensure that all required risk management analyses are performed per current Coast Guard policy to identify potential hazards and mitigation strategies. An alternate airport should be identified, discussed during the pre-flight mission brief, and noted in the flight plan.

A.2. Air Ops Mission Report

The Air Ops Mission Report in an optional document and is an excellent job aid to consolidate mission planning, mission log, risk assessment, specific information required for a SAR or LE mission, and the information required to complete the orders and submit a request for reimbursement.

A.3. Risk Management

Operational commanders and Auxiliary PICs shall carefully weigh the urgency of each mission and assess the benefits to be gained versus the risks involved. For all missions, potential risks to the aircraft and crew shall be weighed against risks to personnel and/or property if the mission is not undertaken.

Additionally, the effects of exposing personnel to the additional risks associated with flight operations shall be considered. This is an ongoing process that shall continue until the mission is complete. Reference (e) establishes responsibilities and procedures for training and conducting RM

For additional risk management guidance see Chapter 12

A.4. Risk Assessment Matrix

Prior to departure, each Auxiliary PIC assigned to a flying mission shall complete the Aviation Risk Assessment, GAR 2.0, in accordance with its instructions and discuss mitigation strategies with the flight crew.

A.5. Performance Data	The PIC shall assess departure, destination, and alternate field conditions, and all enroute segments to ensure the flight complies with aircraft flight manual performance requirements.
A.5.a. Departure Climb Gradient	The PIC of any fixed-wing twin engine aircraft shall ensure the aircraft meets or exceeds the published climb gradient with one engine inoperative for the departure method being used. When no climb gradient is published, the aircraft must be able to climb at 152 feet per nautical mile (2.5 percent) or greater with one engine inoperative. Departures may use visual obstacle avoidance (see-and-avoid) in lieu of meeting the required climb gradient with Air Station Commanding Officer approval.
A.5.b. Enroute Performance	For each segment of the flight, the PIC shall assess the effect of wind, temperature, forecast icing, density altitude, terrain elevation, aircraft gross weight, and potential engine loss on aircraft performance.
A.6. Weather Briefing	The pilot of an Auxiliary aircraft on orders must receive a thorough weather briefing. Acceptable sources of weather data include government-sanctioned aviation weather services and dedicated aviation weather subscription services. The weather briefing shall include all items (applicable to the route of flight) contained in a Standard Briefing as defined in the Aeronautical Information Manual (AIM). For addition weather briefing information see Section B
A.7. Instrument Flight Rules (IFR) Flights	Before an IFR flight, obtain and record a comprehensive weather briefing. Retain IFR flight planning weather information for 90 days.
A.8. Crew Discipline and Mission Briefing	The pilot is responsible for ensuring the crew is properly briefed for the mission. The briefing must be specific and include significant safety related matters. The crew must know exactly who the PIC is and must respond to his/her orders promptly. When working in conjunction with a Coast Guard aircraft, the Auxiliary crew must receive a mission brief by the Coast Guard aircraft commander/mission commander prior to sortie commencement. All briefings should include: • Mission purpose • Area of operation • Communications procedures • Identities and call signs of associated facilities • Pilot/crew responsibilities

	• Risk assessment – initial and on-going • CRM issues
A.9. Preflight Inspection	Before each flight, the pilot must inspect the aircraft using the recommended procedures in the Pilot Operating Handbook for the specific model flown. This check must also ensure that all mission essential equipment, charts, cargo, etc., are onboard and properly secured.
A.10. Checklists	Before each flight, the pilot must inspect the aircraft using the recommended procedures in the Pilot Operating Handbook for the specific model flown. This check must also ensure that all mission essential equipment, charts, cargo, etc., are onboard and properly secured.
A.11. Fuel Reserve Requirements	The PIC shall assess departure, destination and alternate field conditions, and all en-route segments to ensure the flight fuel reserve requirements are met. Consider meteorological factors, mission requirements, and any known or expected traffic delays when computing fuel reserves. Fuel reserve will be, at least that required to complete the mission, fly to the airport of intended landing (in many cases the same as the departure airport), fly from that airport to the alternate airport and then fly after that for 45 minutes at normal cruising speed (for fixed-wing aircraft) or 30 minutes at normal cruising speed (for rotary-wing aircraft). Fuel carried on board at departure will be at least ten percent more than required to reach the alternate airfield via the intended destination.
A.12. Fuel Tank Switching	The PIC will follow procedures recommended in the Pilot Operating Handbook for the specific aircraft flown. Additionally, it is recommended to: • Depart with maximum fuel, for weight and conditions, to enable the opportunity for mission diverts, SAR, etc. Use takeoff tank for preflight run-up. • Switch fuel tanks when the aircraft is at a safe cruise altitude. • Ensure the fuel selector valve is switched to the fullest tank prior to descent for landing.

A.13. Weight and Balance

Prior to any flight, the PIC shall ensure that a weight and balance calculation has been completed based on the actual loading of the aircraft. The PIC shall also be familiar with any anticipated evolutions during the flight that will significantly change aircraft weight and balance (e.g., evolutions involving embarkation of passengers, aerial deliveries of equipment, personnel, significant fuel burn, etc.) and comply with limitations. Retain completed weight and balance forms for 90 days.

A.14. Special Use Airspace (SUA)

All flights shall adhere to 14 CFR §73 for entry into and operations within Special Use Airspace.

All operations within Warning Areas shall be coordinated with the controlling agency prior to entry. Two-way communications with the controlling agency shall be maintained when practicable.

A.15. Air Defense Identification Zones

The PIC is responsible for coordinating entry into and operations within Air Defense Identification Zones and obtaining the proper transponder code.

A.16. Foreign Clearance Procedures

Coast Guard Auxiliary aircraft shall comply with the DoD Foreign Clearance Manual. The PIC shall confirm that required foreign clearances for aircraft, cargo, and personnel have been obtained.

A.17. Customs, Agriculture, and Immigration

Air Station Commanding Officers shall ensure that all flight crews comply with applicable customs, immigration, public health, and agriculture regulations.

A.18. Flight Plans

The PIC of a Coast Guard Auxiliary aircraft shall file a written or computerized domestic, military, or ICAO flight plan prior to each flight, except when required for operational security as directed by the OIA.

The PIC is responsible for closing out any active flight plans.

All flight plans filed with ATC shall include the aircraft call sign.

A.18.a. Enroute Stops

Flights making enroute stops need not file a new flight plan or local flight clearance form if all the following criteria are met:

- Intermediate stops are entered, in order of intended landing, on the flight plan filed at the original point of departure.
- Personnel to be picked up or discharged are either noted on the original flight plan or on a current passenger manifest that is left at each intermediate stop.
- The pilot-in-command (PIC) remains unchanged.

A.18.b. Flight Rules	Flights of Coast Guard Auxiliary aircraft should be conducted in accordance with IFR, whenever practical. When operating under VFR, use radar advisory services to the fullest extent practical.
A18.c. Copies of Flight Plans	A copy of each filed flight plan shall be left with the aircraft home unit or with base operations, the airport manager, or other responsible person at the point of departure. IFR flight plans must be filed with ATC.
A.19. Passenger Manifest Requirements	Before any flight, the PIC shall file a copy of an accurate crew and passenger list with a responsible person, showing name, grade, and service (if military), duty station, and status aboard the aircraft (passenger or crew). Where it is not practicable to leave the crew and passenger list with someone on the ground, an appropriate ground radio station shall be advised of the personnel aboard as soon as possible.

Section B. Flight Planning – Weather

Introduction

This section will discuss incorporating weather into flight planning and requirements.

In this Section

This section contains the following information:

B.1. Application of Actual and Forecasted Weather

All flights shall comply with the weather requirements of this section based on the actual weather at the point of departure, the forecast weather enroute, and the forecast at both the destination and alternate for the period beginning one hour before until one hour after the estimated time of arrival (ETA) at each point.

Existing weather can be used as a basis for clearance when forecast weather is unavailable and if the pilot's analysis of available data indicates satisfactory conditions for the planned flight.

B.2. Instrument Flight Rules Flight Plans

File an Instrument Flight Rules (IFR) flight plan for all flights which may expect to encounter IMC in controlled airspace on any portion of the planned route. For local area operations, an IFR flight plan is not required if a Special VFR clearance is obtained.

B.3. Takeoff Minimums

Auxiliary aircraft shall not takeoff under IFR from an airport where the weather conditions are at or above takeoff minimums but are below authorized IFR landing minimums.

B.4. RWAI Weather Requirements

For RWAI training missions, the Interceptor, and the Track of Interest (TOI) aircraft shall maintain VFR cloud clearances while in the training area. The minimum visibility for RWAI training missions is 3 NM. The TOI altitude shall allow for a minimum of 1,500 feet between the TOI aircraft and cloud bases or next cloud layer when operating VFR over-the-top. The minimum hard deck for training intercept is 1,000 feet Above Ground Level (AGL).

B.5. Departure Alternate Requirements

All IFR flights require a departure alternate, that meets weather requirements contained in Paragraph B.9 of this Chapter (Alternate Airport Minimums (Departure and Destination)). An airport shall be selected and indicated on the flight plan that meets the following criteria:

- Single-engine aircraft: not more than 30 minutes from the departure airport at single-engine cruising speed computed for no wind conditions.
- Two-engine aircraft: not more than one hour from the departure airport at single-engine cruising speed computed for no wind conditions.
- Four-engine aircraft: not more than two hours from the departure airport at three-engine cruising speed computed for no wind conditions.

Twin engine aircraft must be capable of climbing to and maintaining MEA with one engine inoperative while enroute to the departure alternate.

B.6. Destination Forecast Unavailable or Below Minimums

No clearance shall be authorized for destinations at which there is no Terminal Aerodrome Forecast available, or the forecast weather will be below compatible approach minimums (ceiling and visibility) upon arrival unless an alternate airport is available at which forecast weather conditions are equal to or better than the following:

For fixed-wing aircraft:

- Ceiling is at least 2,000 feet above the airport elevation or at least 400 feet above the lowest compatible approach minimum, whichever is higher.
- Visibility is at least three statute miles.

For rotary-wing aircraft:

- Ceiling is at least 1,000 feet above the airport elevation or at least 400 feet above the lowest compatible approach minimum, whichever is higher.
- Visibility is at least two statute miles.

B.7. Destination Alternate Requirements

An alternate destination is required for all Coast Guard Auxiliary aircraft assigned to missions. The alternate shall be identified prior to departure, noted in the flight plan, and communicated to all flight crewmembers and the Air Station.

B.8. Destination Alternate Not Available

If the destination is an island or other remote location where an alternate is unavailable, the Commanding Officer of the unit to which the aircraft is attached will determine the amount of holding time that must be planned in lieu of an alternate; in no case shall this be less than one hour. This holding time is in addition to the fuel reserve requirements contained in Paragraph 3. A.5. of this Chapter.

B.9. Alternate Airport Minimums (Departure and Destination)	Weather at the destination alternate must be forecast to be at or above the specified weather from one hour before to one hour after ETA at the destination alternate. For fixed-wing aircraft, weather must be equal to or better than published non-standard alternate minimums. If none are specified, the ceiling must be at least 800 feet and visibility two statute miles for airports served by a compatible non-precision approach, and ceiling at least 600 feet and visibility two statute miles for airports served by a compatible precision approach; but weather at the alternate shall not be lower than the lowest compatible circling minimums as specified in current flight information publications. For rotary-wing aircraft, the ceiling must be at least 200 feet above the minimum for the approach to be flown, and visibility at least one statute mile but not less than the minimum visibility for the approach to be flown. If an airport is designated as Alternate/Not Authorized (e.g., indicated by triangle A/NA in US Government charts), weather at the alternate must meet those allowing descent from the MEA, approach, and landing under basic VFR.
B.10. Flight in Icing Conditions	Flight in icing conditions shall be conducted in accordance with the applicable aircraft flight manual.
B.11. Turbulence and Thunderstorms	Flight in turbulence shall be conducted in accordance with the aircraft flight manual. All flights shall avoid thunderstorms. Fixed-wing flights shall avoid areas of known (reported or verified) severe turbulence and extreme turbulence. Rotary-wing flights shall avoid areas of moderate or greater intensity turbulence.
B.12. Volcanic Ash Precautions	Avoid aircraft operations in the general area of volcanic activity. Since volcanic dust may extend for several hundred miles, flights should be planned well clear of the area and, if possible, the flight path should be above or on the upwind side of the volcanic dust. Aircraft which have encountered volcanic dust shall not be cleared to fly until suitable maintenance inspections have been accomplished

Section C. Mission Reports

Introduction

It is essential for Auxiliary flight crews to document all flight mission. The following reporting requirements apply.

In this Section

This section contains the following information:

C.1. Patrol Logs

The PIC will normally designate one of the crew to maintain a Patrol Log. During the patrol, the designated crew member completes this log to document observations made, the time and location of observations, and latitude and longitude (or geographical location) of any event and of radio reports made.

This log is maintained during all flights, logging key data to record all mission actions. Information collected on the log should include the following:

- Coast Guard call sign and FAA Registration "N" number of the aircraft along with the date and patrol order number.
- Names and Auxiliary member (EMPID) numbers of all persons onboard.
- Fuel on board, endurance, and range.
- Engine start time.
- Time of takeoff.
- Point of takeoff.
- Weather conditions.
- ATC and Coast Guard Units communicated with.
- Time and critical data for every communication or status message.
- Name and time of touch down of any airports at which that the aircraft lands.
- Time of departure from that airport.

- When on a SAR:
  i. Time that the aircraft arrives in the search area Distance from the takeoff point to the search area Time and location of ANY significant sighting.
  ii. On-scene weather (including ceiling, wind speed and direction, visibility, wave heights, and direction of wave movement).
  iii. If search object is located, log time on-scene and time departing scene Time the aircraft departs the scene of the search.
  iv. Areas searched including altitude and track spacing used.
  v. Hours on the search.
- Engine stop time.
- Full hours flown.

This information is necessary for after mission follow up for the Coast Guard to develop their Situation reports (SITREP) and the Auxiliarists to properly log their time.

C.2. Real Time Reporting

Some missions require real time reporting to the Sector, e.g.., Great Lakes ice reconnaissance. The observer may be tasked to submit photographic imagery during the flight if the aircraft is equipped with Wi-Fi.

C.3. Post Mission Report

Post-mission reports exchanged between the aviation element and the supported element are fundamental parts of a satisfactory mission. The complexity of the report depends on the scope of the mission.

Without an honest appraisal of the mission performance by both parties, neither party has a basis or incentive to improve the manner in which a mission is conducted in the future. Urgent information should be passed by phone immediately following the flight. No later than 24 hours post-mission, an after action (post mission) report shall be created, completed, and sent by email via the AUXLO/District Staff Officer for Aviation (DSO-AV).

C.4. Photographic Imagery

Photos of any notable observations should be attached to the report or included in a separate document. Some Air Stations and Sectors have specific requirements for naming files.

C.5. Patrol Orders

Following each mission, pilots will use AUXDATA II to complete patrol order claims IAW reference (a).

Section D. Flight Crew Requirements

Introduction

This section discusses the minimum crew, aircraft, and selected flight rules for authorized Coast Guard missions.

In this Section

This section contains the following information:

D.1. Minimum Pilot Qualification Requirements

All pilots must possess the qualification require for a specific mission and be current. Auxiliary pilots are responsible for maintaining their FAA certificates and currency requirements in accordance with provisions in this process guide, reference (c), and all applicable Federal Aviation Regulations (FARs) relative to their qualification. The following requirements are minimums and individual Air Stations may have additional requirements.

D.2. Minimum Flight Crew Assignment Requirements

Chapter 6 prescribes the minimum flight crew required by mission in addition to the minimum pilot requirements described in the paragraphs below for Coast Guard aircraft/missions. Crew positions are described in reference (c). Air Station Commanding Officers are authorized to require additional personnel based on unit or mission needs.

D.3. Transporting Active-Duty Flight Crew

Missions transporting active-duty flight crews to another Air Station, Air Facility, or remote airfield to position them for operational missions may be flown by a First Pilot (FP) or Aircraft Commander (AC) in daylight hours and VMC. The active-duty crew serve as minimum crew for the flight and should be engaged in Coast Guard communications, air traffic observation, etc.

D.4. Logistics Transport

Non-divertible daylight missions in VMC may be flown by a single pilot and no additional crew.

Night and/or IMC logistics missions may be flown by a single pilot who is an Aircraft Commander (AC) with a current instrument rating who is also current in category and class so long as the requirements of the "super currency rule" are met. The PIC must file and fly an IFR flight plan. An aircraft flying under these conditions is non-divertible.

The "super currency" rule requires the PIC to have a minimum of 10 hours of actual or simulated night or IMC time within the last six months, 5 of which must be within the last three months. This flight time does not have to be logged while on Coast Guard orders.

Single pilot night and/or IMC logistics missions must be logistical in nature (e.g., cargo transport, pre-positioning the aircraft for a later mission, transit to a search area for a first light search, or to rendezvous with a second pilot for a night and/or IMC non-logistics mission).

D.5. Operational Missions – Night or IMC

Operational missions flown during night hours or IMC require two pilots who are instrument rated, current for instrument procedures, and current in category and class. The PIC must be an Aircraft Commander (AC) and the aircraft must be IFR equipped in accordance with the applicable FARs.

The second pilot will add to overall situational awareness. Dual flight controls, but not dual flight instruments, are required for night or IMC flight. Pilots must obtain an IFR clearance for all flights in IMC. The second pilot shall participate in the flight planning and risk assessment phases of the mission. The second pilot shall be IFR rated and current in accordance with FAR 61.57(c).

Active-duty pilots, who are current for instrument procedures in accordance with reference (c) may serve as a second pilot. An active duty fixed-wing pilot shall not serve as a second pilot on an Auxiliary helicopter, unless the active-duty pilot holds an FAA instrument-helicopter rating and is current in accordance with applicable FAA regulations. An active-duty rotary-wing pilot shall not serve as a second pilot on an Auxiliary fixed-wing aircraft unless the active-duty pilot holds an FAA instrument-airplane rating and is current in accordance with applicable FAA regulations.

Except for take-off and landing, the following altitude restrictions apply to missions at night and/or in IMC: 1,000 feet above ground level (AGL) over water or other unobstructed areas. In other areas, the minimum altitude is 1,000 feet above the highest obstacle, in IMC the minimum

altitude is the minimum vectoring altitude or minimum enroute altitude (MEA) as applicable to the operational area.

D.6. Passenger Transport

Passenger Transport must be authorized by the Air Station Commanding Officer. When conducted during daylight hours and VMC the mission requires two pilots who are current in category and class. The PIC must be a First Pilot (FP) or Aircraft Commander (AC).

If the weather at departure, destination or along the route is forecasted to be less than a 1000' ceiling or less than 3 miles visibility in airspace below 10,000' MSL or less than 3000' ceiling or less than 5 miles visibility above 10,000' MSL the PIC shall be a current Aircraft Commander (AC), a current instrument rated second pilot shall be on-board, and the aircraft facility must be instrument flight equipped and certified.

Passenger Transport flights conducted during night hours or IMC shall require two instrument rated pilots, who are both current for instrument procedures, and current in category and class.

D.7. RWAI Support Flights (RWAI)

Require a First Pilot (FP) or Aircraft Commander (AC) who is current for instrument procedures and has completed RWAI support training provided by the Air Station. A Coast Guard Auxiliary aircraft shall only serve as the target aircraft and never serve as the intercepting aircraft.

All RWAI missions shall be carried out with a minimum two-person crew. Daytime missions in VMC require a PIC and second pilot or air crew qualified crew member. The second pilot or qualified air crewmember's responsibility is to monitor all flight instruments, maintain altitude guard for the pilot, and maintain visual contact with the intercepting aircraft when possible.

Night-time missions in VMC shall be carried out by the PIC and a second pilot. The second pilot shall be instrument rated and current in instrument procedures. The second pilot's responsibility is to monitor all flight instruments, maintain altitude guard for the pilot, and maintain visual contact with the intercepting aircraft when possible

CHAPTER 6
Operational Missions

Introduction

This chapter describes a variety of Coast Guard Auxiliary missions Auxiliary air may conduct. The minimum crewing requirements while conducting these missions. For more details on each of these missions see reference (a).

In this Chapter

This chapter contains the following sections:

Section A. Maritime Safety Missions

Introduction

Maritime safety is a generic term for a class of missions flown with a focus on keeping the boating public safe. This mission usually involves one or more generalized sweeps of the sector while keeping a lookout for vessels in distress or unusual activity on the waterways.

This section will discuss some patrol missions covered under Maritime Safety.

In this Section

This section contains the following information:

A.1. Crewing Requirements

The missions in this section may be flown by a qualified Auxiliary Pilot (CP, FP, or AC) during daylight hours and VMC with a minimum crew who may be:

- Another Auxiliary Pilot
- Auxiliary Air Crew
- Auxiliary Air Observer
- Auxiliary Observer Trainee (note – Observer Trainees shall not be assigned to offshore missions, further than gliding distance from shore, prior to completing the swim test and egress training).
- Active-duty member of the Coast Guard

These requirements are minimums and individual Air Stations may have additional requirements.

A.2. Maritime Safety Missions

The following are Maritime Safety mission:

- Maritime Observation Mission (MOM)
- Training
- Agency Support
- Regatta Support
- Safety Zone Support
- Security Zone Support

- Exercise Support
- Logistics Missions
- Law Enforcement Support (LES)
- Active-duty Area of Responsibility Familiarization (AFAM)

A.3. Crew Briefing

The PIC should brief the crew on the area to be covered by the patrol, using both local marine and aeronautical charts. These charts should also be available in the aircraft during the flight to aid in navigation and communication with surface vessels. These patrols should be carefully planned and discussed with the crew, including details of specific mission objectives determined by the requesting Coast Guard authority.

Section B. Marine Safety and Marine Environmental Response

Introduction

This section will detail missions that fall under Marine Safety and Marine Environmental Response.

In this Section

This section contains the following information:

B.1. Crewing Requirements

The missions in this section may be flown by a qualified Auxiliary Pilot (CP, FP, or AC) during daylight hours and VMC with a minimum crew who may be:

- Another Auxiliary Pilot
- Auxiliary Air Crew
- Auxiliary Air Observer
- Auxiliary Observer Trainee (note – Observer Trainees shall not be assigned to offshore missions, further than gliding distance from shore, prior to completing the swim test and egress training).
- Active-duty member of the Coast Guard

These requirements are minimums and individual Air Stations may have additional requirements.

B.2. Marine Safety and Marine Environmental Response

The following are Marine Safety and Marine Environmental Response:

- Initial Pollution Response
- Marine Environmental Protection (MEP)
- Vessel Verification
- Waterway Management Support
- Marine Safety Observation

B.3. Pollution Response

Auxiliary aircraft can help in this mission by responding to reported spills, monitoring clean-up operations, and/or patrolling harbors or other areas for unreported spills. The Auxiliary aircraft can provide the pollution response team with an important aviation resource.

Auxiliary aircraft may be deployed with an all-Auxiliary crew to report their sightings or be used to transport Coast Guard personnel or personnel from other federal or state agencies

B.4. Reporting Pollution Spills

Remember to save all notes, working papers, and other information related to the incident. Spill information should be radioed to the cognizant Coast Guard command, along with any information requested. Upon landing, the appropriate Coast Guard unit should be contacted by telephone and advised of any additional information.

The Auxiliarist should arrange with the cognizant Coast Guard authority for the original documentation (notes, flight/patrol logs, photographs, videotapes, etc.) to be conveyed to the unit, if requested. Do not discard any of the original documentation until authorized to do so, as these could be important evidence in any legal proceeding. Advise the MSO/MSD, or Sector office as soon as a spill is detected. Do not delay notification while obtaining the information listed above.

The MSO/MSD or Sector will advise of any additional information or specific questions to be answered. The following information is needed for adequate spill reporting:

- Source
- Time
- Location
- Weather conditions
- Extent
- Density
- Photographic evidence (when possible)

Record the apparent source of the spill. Some caution is necessary in determining the actual source of a spill since oil from another location up current may hang around a moored vessel, dock, or other facility possibly confusing identification of the actual source. Always look for traces of oil up current of the suspected source. Often a point source will be evident on a leaking facility or vessel. Record any identification readily visible along with the source type (e.g., vessel, loading facility, wellhead, offshore platform, pipeline, or discharge pipe, etc.).

If the apparent source is a vessel, record as much information as possible. Note the vessel name, hull number, type, color, location of superstructure, deck arrangement, colors on funnels, and get a digital image, if possible, etc. Such information could be useful in the event that the vessel has departed prior to the arrival of Coast Guard personnel.

Record the following:

- Time - Record the time of each sighting
- Location - Record the latitude, longitude, and body of water
  - Weather conditions:Ceiling
  - Visibility
  - Wind direction and velocity
  - Seaside conditions, height, and direction of movement
- Extent of the spill
  - Size
  - Direction of movement
  - Direction, width, and length from the source
- Density - Describe the density of the oil sheen

B.5. Photographic Evidence

Whenever possible, it is desirable to gather photographic evidence to supplement written reports. Ideally, these should be oblique color photographs taken with a 35mm camera, high-quality digital or video camera, preferably one with a date/time stamp inserted on the images. Consult with your local MSO/MSD or coordinating unit for guidance on "chain of custody" procedures to be used for photos or videotape.

B.6. References

Open Water Oil Identification Job Aid for Aerial Observation is an excellent job aid, which includes descriptions, as well as aerial photos.

Section C. Navigation Systems Patrol

Introduction

This section will detail missions that fall under Navigation Systems.

In this Section

This section contains the following information:

C.1. Crewing Requirements

The missions in this section may be flown by a qualified Auxiliary Pilot (CP, FP, or AC) during daylight hours and VMC with a minimum crew who may be:

- Another Auxiliary Pilot
- Auxiliary Air Crew
- Auxiliary Air Observer
- Auxiliary Observer Trainee (note – Observer Trainees shall not be assigned to offshore missions, further than gliding distance from shore, prior to completing the swim test and egress training).
- Active-duty member of the Coast Guard

These requirements are minimums and individual Air Stations may have additional requirements.

C.2. Navigation Systems Missions

Area Familiarization - It is often helpful to provide area familiarization over-flights for ATON personnel. Flying a "pre-cruise" mission for the crew of buoy tenders provides them with a bird's eye view of the mission area. These flights are also useful when there is a change of command for a buoy tender in order to take the incoming and outgoing COs on an area familiarization flight.

Transport of Mission Essential Personnel - Auxiliary aircraft may be used to transport Coast Guard or other personnel to support ATON activities.

Chart Updating - Aircraft may detect and identify changes in many of the objects (e.g., bridges, dikes and levees, jetties and breakwaters, marinas, dry docks, utility lines, docks, landmarks, towers, etc.) that should be reported. On a typical chart updating mission or multi-mission patrol, observers will annotate appropriate charts with the approximate location of items of interest for later reporting.

Sinking or Submerged Buoys - Sinking or submerged buoy(s) are quite likely to be detected by trained and competent observers in an aircraft. This is particularly true in cases where the pilot or observer has substantial local knowledge, visibility is well above minimums for flight under VFR, and the location of the buoy is such that there are numerous landmarks to facilitate orientation/navigation. Detection of missing buoys in a well-identified harbor or marina entrance is relatively simple.

Buoys off Station - Buoys off station, adrift, missing, capsized, or stranded are also judged to have a high probability of detection The fact that a buoy is only slightly off station may not be able to be determined from the air, because it is not possible to establish the actual location of the buoy. A buoy markedly off station is likely to be detected. Beached or capsized buoys are usually easily detected.

Radio Beacons - Radio beacons off the air or giving improper characteristics are likewise easily detected, provided the aircraft has an automatic direction finding (ADF) receiver and a light list to consult for details on frequency and characteristics.

Critical Discrepancy - The ability to identify critical discrepancies and to cover large areas in a short time is particularly valuable for "after storm surveys" to assess the damage after major storms. In winter, over-flights can be useful in assessing damage to buoys and other aids resulting from ice.

C.3. Safety

Aerial surveying of ATON should be accomplished from a close enough distance to observe relevant objects, but not at the risk of causing alarm to persons on the ground or placing the aircraft and crew at risk.

Section D. Ice Reconnaissance

Introduction

Ice reconnaissance missions are conducted primarily to ensure shipping channels are safe and free of ice

In this Section

This section contains the following information:

D.1. Crewing Requirements

The missions in this section may be flown by a qualified Auxiliary Pilot (CP, FP, or AC) during daylight hours and VMC with a minimum crew who may be:

- Another Auxiliary Pilot
- Auxiliary Air Crew
- Auxiliary Air Observer
- Auxiliary Observer Trainee (note – Observer Trainees shall not be assigned to offshore missions, further than gliding distance from shore, prior to completing the swim test and egress training).
- Active-duty member of the Coast Guard

These requirements are minimums and individual Air Stations may have additional requirements.

D.2. Ice Reconnaissance

Auxiliarists carry out ice reconnaissance as follows:

- Observe and report ice conditions.
- Monitor ice fishing and other winter activities.

D.3. Protective Gear

The crew should dress in appropriate uniforms for the forecast weather conditions expected during the flight and the aircraft should be equipped with appropriate winter survival gear. Generally, the crew should wear layers of clothing to accommodate different temperatures at altitude or in sunlight. Should any portion of the flight be beyond gliding distance of shore, the appropriate equipment and clothing is utilized.

D.4. Pre-Flight Planning

The following pre-flight planning is required for winter operation:

- Check the full route of flight.
- Check conditions of airports along the route (ice on runways, fuel availability, etc.).
- Airports and terrain may appear different in winter conditions as runways ice up quickly.
- Monitor for carbon monoxide.
- Taxi carefully.
- Run-up on dry areas and not on ice.
- Use soft-field landing technique.
- Check wheel pants for ice/snow. They should be removed for winter flights.
- Check the aircraft surfaces, pitot, vents, and antennas for ice blockage or accumulation.
- Check for moisture on control surfaces and hinge areas.

D.5. Ice Reporting

Sectors will provide the flight crew specific tasking for ice missions. Many provide specialized cameras and reporting requirements. Information from weekend flights is used to direct ice breaker movements during the week. It is important to provide timely and accurate reports with photographic imagery.

Observer's Guide to Sea Ice

Some Sectors may prefer plain language reports of ice conditions. Check with the OIA and/or the Sector prior to the mission. Digital photographs of ice conditions are invaluable to the Sector. AUXAIR crews are encouraged to carry digital cameras on all ice missions and multi-mission patrols.

Section E. Search and Rescue

Introduction

This section describes the Auxiliary flight crew support and facility use in carrying out the SAR mission. For additional SAR procedures and training requirements see reference (c).

In this Section

This section contains the following information:

E.1. Crewing Requirements

SAR missions may be flown by a First Pilot (FP) or Aircraft Commander (AC), during daylight hours and VMC, with minimum crew who may be:

- Second Auxiliary Pilot
- Auxiliary Air Crew
- Auxiliary Air Observer
- Active-duty member of the Coast Guard
- Observer Trainees do not suffice as minimum crew for SAR

These requirements are minimums and individual Air Stations may have additional requirements.

NOTE

Whenever an Auxiliary aircraft is manned, equipped and available for assignment to a SAR the PIC shall inform the Air Station and Sector.

E.2. Auxiliary Aircraft Usage

For the Auxiliary aircraft, SAR response often takes the form of searching for a person or vessel on the waterways. The Auxiliary aircraft, in this scenario, functions as an observation and communications platform, following certain criteria in the search for the target.

E.3. Mission Priority

SAR generally takes priority over other missions, but it must be coordinated with the Coast Guard units controlling the mission, and the pilot and crew must ensure that they have the skills and resources to complete a SAR before accepting the mission. The aircraft must be properly equipped, and the crew properly trained to be “SAR divertible”.

E.4. Come-Upon SAR

It is vital, in the event of a diversion for SAR or in the case of a "come-upon" SAR event, that the OIA be notified and consent to any deviation from previously assigned missions.

CHAPTER 7
Conduct of Aircraft Operations

Introduction

Coast Guard flight operations occur over land, along the shoreline, over open water and on the high seas. Flight procedures are those relating to the movement of aircraft and the operation of those aircraft while under orders. This chapter describes crew responsibilities and flight operations.

In this Chapter

This chapter contains the following information:

Section A. Flight Discipline

Introduction

Flight discipline is the resolve to safely employ an aircraft within operational, regulatory, and organizational guidelines while using a systematic approach to track and validate the path of the aircraft and the actions of fellow crewmembers. Flight discipline recognizes the ever-present potential for human error due to (1) the limitations of human performance; (2) the challenging and complex aviation environment and (3) the multifaceted interactions among flight crewmembers and aircraft technology. Flight discipline creates and maintains flight safety through CRM core competencies.

In this Section

This section contains the following information:

A.1. Crew Duties

All flight crewmembers are duty bound to implement and employ flight discipline defined behaviours without hesitation in all situations. Each crewmember contributes to mission accomplishment through the effective and efficient completion of their assigned crew duties and shall also monitor and back up other crewmembers to ensure the accurate accomplishment of their duties. To create and maintain aircraft flight safety while executing the mission, all crewmembers shall perform their specific flight duties:

- The primary responsibility of the pilot flying (PF) is to control the flight path of the aircraft, including monitoring automated systems if engaged. It is the PF's secondary responsibility to monitor non-flight path associated tasks such as aircraft systems, navigation, radio communications, and the activities of other crewmembers. The PF shall not allow the secondary responsibility to interfere with the primary responsibility of controlling and monitoring the aircraft's flight path.
- The primary responsibility of the second pilot is to monitor the flight path of the aircraft, including monitoring automated systems if engaged, and execute appropriate backup. It is the PM's secondary responsibility to complete non-flight path associated tasks such as aircraft systems, navigation, radio communications, and the activities of other crewmembers. The PM shall not allow the secondary responsibility to interfere with the primary responsibility of monitoring the aircraft's flight path.
- The primary responsibility of flight crews is to execute their assigned duty in aircraft cabin and monitor the flight path of the aircraft during critical phases of flight.

A.2. Checklist Use

Checklists shall be used in all Coast Guard Auxiliary aircraft. The use of checklists is mandatory. Auxiliary flight crews shall use a challenge and respond checklist.

If an approved electronic checklist is used, there must be a paper copy within arm's reach ready for immediate availability. The most recent checklist provided in the appropriate flight manual shall be used

A.3. Standard Phraseology

The use of standardized phraseology promotes effective communication and increases team efficiency. To maintain shared situational awareness among flight crews, crewmembers shall announce changes in flight path and/or aircraft configuration.

A.4. Critical Phases of Flight

Critical phases of flight are aircraft operations where the consequences of deviation increase, and safety margins decrease. Critical phases of flight include but are not limited to:

- All ground operations involving aircraft movement
- Take off, approach, and landing
- Anytime a checklist is in progress
- Immediately prior to level off during climb/descent under IFR
- Low altitude
- Hover operations
- Below 300 feet AGL/AWL during approach or departure from a hover
- As directed by the PIC

All flight crewmembers will employ the sterile cockpit rule to minimize distractions during critical phases of flight. This rule is not solely limited to the personnel physically located in the cockpit area of the aircraft, as the title may indicate, but this rule applies to everyone on the aircraft. No person shall engage in any conversation or activity that could distract or interfere with a flight crewmember properly conducting their assigned duties during critical phases of flight. This rule does not preclude emergency procedure training.

During critical phases of flight, the PM (if one is on board) shall be able to immediately take control of the aircraft if necessary. The PM shall announce any control inputs that assist or limit the flight control inputs of the PF.

A.5. Two-Challenge Rule

During the normal course of operations, if any crewmember challenges the actions of the pilot flying and does not receive an appropriate acknowledgment after a second challenge, the second pilot shall initiate a change in control of the aircraft. If there is a single pilot on board, flight crewmembers may initiate the two-challenge rule, and if there is no appropriate response, may request the PIC to terminate the mission and return to the home field.

A.6. No Challenge Rule

If the second pilot feels the aircraft is in extremis and immediate action is required for the safety of flight, the second pilot shall initiate the appropriate control input in lieu of the Two-Challenge Rule while verbalizing the control inputs and hazardous condition (e.g., left turn, traffic, my controls). Once the hazard is cleared, positive aircraft control shall be definitive (e.g., clear of the hazard, your controls).

A.7. Automation

The purpose of aircraft automation is to assist the flight crew with mission accomplishment. Flight crews delegate flight path and aircraft system functions to balance workload and optimize situational awareness. The level of automation used at any specific time should be the most appropriate to (1) safely control the flight path of the aircraft; (2) assist flight crew workload; (3) maintain shared situational awareness among the flight crew; and (4) enhance mission effectiveness. Flight crews shall adhere to the following automation principles:

- Flight crews have the final and ultimate authority over the automation for controlling the aircraft flight path and monitoring aircraft systems.
- Aircraft automation shall not command flight crew actions but recommend/suggest appropriate actions, and the flight crew shall determine the proper course of action.
- Flight crews shall know their current aircraft automation level, and how that automation level affects their workload and shared situational awareness.
- Automation that requires the use of internal databases shall be checked for currency and functionality.
- Flight crews shall be proficient in operating the aircraft at, and transitioning between, all levels of automation.
- If aircraft automation provides unexpected commands to the flight controls, flight crews shall revert to lower levels of automation, or manual flying, as necessary, before resolving any problems with the automation.

Since the automation interface is unique to the aircraft, the PIC shall define the specific levels of automation.

A.8. Automation Flight Discipline

Advanced technology aircraft with automated systems require high levels of crew coordination to prioritize tasks and effectively manage workload. Successful crew coordination is accomplished through standardized procedures and flight discipline. To maintain appropriate levels of automation situational awareness, flight crews shall adhere to the following:

- Ensure the duties of all flight crewmembers using automated systems are clearly defined, briefed, and understood.
- Maintain constant awareness of cockpit automation modes in all phases of flight.
- Use standard phraseology for advising current automation status, any changes to the automation status or aircraft systems status.
- Perform normal systems monitoring duties in conjunction with utilizing advisories from automated alert systems.

Ensure that automation systems data entry does not detract from the primary responsibility of controlling and monitoring the aircraft flight path, refer to Crew Duties.

A.9. Operating the Flight Controls

Pilots shall constantly know who is operating the aircraft as PF and PM and ensure both roles are occurring throughout the flight. Flight control transfer between PF and PM shall be announced verbally and conducted in a clear and direct manner. The PF is responsible for controlling the flight path until the PM acknowledges PF duties.

A.9.a. Control Guarding and Defensive Posturing

During critical phases of flight, the PM shall have his or her hands and feet in a position to immediately take control of the aircraft if necessary. The PM shall announce any control inputs that assist or limit the flight control inputs of the pilot flying. Changes in physical control shall be accomplished per the guidance in the following Paragraph.

A.9.b Changes in Physical Control	Changes in the physical control of aircraft shall be done in a positive manner. Normally, simple voice procedures shall be used. The pilot exercising control is responsible until the relieving pilot verbally acknowledges acceptance of control. When verbal transfer is not possible for reasons such as high noise levels or an inoperative Intercommunications System (ICS), the following procedures shall be used: • The pilot desiring to be relieved shall pat his or her head with one hand and then point to the other pilot. • The pilot taking control shall pat his or her head in acknowledgment and immediately and deliberately move both hands to the flight controls. • The pilot being relieved shall hold both hands overhead signifying that he or she has given up control. • In instances where a second pilot or qualified air crew are not on board, air observers should assist the pilot-in command (PIC) with routine duties such as traffic awareness, radio tuning, logging of time over waypoints, etc., provided that the observer has been properly trained and briefed.
A.10. Knowledge of Aircraft Manuals and Directives	Auxiliary Pilots shall be familiar with the publications that pertain to all aircraft for which they hold current qualifications and ratings. These publications include, but are not limited to, aircraft flight manuals, safety of flight supplements, etc. A current flight/performance manual (portable electronic device or paper) and all pertinent checklists shall be carried on the aircraft and be available to the crew. Pilots shall ensure that all flight crewmembers are briefed on all matters pertinent to the safe operation of the aircraft, the mission, their duties, and overall flight safety.
A.11. Focus on Aviation Professionalism	A focus on aviation professional development early in a pilot's career is paramount to building a solid foundation of knowledge and skill. Continued training provided by the Coast Guard and FAA is an integral part of professional development.

Section B. Ground Operations

Introduction

This section describes policy and requirements for aircraft ground operations.

In this Section

This section contains the following information:

B.1. Starting the Aircraft Engines

An aircraft engine shall not be started unless a pilot, either in training, or qualified in type and model occupies a pilot's seat.

B.2. Engaging Helicopter Rotors

A pilot qualified in type and model shall occupy a pilot's seat whenever the rotor is engaged, turning under power, or during shut down.

B.3. Engine Start Procedures

Observe the following precautions before starting an engine or APU:

- Prior to engine start, the pilot must ensure the ramp area surrounding the aircraft is clear of persons, equipment, and other hazards from coming into contact with the airplane or the propeller.
- The pilot shall be aware of what is behind the aircraft prior to engine start.
- Fixed-wing aircraft that depart the ramp before starting all engines can conduct further engine starts while taxiing.
- Prior to starter engagement, the pilot should call "clear", if allowed by the aircraft configuration, and wait for a response from anyone who may be nearby.
- Aircraft operating from military airfields shall be aware of and comply with applicable procedures.

B.4. High Power Run-Ups	Before conducting a high-power run-up, position the aircraft so that propeller, rotor, or exhaust blast will not cause damage to other aircraft, personnel, equipment, or property.
B.5. Taxiing Aircraft	Only pilots qualified in type and model, shall taxi a fixed-wing aircraft. Only pilots qualified type and model, shall taxi a rotary-wing aircraft.
B.6. Controlling Vehicles Near Aircraft	When operating vehicles near aircraft, adequate guide personnel shall be used to help vehicle operators maintain safe clearance.
B.7. Hot Refueling	Hot refuelling is the act of fuelling an aircraft while one or more engines are operating. Gravity feed hot refuelling is prohibited. Gas turbine aircraft equipped with a single-point (pressure) refuelling capability may be hot refuelled with the PIC's approval. Hot refuelling piston aircraft operating on avgas is extremely hazardous due to the low flash point and is not authorized. Carefully weigh the benefit of repetitive hot refuelling against the risk. By lengthening the interval between through/post flight inspections, the risk of experiencing an undetected aircraft component problem increase.
B.8. Loading/ Unloading of Cargo	It is the responsibility of the PIC to ensure that cargo is loaded and unloaded safely, and that its effect on weight and balance is noted, analysed, and considered before further flight. Normally, the aircraft's engines should not be running, and propellers/rotors should not be turning while cargo loading/unloading operations are in progress. If required by operational exigency and deemed by the PIC to be safe under the existing conditions, cargo may be loaded/unloaded with engines running and/or propellers/rotors turning. Care shall be taken to ensure that an adequate safety zone is maintained around any turning propellers/rotors and exhaust blast areas during any engines running evolution. Care shall also be taken to prevent any foreign object from becoming dislodged and damaging the aircraft or cargo, or injuring personnel during the loading and unloading process.
B.9. Embarkation/ Debarkation of Personnel	It is the responsibility of the PIC to ensure that all personnel enter and leave the aircraft safely. Aircraft's engines should not be running, and propellers/rotors should not be turning while personnel are entering or leaving the aircraft.

Section C. General Flight Rules

Introduction

This section will discuss general flight regulations and policies for Auxiliary air.

In this Section

This section contains the following information:

C.1. Overview

Federal Aviation Regulations contained in Title 14 CFR, International Civil Aviation Organization (ICAO) Conventions (except as provided in Flight Information Publication (FLIP) General Planning), International Regulations for Preventing Collisions at Sea, and the DoD Foreign Clearance Manual are binding on Coast Guard personnel in the operation of all Coast Guard Auxiliary aircraft, including UAS and lighter than air vehicles

C.2. Approved Publications

Flights in Coast Guard Auxiliary aircraft, operating under orders, shall be conducted in accordance with the rules, regulations, or recommended procedures specified by the publications in the following list.

- Coast Guard Directives
- Federal Aviation Regulations (FARs)
- International Civil Aviation Organization (ICAO) Conventions
- Procedures, Standards, and International Regulations for Preventing Collisions at Sea
- FAA Aeronautical Information Manual (AIM)
- FAA Airplane Flying Handbook
- Pertinent FAA Advisory Circulars (AC)
- NOTAMs and TFRs

C.3. Restricted Airspace

Pilots of a Coast Guard Auxiliary aircraft shall be aware of and comply with all Restricted Airspace, Prohibited Airspace, and Temporary Flight Restrictions (TFRs).

C.4. Airspace Regulations

Coast Guard Auxiliary aircraft must follow special airspace regulations. This includes warning areas, Class B airspace, etc. It is the sole responsibility of the PIC to check all Notices to Air Missions (NOTAMs), TFRs and other applicable guidance prior to getting airborne.

C.5. Use of GPS for Navigation

For IFR flight, aircraft navigation shall not be predicated solely upon the Global Positioning System (GPS) unless the aircraft GPS Navigation System is certified for IFR navigation in the applicable phase of flight. Non-certified GPS may be used as a means to confirm other navigation sources.

C.6. Digital Moving Maps

Aircraft using digital moving maps on their Multi-Function Displays (MFD) shall be equipped with a current map series obtained from the manufacturer's recommended source.

With expired maps, avoid making critical navigation decisions based solely on the moving map display, due to possible discrepancies with various classes of airspace.

C.7. Terminal Instrument Procedures

Terminal instrument procedures prescribed by the FAA or DoD are authorized. Also, terminal instrument procedures prescribed by an ICAO contracting state are authorized provided the procedure is identified as meeting criteria equivalent to that specified in any of the following: The United States Standard for Terminal Instrument Procedures (TERPS), ICAO Document 8168-OPS; Procedures for Air Navigation Services-Aircraft Operations (PANS-OPS), Volume II, Joint Aviation Authorities, Joint Aviation Requirements, operational agreements, Part 1 (JAR-OPS-1).

C.7.a. Instrument Approach and Landing Minimums

An instrument approach may be started and flown to minimums when the reported weather is below minimums; however, the pilot will not descend below the published Minimum Descent Altitude/Decision Altitude (MDA/DA), or land, unless he or she can either:

- Comply with 14 CFR §91.175
- Proceed with a contact approach

When using a non-precision approach, the visual descent point (VDP) is a defined point on a straight-in, non-precision approach from which you can descend below the MDA, as long as you have the required visual reference. If a VDP is available, it will be indicated by a "v" on the profile view portion of the instrument approach procedure chart. Do not descend below MDA before reaching the VDP. The VDP may be manually calculated if one is not specified on the approach chart.

	For instrument approaches, the term Military Aircraft in 14 CFR §91.175(c) does not exempt Coast Guard Auxiliary aircraft from adhering to the provisions of that Paragraph.
C.7.b Helicopter Circling Approach Minimums	Helicopters may circle to land at the straight-in MDA or DH as long as they can accomplish the maneuver within 500 feet of the runway centerline and remain within the airport boundaries. Determination of departure or arrival requirements contained in Chapter 5 of this process guide shall not be predicated upon this capability.
C.7.c. ILS Approach Categories	Category II and III ILS approaches are not authorized.
C.7.d. Navigation Source Selection	Use of an approved RNAV system as a means to navigate on the final approach segment of an instrument approach procedure based on a VOR, TACAN or NDB signal, is allowable. The underlying NAVAID must be operational and monitored for final segment course alignment
C.8. Simulated Instrument Flight	Simulated instrument flight in any Coast Guard Auxiliary aircraft is prohibited unless another pilot (other than the PF) who is CFII rated and current, qualified in type and model, is in the cockpit monitoring the evolution.
C.9. Visual Approaches	Accepting and flying a visual approach at an unfamiliar field elevates the risk and difficulty of flying the approach. To the maximum extent practical, instrument rated flight crews landing at an unfamiliar airfield shall request and fly a published instrument approach, if available. If a visual approach is to be made, the PIC shall be familiar with the area surrounding the airport, including nearby airports, terrain, and obstacles; and the airport environment, including local traffic pattern procedures, airport layout and communications procedures. Fixed-wing aircraft shall adhere to electronic and/or visual glide path guidance when available. When available, fly the Visual Approach Slope Indicator (VASI) or Precision Approach Path Indicator (PAPI) to ensure the correct glide slope. A VASI is considered a Terminal Instrument Procedure (TERP) and provides obstacle clearance out to 4 SM from the runway threshold. A PAPI is considered a TERP out to 4 SM from the point of its origin, typically 1000’ down the runway.

C.10. Stabilized Approach Criteria

A fixed-wing aircraft shall execute a missed approach or go-around if the following criteria are not met, except for momentary deviations by 1,000 feet AGL in IMC or 500 feet AGL in VMC:

- The aircraft is in the intended landing configuration.
- The aircraft is on the intended flight path with no more than minor corrections required.
- Aircraft speed is within 10 knots of the computed approach airspeed.
- Sink rate is no greater than 1,000 fpm.
- All briefings and checklists are complete.
- If on a precision approach, the aircraft is within one dot of the localizer and glideslope. If circling, the aircraft is wings level by 300 feet AGL.

If deviations from stabilized approach criteria are required, they shall be briefed to the crew prior to executing the approach.

C.11. Special PIC Qualification Airports

When weather is less than 1,000 feet above the MEA, a fixed-wing aircraft may not conduct an approach to an airport identified by the FAA as a Special PIC Qualification airport unless the PIC has reviewed surrounding terrain and obstructions using pictorial means (e.g., photographs and topographical maps) and is familiar with all approach and departure procedures likely to be flown at that airport. If the PIC has flown to a Special PIC Qualification airport within the preceding 12 months, a pictorial review is not required.

C.12. Minimum Equipment for Flight

It is desirable that all Coast Guard aircraft be fully equipped and have all components functioning properly on every mission. It is recognized that for certain missions and under specific circumstances safe operation is possible with less than all equipment operational.

The final responsibility regarding equipment required for a mission rest with the PIC. Acceptance of an aircraft by a PIC to operate on one mission or mission segment without an item or system does not commit that PIC or another PIC to subsequent operations with the same item or system inoperative.

C.13. Transponder and ADS-B

Coast Guard Auxiliary aircraft shall fly with a functioning radar beacon transponder with mode 3/A or Mode S capability. While ADS-B is not mission essential equipment, a properly functioning ADS-B is required in most airspace. Aircraft not equipped with ADS-B are limited in the airspace they are allowed to fly in and the missions they may be assigned.

C.14. Call Sign and Transponder Codes for SAR and LE

Chapter 9, Section C details Auxiliary Aircraft call signs.

Coast Guard Auxiliary aircraft while on Coast Guard orders shall use "Coast Guard 8xxx" (where 8xxx is the aircraft's unique call sign) when communicating on any frequency external to the aircraft. This includes communication with ATC, FAA, Coast Guard, and/or other agency units/assets.

When assigned to a SAR response mission, the aircraft facility may use "Coast Guard Rescue 8xxx".

Coast Guard Auxiliary aircraft shall use the RESCUE call sign defined in FAA Joint Order 7110.65 (series) when communicating with air traffic control and are authorized to squawk Mode 3 code 1277 on search and rescue missions when operating VFR to, from, or within a designated search area. At SAR case conclusion, or when not actively engaged in support of a SAR mission, the RESCUE call sign and 1277 code should not be used. Coast Guard Auxiliary aircraft may be assigned tactical call signs for a specific mission (ex. law enforcement support) by the OIA or the On-Scene Commander.

The aircraft's selectable ADS-B system shall be set with the assigned Coast Guard call sign prior to the mission and reset to the aircraft registration number after the mission is complete

C.15. Occupation of Pilot Seat

The PIC of a Coast Guard Auxiliary aircraft that requires two pilots will ensure that both pilot seats are always occupied. If either pilot must leave his or her seat, he or she will be relieved by another pilot or air crew. At least one seat will always be occupied by a pilot designated in type and model.

C.16. Inflight Emergencies

As soon as practicable following the declaration of an emergency, the PIC should notify, or request the agency with whom he or she is communicating to notify, the unit holding radio guard and the command exercising operational control (OPCON) over the aircraft for that mission (typically the Air Station). During this critical time, communications with the aircraft should be limited to providing whatever assistance or advice is requested by the PIC. The responsibility for the safety of the aircraft and crew and the successful resolution of the emergency lies solely with the PIC.

C.17. Laser Illumination	If a flight crewmember receives a direct eye strike by an external laser light source, the crew shall act to ensure the safety of the aircraft and minimize further exposure to lasers. Do not look for the source of the laser using binoculars or other magnifying optics since this could lead to significant eye injury. After an incident, crewmembers receiving a direct eye strike from a laser should be assessed and the PIC shall determine if the crew can safely continue the mission. The location of the incident shall be reported to OPCON, the nearest air traffic control facility, and local law enforcement as soon as safely possible. Upon return to the home airfield, the incident shall be reported to the Air Station flight safety officer (FSO) and the Auxiliary district flight safety officer (DFSO) and the members receiving a direct eye strike from a laser shall be assessed by medical personnel in accordance with reference (f). Additionally, the Command shall notify Coast Guard Investigative Services (CGIS), the CIO/CDIO, and District Intelligence Staff of the event as well as the law enforcement agency to which the event was originally reported.
C.18. Unusual Performance of Aircraft	PICs shall monitor any abnormal, erratic, or unusual performance of their aircraft or their power plants and if necessary, perform a precautionary landing.
C.19. Annoyance to Persons and Endangering Property	Flights of Coast Guard Auxiliary aircraft shall cause a minimum of annoyance to persons and activities. It is not sufficient that the pilot is satisfied that no person is endangered. The pilot must exercise enough caution to be assured that no person could reasonably believe that they or their property is endangered. Except for operational missions requiring otherwise, the following specific restrictions apply.
C.19.a. Fur and Poultry Farms	Fur and poultry farms shall be avoided. Valuable broods and litters may be lost due to panic caused by aircraft.
C.19.b. Resorts and Beaches	Resorts and beaches shall be avoided by fixed-wing aircraft by at least one mile when at an absolute altitude of less than 2,000 feet and by rotary-wing aircraft by at least 1/4 mile when at an absolute altitude of less than 500 feet. This limitation is waived when these areas are over flown for the conduct of an operational mission, in normal enroute flights on airways, or in compliance with an approved traffic or approach pattern.

C.20. Disturbance of Wildlife

District Aviation Boards and Air Station Commanding Officers shall implement standard operating procedures to prevent unnecessary over-flight of sensitive environmental habitat areas, to include, but not be limited to, critical habitat designated under the Endangered Species Act, migratory bird sanctuaries, marine mammal haul-outs and rookeries, and sea turtle nesting beaches. Pilots shall be made aware of the location, dimensions, and valid time periods of environmentally sensitive areas within the unit's AOR, and as noted on aeronautical charts.

If flying over environmentally sensitive areas, maintain an altitude of no less than 2,000 feet AGL except during response or reconnaissance operations. Additionally, Air Station Commanding Officers may authorize specific training events within environmentally sensitive areas when no reasonable alternatives exist. Prior to approving such training flights, the Air Station Commanding Officer must ensure compliance with all applicable environmental laws, regulations, and Executive Orders, and conduct any required coordination with the regulatory agency associated with the applicable law and area to be overflown. Limit the amount of time spent at low altitudes to what is necessary to accomplish the particular response, reconnaissance, or authorized training operation.

NOTE

Hunting from any Coast Guard Auxiliary aircraft is prohibited IAW reference (b).

C.21. Air Defense Identification Zones

Adhere to all procedures for operating within or transiting Air Defense Identification Zones (ADIZ). A unique transponder code is typically assigned by the OIA or appropriate authority.

C.22. Operations Over High Seas

A Coast Guard Auxiliary aircraft should not conduct operations on the high seas unless they are equipped with appropriate Flight Information Publications and the aircraft conforms to all applicable FARs.

Coast Guard Auxiliary aircraft participating in Law Enforcement Support on the high seas may be part of a Due Regard operation where contact with ATC is not maintained, including transponder and ADS-B operation.

If participating in a Due Regard operation, pilots are responsible to exercise due regard for the safety and navigation of civil aircraft. Coast Guard Auxiliary aircraft should only be assigned to Due Regard operations when the operational gain significantly outweighs the risk. When Due Regard operations are conducted, full responsibility for separation between Coast Guard aircraft, including Auxiliary aircraft, and all other aircraft, both public and civil, falls on the Coast Guard.

	Operational airspace deconfliction is the responsibility of the active-duty operational and tactical commanders (OPCON and TACON). Commanders must ensure procedures are in place to minimize the risk, including de-confliction procedures and a tactical communications plan. Commanders must be especially vigilant in identifying situations where more than one aircraft are directed to operate in the same area or to proceed to the same point.
C.24.a. Aircraft Operating Within RADAR Surveillance and Radio Communications of a Surface RADAR Facility.	Airspace deconfliction during Due Regard operations may be accomplished when an aircraft is in radar and radio contact with a surface facility only when that facility is certified to provide aircraft separation by the appropriate controlling agency.
C.24.b. Operations with Aircraft Equipped with RADAR Providing Separation	Coast Guard Auxiliary aircraft are typically not equipped with radar that is sufficient to provide airspace deconfliction during Due Regard operations. Other aircraft that are properly equipped and certified by the appropriate controlling agency can provide aircraft separation, including active-duty aircraft.
C.23. Instrument Meteorological Conditions Operations Outside Controlled Airspace	Aircraft operations in IMC in uncontrolled airspace shall be minimized. Aircraft commanders must exercise sound judgment before entering IMC in uncontrolled airspace keeping in mind the goal is to descend or ascend to acquire VMC. If mission requirements allow, aircraft commanders shall broadcast their intentions on applicable common or guard frequencies before initiating operations in IMC in uncontrolled airspace. Except when mission requirements dictate, prolonged IMC operations in uncontrolled airspace are not allowed.
C.24. Use of Aircraft Exterior Lights	Lights out operations may be conducted within US domestic airspace under the provisions of the FAA Exemptions and Authorizations if authorized by the Air Station Commanding Officer for a specific mission.
C.25. Fuel Reserve	Coast Guard Auxiliary aircraft must follow the fuel reserve requirements contained in Chapter 5 of this process guide.

C.26. Beach Landings	Auxiliary pilots may conduct beach landings only when emergency conditions dictate.
C.27. Water Landings	The FAA approved aircraft flight manual contains procedures, limitations, and techniques dealing with water landings by seaplanes and amphibious aircraft. Pilots of floatplanes may not make non-emergency open-sea landings while on orders, unless authorized by the OIA.
C.28. Formation Flying	Aircraft may not fly in formation, of any type, including "loose" formation, while under orders, with the exception of RWAI training flights.
C.29. Aerial Deliveries	Auxiliary flight crew must not drop any equipment of any type for any purpose.
C.30. Operations at Uncontrolled Airfields	Pilots of Coast Guard Auxiliary aircraft operating at uncontrolled airfields should exercise additional caution and mitigate the risk by following the procedures described in the Aeronautical Information Manual (AIM), Airplane Flying Handbook, and pertinent Advisory Circulars (AC). These references provide guidance for standardized traffic patterns, communicational phraseology, and operational procedures. Pilots shall follow recommended procedures for the transition from the enroute to the landing phase of flight, and standardized entry into and departure from the pattern. Prior to entering or departing the airspace surrounding an uncontrolled airfield, flight crews shall update their RM assessment to identify and assess the hazards, evaluate the risk level, and mitigate the risk. Effective CRM is essential to reducing risk.

Section D. Operational Flight Maneuvers

Introduction

This section will specify authorized and prohibited flight maneuvers.

In this Section

This section contains the following information:

D.1. Formations of Aircraft

Formation flights for RWAI training shall be thoroughly coordinated and briefed by all participating flight crews before conducting the flight. For flights of dissimilar aircraft particular attention shall be given to differences in wake turbulence, minimum and maximum airspeeds, manoeuvring power requirements, clearing, and flight safety.

D.2. Flight in the Vicinity of Civil Aircraft

Commercial carriers and other civil aircraft shall be avoided unless close approach is required by SAR, law enforcement operations, homeland security operations, or conforms with Air Traffic Control (ATC) instructions and clearances.

D.3. RWAI Authority

Only those pilots and crew authorized and trained by the Air Station may conduct RWAI training operations.

D.4.a. RWAI Training Limits

Intercept training shall be conducted at a minimum of 1,000 feet AGL. In abeam, head-to-head, and static TOI intercepts both aircraft shall have each other in sight by no less than one NM to continue the practice intercept. If the TOI aircraft maintains position over a linear geographical landmark or agreed upon ground track, only the interceptor is required to have the other aircraft in sight at one NM to continue the practice intercept.

D.4.b. RWAI Training Tracks of Interest

Only aircraft specifically pre-briefed to conduct RWAI training shall be intercepted during training evolutions or exercises. At all times during close maneuvering, the simulated TOI aircraft shall have one crewmember exclusively designated to monitor the interceptor position and closure.

	Coast Guard Auxiliary aircraft may be used to conduct day and night training and exercises only when radar services by an air defense ground-based or airborne radar control source are utilized. All Auxiliary flights in support of RWAI training shall be conducted in accordance with this process guide and any specific training and regulations provided by the Air Station.
D.4. Zooming of Vessels	No vessels shall be zoomed except in an emergency or during a SAR operation when the attention or assistance of the vessel is desired. Identification passes for law enforcement support and SAR are authorized. The FAA has specifically authorized the Coast Guard to deviate from 14 CFR §91.119(c) on law enforcement support missions, specifically to operate no closer than 200 feet from a suspect vessel and no closer than 500 feet from other persons, vehicles, vessels, or structures.
D.5. Aggressive Maneuvering	The aggressive use or maneuvering of a Coast Guard Auxiliary aircraft to stop a noncompliant vessel is prohibited.
D.6. Feathering Propellers/Securing Engines	No propeller shall be feathered or engine shutdown in flight, except in an emergency, during a maintenance flight or as part of a pilot qualification syllabus or flight check. If a propeller is feathered or engine is shut down for training, it must be conducted in accordance with the following criteria: • Day, VMC only. • In the vicinity of a suitable airport with crash equipment immediately available. • The entire feathered propeller/secured engine evolution shall be conducted at or above 6,000 feet AGL.

Section E. Offshore Flight Operations

Introduction

The Commanding Officer of an Air Station to which a rotary-wing or fixed-wing Coast Guard Auxiliary aircraft is assigned must carefully weigh the urgency of each offshore mission. Mission planning for offshore flight operations shall include an assessment of flight crew survivability and the risk management policy stated in Chapter 5, Section A, paragraph A.3. This analysis shall be based on the possibility that the flight crew might be forced into a survival situation during any phase of the mission.

In this Section

This section contains the following information:

E.1. General

Flying beyond the gliding distance from shore is an offshore operation. Shore is "land that is suitable for an emergency landing with a reasonable expectation of landing without injury to persons on board the aircraft." Single-engine aircraft may not proceed more than 50 miles offshore unless authorized by the Air Station Commanding Officer.

Multi-engine aircraft may operate offshore without limitation, other than limits set by the Air Station Commanding Officer. Co-Pilots may only fly as PIC within gliding distance from the shore.

When working with a surface vessel, helicopter, or other recovery asset which a communications guard is maintained, the shore effectively extends to the location of the communications guard.

When operating missions offshore, the flight crew may experience conditions not normally encountered in personal flying. Maritime safety missions, including SAR prosecution, are typically flown at a lower altitude than would normally be chosen for an over-water route. Offshore weather may be quite different from inshore or even shoreline airports. It is not unusual for haze conditions offshore to blend with reduced visual cues created by calm water and contribute to a lack of spatial awareness. Due to these circumstances, certain procedures have been mandated for all offshore operations in Auxiliary aircraft operating under orders, and it is recommended that at least one pilot aboard be instrument-rated when operating out of sight of land.

E.2. Special Requirements

The following are special requirements to be met before any offshore operation is conducted or contemplated:

- The pilot must be a first pilot or aircraft commander
- All crewmembers must be current in Egress Training and Water Survival training
- Appropriate PPE must be worn or carried
- The aircraft must be equipped with specific rescue and survival equipment, such as rafts, signaling, and first-aid gear
- Offshore missions are flown only in daytime and under VMC

Non-operational offshore overflight may be authorized at night or IMC.

E.3. Inflight Emergencies	As soon as practicable following the declaration of an emergency, the PIC should notify, or request the agency with whom he or she is communicating to notify, the unit holding radio guard and the command exercising operational control (OPCON) over the aircraft for that mission (typically the Air Station). During this critical time, communications with the aircraft should be limited to providing whatever assistance or advice is requested by the PIC. The responsibility for the safety of the aircraft and crew and the successful resolution of the emergency lies solely with the PIC.
E.4. PPE	All aircraft must follow the PPE guidelines described in Chapter 10, Section D. and comply with applicable FARs when operating offshore. Recommended PPE can be found in the Personal Protective Equipment for Auxiliary Aviation document.
E.5. Flight Crew Survivability Factors	There are three factors that should be evaluated for each mission over water: estimated time to loss of useful consciousness, probable survival time, and estimated recovery time
E.1.a. Loss of Useful Consciousness	Loss of useful consciousness adversely affects the probable survival time since the crewmember loses the physical ability to control the survival situation due to the debilitating effects of hypothermia, the abnormal lowering of internal body temperature. Even in situations where fatality from hypothermia is highly improbable, cold water greatly facilitates unconsciousness and/or death from drowning, often in the first 10 to 15 minutes, particularly for those not wearing flotation devices.
E.1.b. Probable Survival Time	Exposure to the chilling effects of cold air, wind, or water can result in fatal hypothermia. The rate of body heat loss increases as air and water temperatures decrease. Fatal results from hypothermia occur over four times more often in water than on land. The curves in Table 7-1 were developed using known data points for specific sets of known conditions. In the general case, and even when conditions are close to those used to generate the curves, Table 7-1 should be used as a guideline, not as a precise indicator. A large amount of individual variability can be associated with different body sizes, builds, level of body fat, physical fitness, and state of health. Specialized insulated protective clothing (e.g., survival suits, wet suits) are capable of increasing survival time from 2 to 10 times (or more) the basic duration shown in Table 7-1.

E.1.c. Recovery Time

Recovery time is the total elapsed time from the occurrence of a mishap until the flight crew is rescued. Recovery time includes the time required for recovery resources to become aware of the mishap, ascertain the position of the downed flight crew, proceed to scene, conduct a search, effect rescue, and begin appropriate medical treatment.

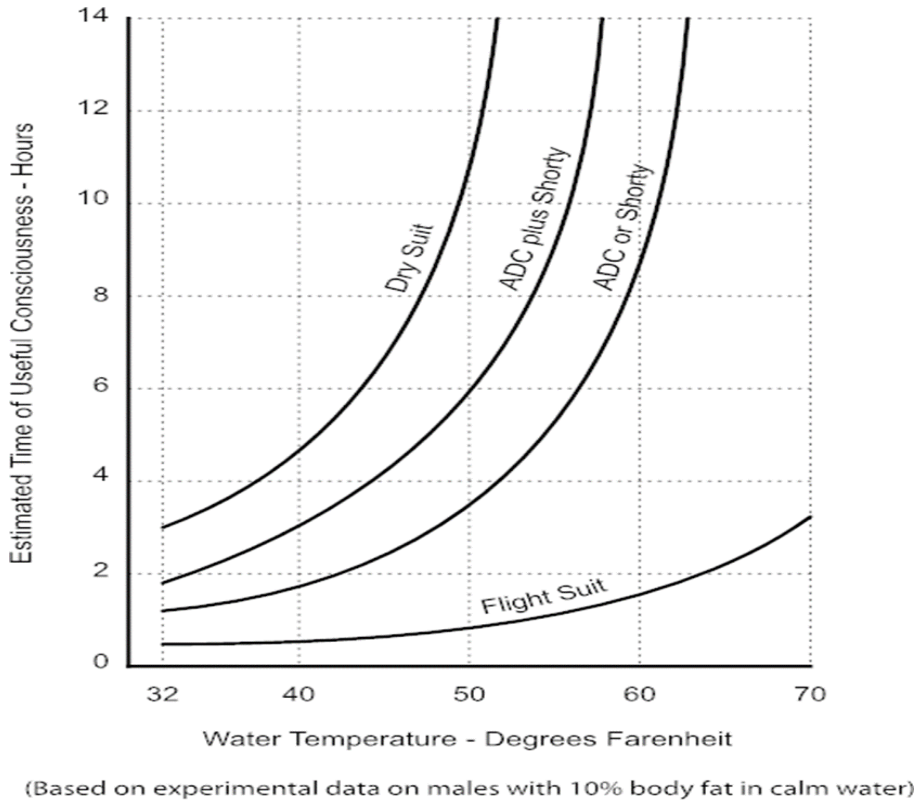

Table 7-1
Probable Survival Time

Section F. Flight Violations

Introduction

Auxiliary pilots will follow all applicable Coast Guard and FAA regulations.

In this Section

This section contains the following information:

F.1. Violation of FAA or Coast Guard Regulations

All pilots must be aware of and follow all applicable current flight regulations. Violations of FAA or Coast Guard regulations when flying under orders shall be reported to the DSO-AV, DFSO and OIA. These include but are not limited to altitude deviations, runway incursions, inadequate fuel reserves and airspace violations such as TFR incursions, entering Restricted or Prohibited Airspace, or entering the ADIZ without an authorized transponder code. Any other incident with a likelihood that the FAA may take action against the pilot shall be reported.

Section G. Weapons

Introduction

This section specifies requirements for active-duty personnel or other law enforcement officers to carry weapons onboard an Auxiliary aircraft.

In this Section

This section contains the following information:

G.1. General

Weapons are not authorized to be carried on a Coast Guard Auxiliary aircraft when operating under orders, unless carried on board by active-duty forces or other law enforcement officers. All weapons carried on board shall be safeguarded in accordance with reference (g).

G.2. Authority and Responsibility of the PIC

The PIC shall ensure that the policy provided in this Section is enforced.

Section H. Inflight Use of Portable Electronic Devices

Introduction

This section specifies requirements for carrying and inflight use of portable electronic devices onboard an Auxiliary aircraft.

In this Section

This section contains the following information:

H.1. General

Portable electronic devices (PED) that interface with or attach to Coast Guard Auxiliary aircraft shall be approved for use by the PIC and in conformance with the aircraft and equipment manuals. This includes devices that only interface via aircraft power.

The PIC shall ensure that the electronic devices do not interfere with aircraft operating, navigational or communication systems.

H.2. Transmitting Devices

Carry-on devices equipped with transmitting capabilities (i.e., Bluetooth, WIFI, etc.) may be operated with PIC approval.

H.3. Cellular Telephones

Cellular telephones and other devices with cellular capability may be carried aboard aircraft if authorized by the PIC.

H.4. Cameras

Flight crewmembers should have a camera on board to take appropriate quality electronic imagery. Cell phone cameras may be used unless the OIA has need for higher quality imagery

H.5. Devices Always Allowed

Non-transmitting, non-interfaced, non-recording devices, such as personal medical devices (e.g., hearing aids, pacemakers), hand-held calculators, electronic watches, etc., are authorized for use at the discretion of the PIC and do not require approval.

CHAPTER 8
Passengers and Cargo

Introduction

This chapter describes the policies and regulations for passengers and cargo on Auxiliary aircraft. Commanding Officers of Coast Guard Air Stations are authorized to approve passengers or cargo on Auxiliary aircraft operating under orders.

In this Chapter

This chapter contains the following information:

Section A. Basic Principles

Introduction

This section specifies the Federal Statutes that authorize passenger transport on Auxiliary aircraft.

In this Section

This section contains the following information:

A.1. Federal Statute, Regulations, and Executive Branch Policy

41 C.F.R. § 301-70.800 et seq. prescribes regulations governing the policies and procedures for agencies that authorize travel on government aircraft. The Office of Management and Budget (OMB) has also issued overarching Executive Branch policy for improving the management and use of government aircraft, Improving the Management and Use of Government Aircraft, Circular No. A-126, in accordance with these regulations.

A.2. Department of Homeland Security Policy

In accordance with OMB Circular No. A-126, DHS has issued DHS Aviation Management and Safety, MD 0020.1 (series), to provide additional guidance on the use of DHS aircraft. Consistent with these broader policy documents, this Chapter provides clarifying guidance for the operation and management of Coast Guard aircraft for purposes of transportation and orientation.

A.3. Use of Coast Guard Auxiliary Aircraft

Coast Guard Auxiliary aircraft will only be used for official purposes. Coast Guard aircraft must be used in the most cost-effective manner to meet requirements and will not be used for political activities. Furthermore, commercial transportation shall be used for passengers and/or cargo to the maximum extent practicable.

A.4. Approval of Coast Guard Auxiliary Aircraft Operations	All Auxiliary flights require approval at the appropriate level within the organization depending upon the justification (authorized use) for the operation of a particular flight.
A.5. Approval of Passengers Onboard Coast Guard Aircraft	Use of Coast Guard Auxiliary aircraft for Passenger Transport is authorized when the Air Station Commanding Officer determines it is either cost effective or if no commercial airline or aircraft service, including charter, is reasonably available to effectively fulfil the transportation requirements.

Section B. Passenger Transport

Introduction

A passenger is any person transported on a Coast Guard aircraft other than an Auxiliary flight crewmember, mission essential personnel, active-duty flight crewmembers or active-duty members on an AOR familiarization flight. Passengers are normally aboard aircraft for transportation or to accompany mission essential personnel. Passengers are not critical to mission execution.

In this Section

This section contains the following information:

B.1. Passenger Briefing	The PIC shall ensure that all passengers embarked on Coast Guard aircraft receive an adequate briefing. This briefing shall cover at least the following: • Use of flotation devices (is flight will proceed over water) • Applicable alerting signals in event of emergency • Action required in case of ditching or crash landing (e.g., emergency evacuation procedures) • Location and operation of emergency exits and other equipment • Seat belt rules and procedures • Restrictions regarding electronic devices, firearms, etc. • Location and use of supplement oxygen (as required) • Sterile cockpit requirements • Use of parachutes if carried • Tobacco use is not allowed aboard Coast Guard aircraft • Alternate airport
B.2. VIP passengers	Except in an emergency, Very Important Person (VIP) flights should not arrive before the latest ETA that has been forwarded to the destination. The latest ETA should be sent in ample time to permit notification of interested personnel
B.3. Safety Restraint of Passengers	The PIC may authorize passengers on transport missions to unfasten their seat belts and move about the aircraft during flight in smooth air. The PIC must be alert at all times to anticipate turbulent flight conditions while passengers have seat belts unfastened. Physical safety restraint requirements for passengers are contained in Chapter 10, Section G
B.4. Children	Children may be flown only when authorized by the Air Station Commanding Officer (ex. disaster evacuation, etc.).
B.5. Pets	Normally, pets are not authorized on government aircraft, except in very unusual circumstances, and at no cost to the Government. Bona fide working animals (i.e., guide, rescue, or police dogs) are not pets and are authorized transportation when accompanied by a handler.

B.6. Uniform Requirements for Passengers

Passengers on Coast Guard aircraft are authorized to wear civilian clothing. Uniforms should be worn by Uniformed Services passengers when required by operational necessity or the DoD Foreign Clearance Manual. When civilian clothing is worn, it shall be in good taste, at the discretion of the Air Station Commanding Officer or the PIC. Coast Guard personnel must ensure that their dress and personal appearance are appropriate for the occasion and will not discredit the Coast Guard.

Conservative styles and fashions are authorized. Tank tops or T-shirts worn as outer garments, shorts, sandals and revealing, soiled or torn clothing are examples of inappropriate civilian clothing.

B.7. Passenger Identification

Positive identification is required of all passengers. Government issued ID unless the passenger is personally known to the PIC.

B.8. Passenger Travel Orders and Authorizations

Official travellers will have in their possession a travel or transportation authorization published by an appropriate approving authority. Travelers other than DHS employees or members of the U.S. Uniformed Services are also required to possess documentation that their travel aboard Coast Guard aircraft has been approved in accordance with this process guide.

B.9. Mission Essential Personnel

Mission essential personnel are either flight crew or non-flight crew, including active duty. Mission essential personnel holding a current qualification are considered flight crew. Mission essential personnel not holding a current qualification are considered non-flight crew.

Flights by non-flight crew mission essential personnel shall be limited to the minimum necessary to accomplish assigned missions.

B.10. Survival Equipment

The PIC shall ensure all non-flight crew mission essential personnel are equipped with the appropriate protective clothing, flotation equipment, supplemental oxygen, or any other mission applicable required safety equipment.

Air Station Commanding Officers can authorize temporary deviations from the provisions of this section for mission essential personnel when necessary to respond to urgent incidents requiring unusual levels of flight activity.

Unit Commanding Officers shall ensure flight equipment is maintained in accordance with the manufacturer’s standards or guidance in reference (b).

B.11. Aircraft Orientation for All Mission Essential Personnel

Prior to flight, all mission essential personnel shall complete orientation on the following:

- Use of flotation devices (is flight will proceed over water)
- Applicable alerting signals in event of emergency
- Action required in case of ditching or crash landing (e.g., emergency evacuation procedures)
- Location and operation of emergency exits and other equipment
- Inflight emergency procedures
- Use of aircraft safety equipment, including PPE
- Seat belt rules and procedures
- Restrictions regarding electronic devices, firearms, etc.
- Location and use of supplement oxygen (as required)
- Sterile cockpit requirements
- Use of parachutes if carried
- Tobacco use is not allowed aboard Coast Guard aircraft
- Alternate airport

B.12. Equipment and Training Requirements for Mission Essential Personnel

Equipment requirements are contained in Chapter 10 of this process guide. Training requirements for flight crew and non-flight crew mission essential personnel are contained in reference (c).

Section C. Transportation of Cargo

Introduction

This section applies to transportation of cargo aboard Coast Guard Auxiliary aircraft. Commercial airlines or services, including charters, shall be relied upon to the maximum extent practicable. The use of these external services must economically and effectively meet the cargo transportation requirements. Coast Guard Auxiliary aircraft may be used to transport cargo when these external services are unable to do so in a timely manner.

In this Section

This section contains the following information:

C.1. Mission Essential Cargo

Cargo is considered mission essential when its presence aboard Coast Guard Auxiliary aircraft is in direct support of the approved mission. Air Station Commanding Officers may authorize the transportation of cargo, including U.S. mail, on ordered Auxiliary logistics mission's flight subject to the limitation of FAA regulations.

C.2. Transportation of Non-Mission Essential Cargo as the Primary Purpose of Flight.

Cargo that is not considered mission essential may be transported as the primary purpose of the flight.

C.3. Cargo Inspection and Hazardous Cargo Handling and Regulation

Cargo may be inspected, regulated, or prohibited for safety-of-flight reasons by Air Station Commanding Officers of aviation units or by pilots in command of flights. Coast Guard Auxiliary aircraft may not carry hazardous cargo.

CHAPTER 9
Communications

Introduction

When on a mission, it is important to know what other units, surface vessels, helicopters, etc., are involved, and the altitudes, separation requirements, and communications protocol. It is also important to know what information may be conveyed on these open frequencies and what should be reported on a landline or post mission in writing.

This chapter describes the communication/navigation requirements and equipment necessary for effectively operating in the aviation mission environment.

In this Chapter

This chapter contains the following sections:

Section A. Mission Communications

Introduction

The primary purpose of AUXAIR patrols is to act as the eyes for Coast Guard and Coast Guard Auxiliary operations and transmit the information gathered to shore or other operating facilities. Mission communications consist of an orderly sequence of communications between an Auxiliary aircraft and the Coast Guard unit that is holding the aircraft radio guard. These communications are normally planned and expected but may occur spontaneously as an Auxiliary aircraft moves through the AOR of a Coast Guard unit

In this Section

This section contains the following information:

A.1. Communication Partners

A typical Auxiliary aircraft on a multi-mission patrol, environmental flight, or SAR response will maintain communications both with an FAA facility and with Coast Guard and/or Coast Guard Auxiliary unit(s).

A.2. Coast Guard Vessels and Aircraft

Coast Guard communications may be with Coast Guard cutters, small boats, aircraft, or ground radio stations on frequencies ranging from high frequency single side band to ultra-high frequency (UHF), although communication is normally concentrated in the VHF-FM and VHF-AM bands. A qualified and competent observer can assist the Auxiliary pilot by handling some of these communications directly and by recording pertinent information obtained through these radio contacts.

A.3. FAA

FAA communications are of such a nature that pilots may prefer to personally handle them since these communications relate to ATC and any actions required are often immediate. These include communications with airport ground control, clearance delivery, control tower instructions, air route traffic control centers (ARTCC), and approach control. These communications involve maintaining separation from other aircraft and will often contain flight restrictions or direction. Some of these communications, including those with FAA FSSs, will contain information that will be needed later by the pilot. The observer should be ready to record these instructions when requested by the pilot.

In times of heavy workload, the pilot may elect to delegate FAA communications to aircrew qualified flight crewmembers.

A.4. PIC Responsibility

The PIC is responsible for all aspects of a flight including audio transmissions from the aircraft. When in doubt, the air crew/observer should obtain approval from the pilot before making a transmission.

A.5. Radio Guard

Flight following services under VFR flight and ATC communication while under IFR flight suffices as radio guard. In these situations, it is still advisable to maintain radio communications with the Sector in case the aircraft is re-tasked.

A.6. Departure

Immediately after takeoff, communications should be established with a regular Coast Guard unit or Auxiliary radio and a flight guard should be established. At a minimum, the following information should be transmitted:

- Time of takeoff
- Departure airport
- Number of persons onboard
- Mission and/or destination, including route, if known

A.7. Position Reporting

Facility operators follow all Coast Guard reporting requirements in accordance with reference (h) during a patrol. Position and flight status (usually "flight ops normal") reports are made every 15 minutes for helicopters and single-engine aircraft and every 30 minutes for multi-engine aircraft. The Air Station or Sector may impose a more stringent reporting requirement. This report should include:

- Unit called.
- Aircraft call sign.
- Flight status.
  i. "flight ops normal" when operations are normal.
  ii. When circling a fuel spill, that information would be given in place of the "flight ops normal".
  iii. When flying a search pattern, the search leg being flown, or number of legs completed would be given.
- Position is reported to the nearest minute of latitude/longitude or with reference to a known landmark.

A.8. Loss of Communications

If communications are lost for more than the designated reporting period, the mission is aborted, the facility moved to a safe haven, and the OIA advised of the situation. For flights operating under direct air traffic control or those receiving VFR flight following, radio contact with the controlling agency satisfies this requirement.

In areas where there are known communication gaps, the OIA may authorize an alternate communications plan. The facility operator will notify the OIA or designee, before beginning the mission, of the patrol's start and end times and the names of all individuals aboard. The facility operator notifies the OIA, or designee, immediately upon return from the mission. At any time, the mission is expected to run more than 15 minutes beyond the estimated time of arrival (ETA), the facility operator communicates a new ETA to the OIA, or designee, as soon as practicable, but in no case later than 15 minutes from the original ETA

A.9. Changing Radio Guard

When changing radio guard from one station to another, first establish a guard with the new station, then secure the guard with the previous station, advising them of the identity of the new guard station. If, for any reason, communication with the previous guard station is not possible, ask that the new station secure the guard with the previous station. In any event, the previous guard MUST be secured in a timely manner.

At the end of the mission, the Coast Guard air station for which the mission was flown is informed that the aircraft is back on the ground and the mission has been completed.

A.10. Relaying Traffic

Because an aircraft presents a good radio location due to its altitude, it may be the only unit capable of communicating with the vessels or aircraft at the scene of a mission. If requested to relay information between the shore station and the units on-scene, it is imperative that the information be retransmitted exactly as it is received. Under no circumstances should any subjective interpretations be added to the information being relayed.

A.11. COMSEC and OPSEC

It is important for the flight crew to keep in mind that generally air/ground communications will occur on "open channels" and may be monitored by any person with a scanner, receiver, or transceiver.

Communications Security (COMSEC) and Operational Security (OPSEC) should always be considered as communications are being composed to ensure that sensitive information is not inadvertently disclosed by the transmissions. Unless the mission profile includes provisions to the contrary, or a request is received from a Coast Guard unit, the following precautions should be taken when planning transmissions on "open channels":

- The positions of Coast Guard or Auxiliary vessels should not be disclosed.
- Activities of law enforcement vessels or aircraft should not be disclosed.
- Locations of military vessels should not be disclosed.
- Reports of suspicious activity might better be reported after landing unless notification is urgent.

Examples of when these reports are part of the mission profile or are otherwise permissible are:

- While on ice reconnaissance patrols, Auxiliary aircraft might be requested to relay the location of the ice breakers.
- During exercise support missions, the locations of military vessels may be requested.
- During regular missions, a Coast Guard unit may request that the flight crew report the location of one of its assets.

During training missions, prior agreement may have been reached to direct vessels to the "aid" of a Coast Guard or Auxiliary vessel.

Section B. Radio Equipment

Introduction

This section describes the radio frequencies on which Auxiliary aircraft operate and the installation of the radio equipment.

In this Section

This section contains the following information:

B.1. Aviation Band

One or more radio transceivers (VHF-AM) operating on VHF-AM in the frequency range of 118.000 to 135.975 MHz are common in all aircraft, and are aboard facilities flown by Auxiliarists. These units are compact and designed to fit in industry-standard spaces in the instrument panel. These transceivers are operated in the same manner as radios aboard vessel facilities. The front panel normally contains an off/on volume control, a squelch control, which is used to minimize background noise, and a frequency selector, which usually displays the frequency digitally. If there is more than one aircraft radio, there will generally be a selector switch that selects which radio is to be used for transmission and/or reception. It is possible, depending on aircraft installation, to have two radios on at one time enabling monitoring of both frequencies at the same time. The following are common aircraft frequencies:

- 121.500 MHz – Distress or emergency communications only
- 122.750/122.850 MHz – Air-to-air
- 126.200 MHz – Military airports
- 122.000 MHz – Flight Watch/FSS
- 122.900 MHz – Common Traffic Advisory Frequency (CTAF)
- 123.100 MHz – SAR frequency, air-to-air

B.2. Marine Band/Coast Guard Frequencies

Auxiliary aircraft carry one or more radio transceivers operating on VHF-FM in the frequency range of 156.050 to 162.025 MHz Most VHF-FM marine-band transceivers used in Auxiliary aircraft are not designed to fit in the standard aircraft stack. These essential radios are usually mounted wherever space permits their safe mounting. Sometimes, due to switching or wiring complexities, the marine band radio cannot be interconnected with the aircraft microphone system, thus requiring a separate microphone. A less desirable method to obtain VHF-FM-band communications is to use a portable, handheld unit. In either case, an attachment to an external antenna is part of the facility requirements. The following are common frequencies for Coast Guard Auxiliary communications from aircraft:

- Channel 6 - SAR and Coast Guard Aircraft/Vessels
- Channel 16 - Maritime Distress and Calling
- Channel 21A - CG Working Frequency
- Channel 22A - CG to Public Liaison Frequency
- Channel 23A - CG Working Frequency
- Channel 81A - CG Working Frequency
- Channel 83A - CG Working Frequency

B.3. VHF-FM Transceiver Installation

The installation should be designed to use the aircraft electrical system for power or battery charging of the marine radio and should also use the aircraft intercom system to permit all crewmembers to hear the marine transmissions. The antenna should be hull mounted to the bottom of the aircraft for best results and dedicated exclusively to the VHF-FM radio. It may be incorporated as part of a "Y" lead for emergency use handheld VHF-AM units. It is important that all onboard are able to hear the communications on the VHF-FM unit in order to ensure effective CRM principles and reduce time and error in passing along information within the aircraft. Table 9-1 illustrates one method of connecting a handheld or portable marine unit to the aircraft systems.

Since common aircraft power systems are either 12- or 24-volt, a power converter may be needed to connect to the transceiver power or charging port.

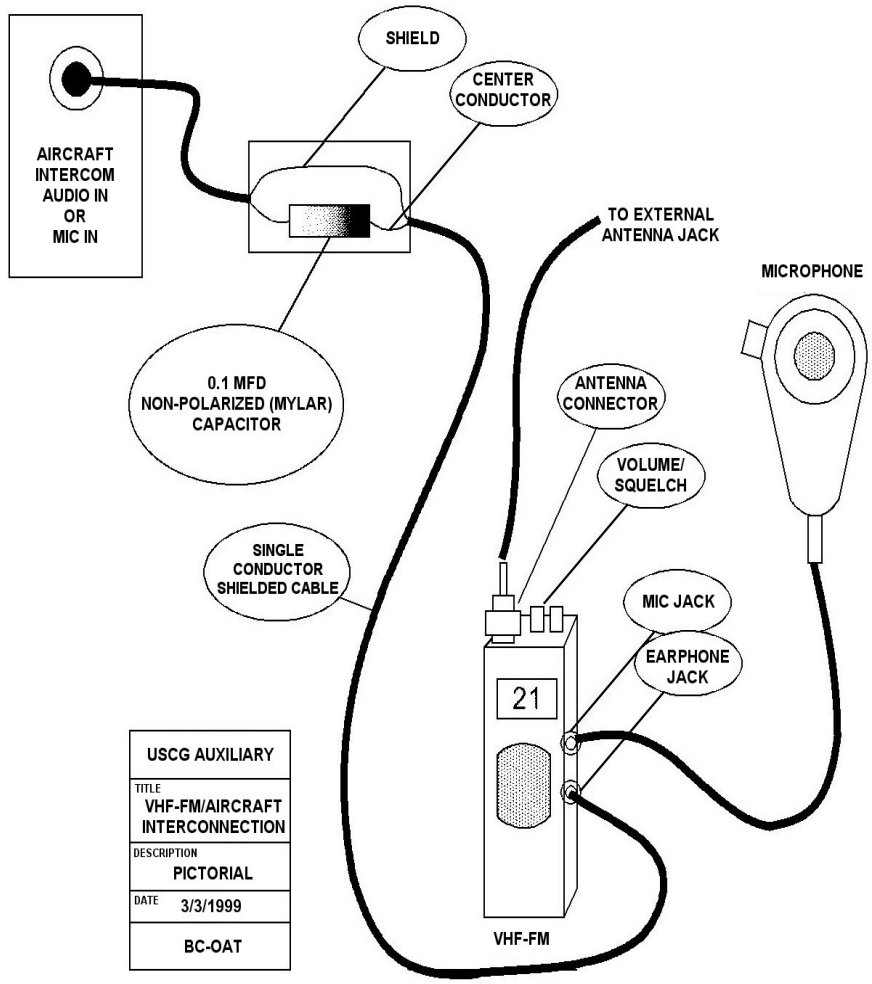

Table 9-1
Interconnection of VHF-FM Transceiver in Aircraft

B.4. VHF-FM Transceiver Usage

In aircraft use, the microphone may pick up aircraft noise if it is not a noise-canceling type. This may make aircraft transmissions difficult to understand. For reception, an intercom connection is superior to a single earpiece. However, if an intercom is not available, an earpiece alone may be required.

Due to the increased range possible with VHF-FM radios transmitting from aircraft, low power should be used whenever possible.

B.5. VHF-FM Antenna

Aircraft with a metal fuselage shall have a VHF-FM antenna mounted externally to the fuselage.

Aircraft with a composite fuselage shall have a VHF-FM antenna mounted inside the aircraft.

Section C. Call Signs

Introduction

This section describes establishing Auxiliary aircraft unique call signs and policy.

In this Section

This section contains the following information:

C.1. General

Auxiliary aircraft will be assigned unique call signs in the active-duty format (C8xxx), ensuring that Auxiliary aircraft are properly identified as Coast Guard aircraft while executing missions under orders.

C.2. Assigning Call Sign

The National Aviation Team will assign each operational Auxiliary aircraft a unique call sign and communicate those to the DSO-AV. The DSO-AV will verify the call signs are properly assigned (single-engine, multi-engine, turbine, or helicopter), and communicate to the Squadron pilots. The call signs will be entered into AUXDATA II by the National Aviation Team. DSO-AVs will alert the BC-RAP when a new aircraft facility is approved, or an aircraft facility becomes non-operational.

C.3. AUXAIR Call Sign Anatomy

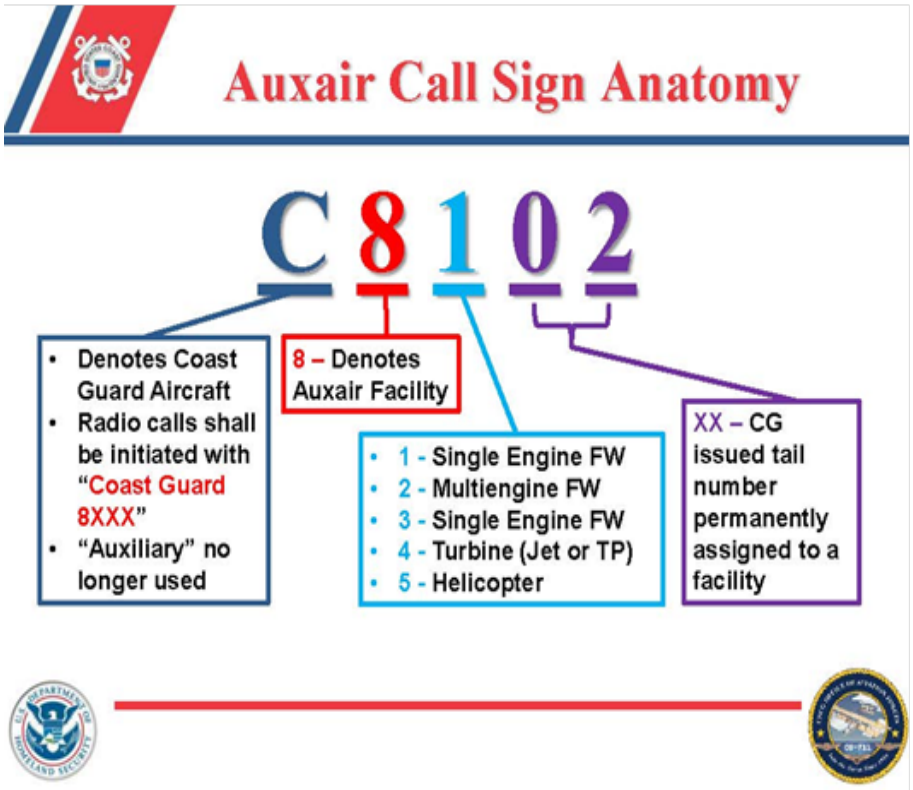

Table 9-2
Call Sign Anatomy

C.4. Communication

When verbally communicating with Air Traffic Control (ATC) or a Coast Guard facility/asset the aircraft will identify as "Coast Guard" 8xxx (where 8xxx is the aircraft's unique call sign).

C.5. Flight Plan

Notwithstanding flight planning requirements in Chapter 5, Coast Guard Auxiliary aircraft are required to file a flight plan for all patrols. IFR flight plans shall be filed using the ICAO International Standard form. Local VFR flight plans may be filed with the Air Station using either the ICAO form or a flight plan form unique to the Air Station. Waypoints should be used in the "Route" section to accurately describe the intended flight route. A primary and alternate destination shall be identified. In addition to the information required for a civilian flight, the following information should be included:

- Type of Flight — M (military)
- Remarks/other — USCG C8xxx, OPR/US Coast Guard Air Station (ex. Air Station Miami), ODO's phone number
- Pilot Contact

CHAPTER 10
Equipment

Introduction

This chapter describes minimum aircraft equipment for Auxiliary facilities and survival equipment that must be carried onboard.

In this Chapter

This chapter contains the following information:

Section A. Mission Configurations

Introduction

This section describes capabilities expected of Coast Guard Auxiliary aircraft for common missions. An aircraft that does not meet the capability requirements for a mission listed in this Section shall be considered Partially Mission Capable for that mission. An Air Station Commanding Officer may assign an aircraft not meeting all mission capability requirements if he or she determines that the mission will have a reasonable chance of success. Similarly, for missions not listed in this section, the Air Station Commanding Officer shall ensure the aircraft is suitably equipped to provide a reasonable chance of success.

In this Section

This section contains the following information:

A.1. Auxiliary Aircraft

Coast Guard Auxiliary aircraft range from two-seat single-engine to multi-engine turboprop and turbofan cabin class aircraft. These aircraft represent a wide range of capability and are not equitably spread throughout the country.

Air Station leadership is urged to maintain close contact with Auxiliary pilots to familiarize them with the capabilities and limitations of the aircraft and pilots in their Area of Responsibility. The aircraft available in any district is directly related to membership population and the kind of aircraft those members offer for use and fly.

A.2. Basic Capability

To be fully mission capable for any mission, an aircraft is expected to be able to fly VFR and IFR, during the day and at night.

Aircraft not equipped with instruments for IFR flight are limited to those missions approved for flight in VMC only.

A.3. Equipment Requirements

Coast Guard Auxiliary aircraft shall be equipped, at a minimum, with the following equipment:

A.3.a. Search and Rescue	The minimum equipment required to be carried aboard Coast Guard Auxiliary aircraft is: • 406 MHz distress beacon • VHF Aircraft Band transceiver to communicate with ATC. Additionally, 121.5, 123.1 and 122.9 MHz • VHF-FM marine band transceiver with at least channel 16, 22A and other district required channels • Aircraft with a metal fuselage shall have a VHF-FM antenna mounted externally to the fuselage • Aircraft with a composite fuselage shall have a VHF-FM antenna mounted inside the aircraft • Lap and Shoulder Harness (front seat) • Global Positioning System (GPS) • Sectional and marine charts • Aircraft checklist • ADS-B out
A.3.b. Flight in IMC	To be considered fully mission capable for flight in IMC, a Coast Guard Auxiliary aircraft shall be, in addition to paragraph (a): • Equipped with a complete set of instruments for IFR flight in accordance with applicable FARs.
A.3.c. Rotary-Wing Intercept Training	To be considered fully mission capable for RWAI training, a Coast Guard Auxiliary aircraft must be, in addition to paragraph (b): • Equipped with dual flight controls • Able to communicate with the Intercept Helicopter

Section B. Navigation Equipment

Introduction

All aviation-qualified Auxiliarists are trained to understand and interpret the aircraft navigation equipment (NAV) discussed in this section. Aircrew qualified personnel are trained to operate the system. Auxiliary aircraft are not standardized, and each is equipped with its own specific instrumentation.

In this Section

This section contains the following information:

B.1. GPS/WAAS

GPS depends on information received from satellites. The GPS computer displays the aircraft's position in latitude/longitude and may also provide altitude information. The information available to the pilot includes ground speed, cross-track error, and relative positioning to various waypoints. Global Positioning System (GPS) is a space-based radio-navigation system consisting of a network of satellites and ground stations. It provides location, altitude, and time information in all weather conditions.

Wide Area Augmentation Systems (WAAS) is a navigation aid developed by the FAA to augment the GPS system. WAAS significantly improves the accuracy, integrity, and availability of GPS. WAAS was intended to enable aircraft to rely on GPS for all phases of flight. WAAS uses ground stations to measure small variations in the GPS satellite's signals and provide corrections to improve accuracy.

B.2. Use of NAV Equipment for SAR

The VOR system is basically line of sight which increases the aircraft's effective range with altitude. The effective range for the VOR portion (azimuth) is greater than that for the DME (range). Either lines of position (radials) from two VOR stations or one line of position and distance from a VORTAC or VOR/DME station may determine a position fix. This information is then plotted on an aeronautical chart and converted to latitude/longitude, if required.

A position determined by a GPS navigation computer is displayed in latitude and longitude and may be passed directly to a vessel or shore station with no correction, adjustment, or other processing necessary. It is necessary to ensure that the characteristics of the unit and display properties are properly set or understood, so that it is clear whether the unit is displaying nautical or statute miles, and whether the bearings are magnetic or true. When flying over a significant target, the position may be entered as a waypoint. Recalling this waypoint will display the position and the GPS will provide navigation directions relative to that position. Returning to the position, vectoring a surface craft to the position, or orienting a search about the position becomes an exercise in reading and interpreting the display.

B.3. Electronic Flight Apps

The use of electronic flight apps is encouraged. An integrated flight app enables flight planning, the filing of flight plans, flight path tracking, and search pattern selection. Once a specific search pattern has been specified and uploaded in the aircraft NAV system, flying the search pattern becomes much easier. The auto pilot system can be synched to the search pattern. ForeFlight and Garmin Pilot are examples of software in use.

Section C. ADS-B Equipment

Introduction

Automatic Dependent Surveillance–Broadcast (ADS–B) is an advanced surveillance technology that combines an aircraft's positioning source, aircraft avionics, and a ground infrastructure to create an accurate surveillance interface between aircraft and ATC. ADS–B is a performance–based surveillance technology that is more precise than radar and consists of two different services: ADS–B Out and ADS–B In.

In this Section

This section contains the following information:

C.1. ADS-B

Automatic Dependent Surveillance – Broadcast (ADS-B) is a surveillance technology in which the aircraft determines its position via satellite navigation and periodically broadcasts it, enabling the aircraft to be tracked. The information can be received by air traffic control ground stations as a replacement for secondary radar. It does not require an interrogation signal from the ground. It can be received by other ADS-B equipped aircraft to provide enhanced situational awareness and facilitate self-separation. The system is "automatic" and does not require crew input. It is dependent on position data from the aircraft's navigation system.

ADS-B is an instrument in the cockpit and. can also be used in conjunction with electronic flight tools such as Foreflight.

C.2. ADS-B In

ADS-B In provides operators of properly equipped aircraft with weather information, and traffic position of other aircraft information delivered to cockpit instrumentation. It does **not** transmit your own aircraft's information to others.

C.3. ADS-B Out

ADS-B Out broadcasts your own aircraft's GPS location, altitude, ground speed and other data to ground stations and other aircraft, once per second. A selectable ADS-B out is the preferred system for Auxiliary aircraft.

C.4. Aircraft Call Sign

ADS-B transmitters require appropriate programming to correctly identify aircraft as Coast Guard Auxiliary flights when on a mission. ADS-B equipment is available that allows dual programming of general aviation and Coast Guard aircraft identity.

"Pilots operating aircraft that **are equipped** with selectable ADS-B systems are to use the designated Coast Guard call sign (C8xxx) and program that into the ADS-B system prior to operating a mission under orders. At the completion of the mission, they shall reprogram the ADS-B with the aircraft's registration number."

"Pilots operating aircraft that are **not equipped** with selectable ADS-B systems are to use the designated Coast Guard call sign (C8xxx) even though their ADS-B system is broadcasting the aircraft registration number. File an ICAO flight plan (IFR or VFR) with the FAA and indicate that the aircraft is not equipped with selectable ADS-B. In the rare instance that the pilot receives a letter from the FAA indicating there has been a call sign mismatch, immediately notify your DSO-AV.

C.5. Traffic Identification

Many Auxiliary aviation flights are conducted under visual flight rules (VFR) and **separation of the aircraft from all other aircraft is the pilot's responsibility**. Pilots are required to maintain appropriate visual separation. Other flight crew members should **assist** the pilot by searching for and identifying air traffic. The PIC may make crew assignments to monitor specific sections of the sky. This does not relieve the PIC of overall responsibility.

In controlled airspace, radar services may be available to **assist** the pilot with separation. Pilots are highly encouraged to use flight following when available.

The ADS-B system provide additional separation information to the crew but does not supersede the pilot's responsibility to maintain visual separation. ADS-B systems only report other ADS-B equipped aircraft. It should not be relied on as the primary means of air traffic separation. It does report aircraft that are equipped with ADS-B in, drones, balloons, or other objects in the sky.

Section D. Protective Clothing

Introduction

Policy, authorization, and instructions pertaining to the procurement, configuration, use and maintenance of protective clothing authorized for personnel conducting Coast Guard missions from an aircraft is specified in reference (i) and reference (j). Use of other protective clothing items is prohibited unless specifically authorized by Commandant (CG-711)

Personal Protective Equipment (PPE) requirements are the same as active duty and described in this section. Air Station Commanding Officers will issue PPE and ensure Auxiliary aviators are properly outfitted prior to conducting Coast Guard missions. Recommended PPE is specified in the Personal Protective Equipment for Auxiliary Aviation document.

In this Section

This section contains the following information:

D.1. Protective Clothing (Flight Gear) Inspection

Personal protective clothing and equipment issued to aviation personnel shall be inspected annually or in accordance with applicable Maintenance Procedures Card (MPC).

D.2. Flight Suits

All flight crew members shall wear the Freedom Green NOMEX fire-resistant flight suit on ordered missions. It is the same uniform authorized for active-duty aviators and provides the greatest degree of protection.

To provide maximum fire protection, sleeves shall not be rolled up.

Mission essential personnel and passengers may fly in their appropriate duty uniform. for operational, non-transport missions.

D.3. Additional Uniform Items

Additional uniform items are specified in Document AV-04-02A found on the Response Directorate website, Air Documents page. These items include authorized patches for the flight suit, black flight boots, operational flight jackets, headgear, gloves, under garments, and covers.

Additional clothing is authorized for the flight line and inclement conditions.

D.4. Flight Gloves

Auxiliary flight crews should wear fire retardant flight gloves when engaged in all ground and flight operations. Mission essential personnel and passengers should wear fire retardant flight gloves for operational, non-transport missions.

Protective work gloves shall be available aboard each aircraft that provide suitable protection from hazards expected to be encountered during routine operations.

D.5. Flight Helmets

For rotary-wing aircraft, flight crewmembers shall wear an approved helmet when within close proximity to a turning rotor system. All other personnel shall wear a helmet when within close proximity to a turning rotor system, to the maximum extent practical. All personnel shall use the eye-protecting visor to the maximum extent practicable.

D.6. Conditions Requiring Anti-Exposure Garments

Anti-exposure garments for all flight crew, passengers and mission essential personnel shall be carried on board when required by during all operations beyond gliding or autorotation distance from land.

Anytime the water temperature is below 60° F (Table 10-1), all occupants of single-engine fixed-wing aircraft (SEFW) aircraft and helicopters must wear anti-exposure garments.

Water Temp (W)		Air Temp (A)	Anti-Exposure Garment
70° F ≤ W	and	Any	Not required
60° F ≤ W < 70° F	and	85° F ≤ A	Not required
60° F ≤ W < 70° F	and	A < 85° F	Required
W < 60° F	and	Any	Required

Table 10-1
Anti-Exposure Garment Requirements per Water/Air Temperature

B.5.a. Authorized Anti-Exposure Garments	Flight crew shall wear the Aircrew Dry Coverall, or the Aircrew Immersion Coverall garments described in reference (i) Non-flight crew personnel with frequent periodic flight requirements shall wear the authorized anti-exposure garments described in reference (i) when available. All non-flight crew personnel may wear anti-exposure coveralls or dry suit ensembles described in reference (k).
B.5.b. Immersion Suit	Personnel aboard Coast Guard rotary-wing aircraft, with the exception of survivors/patients embarked during search and rescue, are prohibited from wearing immersion suits in flight because of the hazard involved in an inverted egress.
D.7. Underwear and Socks	Underwear for flight suits shall be 100 percent cotton or fire retardant and moisture-wicking. The T-shirt worn with flight suits shall be crew neck and ODU-blue in color. Socks shall be at least 80 percent cotton or wool. Aircrew Dry Coverall (ADC) undergarment must consist of fire retardant/ moisture-wicking garments, cotton undergarments are not authorized to wear with the ADC as they will absorb perspiration and make the person subject to chill, hypothermia, and frostbite.

Section E. Flotation Equipment

Introduction

This section describes the minimum flotation, signaling and survival equipment that must be worn or carried onboard the aircraft during flight operations.

In this Section

This section contains the following information:

E.1. Life Rafts

All aircraft shall carry enough life rafts of a rated capacity and buoyancy to accommodate all aircraft occupants for flights conducting offshore operations. Flight crewmembers must store the raft(s) in a position so that it may be removed without flight crewmembers leaving their flight station(s).

E.2. Personal Flotation Device

All aircraft shall carry one Personal Flotation Device (PFD) for each person aboard. Flight crew survival vests may only be worn by personnel trained in their use. Automatically inflated PFDs are prohibited. PFDs capable of selectable manual or automatic inflation may be worn provided the automatic inflation feature is disabled for use aboard aircraft.

WARNING

Automatic inflatable vests shall not be transported aboard Coast Guard aircraft unless they are disarmed.

E.2.a. Multi-Engine Fixed-Wing Aircraft

Occupants of multi-engine fixed-wing aircraft are not required to wear flotation devices. The use of flotation devices shall be a decision made on a case-by-case basis by the PIC or the Air Station Commanding Officer.

E.2.b. Rotary-Wing, Single-Engine Fixed-Wing, or Airship Aircraft	Rotary- wing flight crewmembers shall wear the approved survival vest during all flight operations. All occupants aboard rotary-wing, single-engine fixed-wing (including floatplanes and seaplanes), or airship aircraft that operate beyond emergency landing distance from land shall wear an approved aircraft type personal floatation device.
E.3. Minimum Contents of Survival Vests	Minimum survival equipment is specified below. Air Station Commanding Officers may require additional items to meet local conditions. • Signal mirror • Personal Locator Beacon (PLB) • Portable or pocket strobe • Dye marker or sea rescue device • Chemical emergency light • Whistle • Survival knife
E.4. Electronic Visual Distress Signaling Device (eVDSD)	Coast Guard Auxiliary aircraft shall carry at least one Coast Guard approved eVDSD on board the aircraft. Flight crewmembers shall store the eVDSD(s) in a position so that it may be removed without flight crewmembers leaving their flight station(s). The flight crewmember physically closest to the eVDSD shall ensure it is taken in the event of an aircraft evacuation.
E.5. Additional Equipment	Recommended additional equipment includes: • Insect repellent • Space blanket • Waterproof matches • Sunscreen cream • Pocket compass • Air Station Commanding Officers may require additional items necessary for local conditions

Section F. Oxygen

Introduction

Maintaining an appropriate oxygen level in the aircraft is critical for safe flight operations.

In this Section

This section contains the following information:

F.1. Unpressurized Aircraft

Each person aboard an aircraft shall use oxygen at cabin altitudes above 10,000 feet MSL. However, when no oxygen equipment is in use, an unpressurized aircraft may ascend to 12,000 feet MSL provided it does not remain above 10,000 feet MSL for more than thirty minutes.

Aircraft with oxygen equipment available but unable to pressurize will not exceed FL180 unless a comprehensive briefing by competent aviation medical authority is obtained immediately prior to the flight. This is to reacquaint crewmembers with the hazards associated with high altitude flight, such as decompression sickness, hypoxia, etc., and to ensure adherence to preparatory measures, such as pre-breathing.

F.2. Pressurized Aircraft

If cabin pressure altitude is normally maintained at 10,000 feet or less, the following applies:

- In pressurized aircraft operating above FL180, oxygen masks shall be readily available for use by all flight crewmembers.
- In pressurized aircraft operating above FL350, one pilot at the controls shall be wearing and using an oxygen mask unless there are two pilots at the controls that have an approved quick-donning mask with instant Inter-Communication System (ICS) capability that is properly adjusted and positioned for use within five seconds. If the second pilot leaves the flight controls, the remaining pilot shall put on and use an oxygen mask until the other pilot has returned to the flight controls.
- In pressurized aircraft operating above FL410, one pilot at the controls shall be wearing and using an oxygen mask.
- In pressurized aircraft operating above FL250, a source of oxygen shall be within reach of each passenger for emergency use. Enough oxygen shall be carried to provide for all passengers until the aircraft can descend to 10,000 feet MSL.

Section G. Safety Devices

Introduction

This section describes the requirements and usage of safety devices carried onboard the aircraft during flight operations.

In this Section

This section contains the following information:

G.1. Personnel Safety Restraint

Each occupant of a Coast Guard aircraft in motion shall occupy an aircraft seat and wear a properly fastened safety belt. Where installed, both a safety belt and shoulder harness shall be worn.

G.1.a. Exceptions

Exceptions to safety belt requirements may be granted by the PIC for:

- Required inflight crew duties
- Crew and passenger movement when above 1,000 feet absolute altitude, in cabin class aircraft and smooth air

G.1.b. Passenger Restraint

Each passenger aboard Coast Guard Auxiliary aircraft shall occupy a suitable seat and shall wear a properly fastened seat belt when the aircraft is in motion, unless otherwise authorized by the PIC.

G.2. First Aid Kits

One first aid kit for treatment of injuries likely to occur in flight or minor accidents shall be provided for every ten occupants. In pressurized aircraft operating above FL250, a source of oxygen shall be within reach of each passenger for emergency use. Enough oxygen shall be carried to provide for all passengers until the aircraft can descend to 10,000 feet MSL.

G.3. Emergency Locator Transmitter

Each aircraft shall be equipped with an operable emergency locator transmitter

CHAPTER 11
Crew Endurance Management (Fatigue)

Introduction

Crew Endurance Management (CEM) can be used to control fatigue - related decrements in safety and performance. CEM is based on operational experience, analysis of aviation missions, and a wealth of information derived from a variety of studies on the effects of shift work on human performance.

In this Chapter

This chapter contains the following information:

Section A. Crew Utilization

Introduction

Evidence has shown that a high percentage of mishaps are due to prolonged operations and fatigue. As fatigue adversely affects operational capability and safety, it is necessary to establish reasonable air crew utilization criteria through the use of mandatory mission hour limits.

In this Section

This section contains the following information:

A.1. Command Responsibility

Prescribed limits are necessary for safe Coast Guard air operations. More conservative limits may and should be imposed at all command levels when deemed advisable. As these limits are approached, time available for ground duties necessarily will be reduced. Such consequences must be anticipated and accepted during periods of heavy flight activity.

A.2. Responsibility of Flight Crew members

Flight crew members are responsible to be aware of these provisions and ensure they are operating in compliance of them. Crew utilization standards impose limits upon operational commanders in order to improve mental and physical readiness of flight personnel. Individual flight crew members shall advise the PIC whenever he or she is approaching, or has reached, the prescribed limits in Table 11-1.

A.3. Flight (Fatigue) Hours

Table 11-1establishes maximum flight(fatigue) hours for Auxiliary air crew members. These totals may be an accumulation of several missions (SAR, TRA, MS, etc.) over a 24-hour period.

A.4. Flight Hours Table

Aircraft Type	Individual Flight Hours	Crew Mission Hours
Rotary-Wing Single-Pilot	6	12
Rotary-Wing Multi-Pilot	8	12
Fixed-Wing Unpressurized	8	12
Fixed-Wing Pressurized	12	16

Table 11-1
Flight Scheduling Standards per 24-Hour Period

A.5. Crew Mission Hours

Crew mission hours begins when the crew member reports to the appointed place to prepare for the mission. It ends when the day's missions are complete (including post-flight duties). Crew mission hour's accumulation can stop anytime adequate rest facilities are obtained in accordance with Table 11-1.

A.6. Flight Crew Flight Scheduling Standards

Within any consecutive 24-hour period, avoid scheduling a flight crewmember to exceed the hourly limits shown in Table 11-1. Avoid extending flights scheduled for the maximum time allowed except for urgent mission requirements. The PIC shall advise the Operations Officer.

A.7. Hours of Crew Rest

A new 24-hour period will begin any time a flight crew or non-crewmember has completed ten hours rest, regardless of duty status. Do not calculate deadhead time as part of rest time.

A.8. Air Crew Utilization Fatigue Hours Waiver

For SAR missions in which saving life is probable, crew utilization requirements of this section may be waived by Air Station Commanding Officers on a calculated risk basis. This authority may not be delegated. Flight safety will be affected with a corresponding rise in mishap potential. Advise cognizant operational commanders of the situation and action taken.

Section B. Fitness of Flight Crew Personnel

Introduction

This section will discuss factors that may contribute to fatigue. As well as fitness and readiness policy requirements. Any questions should be addressed to the Auxiliary Flight Surgeon (BC-RAA).

In this Section

This section contains the following information:

B.1. Squadron Leadership Responsibility

The following are leadership responsibilities:

- Observing, in letter and spirit, the maximum utilization factors for flight crews prescribed in this process guide.
- Provide annual training in aeromedical factors.
- Arranging flight schedule duties so that crews comply with the requirements of this process guide.
- Ensuring that all flight crew personnel clearly understand the effects of fatigue, distraction, emotional stress, improper diet, overindulgence, and insufficient sleep; advising flight crew personnel of their duty and responsibility to bring any such conditions which might affect safety of flight to the attention of the Air Station Commanding Officers, and to request grounding, if necessary, until such factors are corrected.
- The Coast Guard monitors and controls crew mission days, flight time, and other fatigue related factors as a risk management tool. Crew utilization standards are not designed to hinder operational commanders in mission planning or execution. Scheduling and rest guidance should be viewed as long term risk management and loss control parameters designed to minimize injury and damage and to preserve limited capital and personnel resources for future operational use.
- The Auxiliary Flight Surgeon shall be familiar with policies, responsibilities and guidelines set forth in reference (l) and reference (b).

B.2. Individual Responsibility

All certified aviation personnel are expected to exhibit professionalism, maturity, and concern for self and others. Aviation personnel are encouraged to seek help or care for physical, mental, or behavioural health matters; however, it is necessary for aviation medicine providers to be made aware in order to address fitness for duty and preserve safety of flight. Personnel receiving the above types of care from any source outside of their designated aviation medicine provider without that provider's knowledge are prohibited from participation in all flight, ground, or maintenance related activities. To resume flight duties, personnel shall report to their aviation medicine provider for clearance.

Flight crewmembers are required to keep their FAA medical certificate or Coast Guard medical screening current. They should report any change in their medical status that would invalidate their medical certificate or screening to squadron leadership and place themselves in a non-operational status until their medical status is in compliance.

B.3. Medical Clearance for Flight Duty	All flight crew personnel are required to maintain a current flight medical.
B.3.a. FAA Medical Certificate	All Auxiliary flight crewmembers are Medically Cleared for Flight Duty if they possess a current FAA third class (or higher) medical certificate.
B.3.b. ANSC 7042	Air Observers and Air Crew are medically cleared for flight duty if they possess a current Auxiliary Flight Crew Medical Screening.
B.4.c. Medical Issues	If certified flight crewmembers have experienced any significant medical change since their last flight examination that would affect mission performance and/or would preclude medical clearance by a medical authority, they must notify the District Director of Auxiliary prior to engaging in flight operations.
B.4. Sleep and Rest	Human factor studies have identified fatigue as a significant factor impacting flight crew judgment and operational performance. Fatigue is alleviated and mental alertness is restored by proper sleep. Irregular and insufficient sleep patterns can create both immediate and long term (or chronic) fatigue. Noise, poor climate control, bright light, excitement, worry, daytime sleep period, or any other condition that is not conducive to restfulness will diminish the benefits of sleep. While the optimum amount of sleep varies among individuals, the normal standard for flying personnel is eight continuous hours in every 24-hour period. Factors such as excessive fatigue, illness, and emotional stress tend to increase this standard. Mishap experience and studies indicate that any decrease in a flight crewmember's ability to sleep will impact normal performance functions and increases the likelihood of error. Since influence of increased error becomes particularly significant during operations at night and in poor weather, flights, watch standing requirements, and collateral duties should be assigned with due regard to providing adequate crew rest for such assignments.

B.5. Diet

The optimum diet is based on the individual's caloric needs and the adequate provision of essential nutrients. The caloric value of food consumed for a given period should balance the heat eliminated by the individual during that same period. The assistance of a flight surgeon, qualified aviation medicine provider, or dietitian should be obtained in calculating these values, especially in hot or cold climates. A medical officer should always be consulted when using a special diet, whether for gaining or losing weight. The regularity with which meals are consumed is as important as the type of food. Adequate provision for meals is essential to flight safety.

B.6. Exercise

Exercise requirements are more uncertain than any of the other factors discussed in this process guide Although needs vary from individual to individual and from situation to situation, some form of physical exercise is necessary to keep the body in good condition. Physical fitness programs are encouraged at aviation units to ensure operational readiness.

B.7. Alcohol Consumption

Alcohol is a well-recognized central nervous system depressant. It is one of the most frequently used and abused drugs in our society. Even small amounts of alcohol in the blood can seriously impair judgment, reflexes, muscular control and also reduce the restorative effects of sleep. The level of alcohol in the body varies with the frequency and amount of alcohol intake, the length of time following cessation of drinking and an individual's body weight. A zero-alcohol level is essential for aviation personnel to meet the rigorous demands of flight operations. Detectable blood alcohol or symptomatic hangovers are causes for grounding of flight crew personnel. Although some personnel may completely metabolize all alcohol well within the 12 hour limit, this time span allows an adequate margin of safety before resuming flight operations.

Aviation personnel are restricted from aerial flight for **12 hours** after last alcohol use and must have no residual effects. This includes the use of low and no-alcohol beer. Residual effects include light-headedness, headache, fatigue, nausea, visual alteration/distortion, and lack of alertness.

B.8. Tobacco

The nicotine contained in tobacco is a quick acting poison. Excessive smoking causes depression of the nervous system and impairment of vision. The carbon monoxide resulting from the combustion of tobacco is absorbed by the bloodstream in preference to oxygen, resulting in a lowering of altitude tolerance. Tobacco smoke also irritates the respiratory system.

B.9. Caffeine

The drug caffeine, contained in coffee, tea, and many soft drinks, can produce an adverse effect on the body. The amount of caffeine contained in just two cups of coffee appreciably affects the rates of blood flow and respiration. In small amounts, coffee can be considered a nervous system stimulant. Excessive amounts may produce nervousness, inability to concentrate, headaches, and dizziness. Individuals accustomed to daily intake of caffeine may develop headaches and experience a loss of sharpness if daily intake is stopped or significantly curtailed. Caffeine withdrawal syndrome may impact flight safety.

B.10. Drugs, Medications and Nutritional Supplements

Personnel engaged in flight operations shall not take any medication/supplement unless prescribed and/or approved by a flight surgeon or other qualified aviation medicine provider in accordance with reference (l) or current aeromedical policy letters on medication use.

Self-medication in any form by flying personnel can be extremely hazardous. Even relatively common medicines, such as aspirin, antihistamines, cold tablets, and tranquilizers can seriously impair the coordination and concentration required in flight. Detailed information on the use of medications and nutritional supplements by aviation personnel is found in the Medications Aeromedical Policy Letter. Approved over-the-counter medications may be used for acute, episodic use in the treatment of MILD, non-disqualifying conditions.

B.11. Minor Illness

The common cold, digestive upsets, and other minor illness, which do not seriously handicap individuals in other pursuits, may produce intolerable impairments in flying personnel. Inflammation accompanying a cold can cause extreme discomfort during altitude changes and can result in permanent injury. Distention caused by gas in the stomach or intestines may create symptoms varying in intensity from mild discomfort to incapacitating pain.

B.12. Mental and Emotional Illness

The safe and effective operation of aircraft requires close attention, ability to ignore distractions and a high degree of emotional control. Inflight emergencies often demand rapid, accurate decisions and skilful actions. Attention to the job-at-hand can be dangerously diverted by concern over non-task-related problems. The flight crewmember who is preoccupied with personal, domestic, or other problems, or who exhibits signs of poor mental attitude or emotional instability, should not be permitted to fly. A flight crewmember who encounters these problems should report them to his or her squadron leadership and request to be grounded.

B.13. Restrictions on Blood and Bone Marrow Donations

Flight crew personnel shall obtain permission from the Air Station Commanding Officer before donating blood or bone marrow. Flight crew personnel shall be grounded following blood or bone marrow donations. Return to flight status shall be in accordance reference (l).

B.14. Simulator Sickness

The experience of symptoms such as nausea, disorientation, and sweating has occurred in fighter, attack, patrol, helicopter, and general aviation flight simulators. Symptoms of simulator sickness may occur during simulator flight and last several hours after exposure. In some cases, the onset of symptoms has been delayed as much as 18 hours. These symptoms have occurred in both motion-base and fixed base simulators to pilots and other flight crew as well as instructors. Preliminary data suggest that more experienced flight personnel are at greater risk and that simulator exposure can cause perceptual sensory rearrangement which may compromise safety. Flight personnel exhibiting symptoms of simulator sickness following simulator exposure should abstain from same day flying duties. Individuals who have experienced simulator sickness in the past have a greater probability of reoccurrence and should not be scheduled to fly for 24 hours following simulator exposure.

B.15. Hypobaric Exposure

The following restrictions to flight following low pressure chamber flights or accidental hypobaric exposure apply:

- Flight personnel shall not perform flight duties for 12 hours after exposure to low pressure chamber flight in excess of 30,000 feet. They may fly during the 12 hours as passengers in aircraft where cabin altitude does not exceed 10,000 feet.
- Individuals who have experienced a reaction to decompression (i.e., vasomotor collapse, unconsciousness, bends, etc.) shall be immediately referred to a flight surgeon or other qualified aviation medicine provider.

B.16. Hyperbaric Exposure

Under normal circumstances, flight personnel shall not fly or participate in low pressure chamber flights within 24 hours following Self-Contained Underwater Breathing Apparatus (SCUBA) diving compressed air dives, or high-pressure chamber evolutions.

Where an urgent operational requirement dictates, flight personnel may fly within 12 hours of SCUBA diving, provided no symptoms of decompression sickness or air embolism as described in the reference (b) develop following surfacing and the subject is examined and cleared for flight duties by a flight surgeon or other qualified aviation medicine provider.

B.17. Vision

Auxiliary Pilots are required to meet at least the minimum vision requirements of an FAA third class medical certificate. Other flight crewmembers must have at least 20/40 vision (corrected or uncorrected) while performing flight crew duties. Auxiliary flight crewmembers required to fly with corrective lenses or contact lenses to correct to these requirements must have in their possession a backup pair of corrective lenses. Refer to Section 1.C.13 of reference (l) for further information.

FAA Third Class Medical vision requirement is 20/40.

B.18. Dehydration

Very often, flight crews are called on to fly long missions at low altitudes, 1000 to 1500 feet AGL, during the summer months. Due to the possibility of dehydration during missions of this type, it is imperative that all crew members stay alert for the first signs of dehydration. The PIC always has the authority to halt a mission when it appears safety is becoming an issue and there should never be any hesitation to do so.

Be sure to carry water for all crew members. Stops to allow crew members to re- hydrate, cool-off, and rest are also a good idea. Symptoms of dehydration include:

- Profound loss of fluids through sweat, vomiting, urine, or bowel movements
- Eyes that seem to sink into the eye sockets
- Dry mouth or sticky mucus membranes
- Loss of normal skin elasticity
- Decreased or absent urination
- Decreased tearing in eyes

B.19. Pregnancy

In accordance with reference (l), a Coast Guard Auxiliary aircraft shall not fly with any pregnant person (pilot, crew, or passenger) on board whose pregnancy is beyond the end of the second trimester. Pilots and crew shall not participate in any physiological training, including the dunker, shallow water egress training (SWET), swim training, etc. beyond the end of the second trimester.

CHAPTER 12
Crew Risk Management and Risk Management

Introduction

Crew Risk Management (CRM) deals with resource management in flight operations and encompasses elements of risk management. CRM is the utilization of all available resources to maximize the safety and effectiveness of the mission. Resources include autopilots, avionics systems, operating manuals, and people, including crewmembers, air traffic controllers, and others in the aviation operating environment.

Risk Management is the Coast Guard process for identifying and mitigating risk.

In this Chapter

This chapter contains the following sections:

Section A. Background

Introduction

This section will discuss the CRM training requirements and basic concepts and principles of CRM.

In this Section

This section contains the following information:

A.1. CRM Training Requirements

All Auxiliary pilots and air crew are required to participate in initial and annual Coast Guard CRM Training. The initial training (AUX-17) is given by instructors who have completed the Auxiliary CRM Initial training syllabus and are currently qualified by ATC Mobile to teach the course. AUX-17 must be completed prior to certification in any aviation qualification, and on a 5-year recurring basis.

Additionally, annual training in CRM is required as part of the regular aviation workshops presented by each district. The CRM Refresher must be completed annually, no later than the end of the 15th month following AUX-17 or subsequent CRM Refresher training. It must be completed by all pilots, air crew, and air observers during the annual Flight Safety Workshop or other regional training event.

A.2. Minimizing Risk

Human error continues to be the single largest causal factor in aviation accidents. Current statistics indicate that 70-80% of all aviation accidents are attributable to human error. Although this process guide cannot cover all of the facets of CRM, some highlights are presented here. Mounting accident/incident data suggests that while superior airmanship is an essential component of what we do, it is insufficient in and of itself to assure flight safety. Safe and efficient Auxiliary flight operations depend on teamwork and understanding of human behavior. Some of the key CRM concepts include:

- Situational awareness
- Stress and performance
- Decision-making
- Attitude and crew performance
- Effective communication

A.3. Principles of CRM

The principles of CRM are an essential part of the Coast Guard Auxiliary Aviation Program. These principles also apply even in the single-pilot environment by using all available resources both in the cockpit and on the surface. The human factor is the single most important element for safe and effective aircraft operations. An understanding of CRM will help the pilot to better utilize the crew and at the same time will help the crew to understand that they must take an active part in the operation of each flight.

CRM deals with resource management in flight operations is the utilization of all available resources to maximize the safety and effectiveness of the mission. Resources include autopilots, avionics systems, operating manuals, and people, including crewmembers, air traffic controllers, and others in the aviation operating environment. The goal of CRM is to improve individual and crew performance by using all of the resources available to minimize risk.

Section B. CRM Concept

Introduction

The CRM concept is based in part on the following:

- Performance
- Focus
- Acquisition of CRM skills
- Motivation of crewmembers
- Assertiveness

In this Section

This section contains the following information:

B.1. Performance

Effective performance depends on both technical performance and interpersonal skills.

B.2. Focus

CRM focuses on crewmember attitudes and behaviours. A primary focus of CRM is effective team coordination. The team encompasses the flight crew, air traffic controllers, maintenance, and other groups that interact with the cockpit crew. Effective CRM involves the entire flight crew. CRM is not simply the responsibility of the PIC, nor should CRM be viewed as pilot training. All crewmembers are responsible for the effective management of the resources available to them.

B.3. Acquisition of CRM Skills

The acquisition of effective CRM skills requires the active participation of all crewmembers. Basic CRM skills are typically introduced in classroom lectures but are perfected by active participation and practice on each flight.

B.4. Motivation of Crewmembers

The PIC must maintain a positive climate on the flight deck and encourage crewmembers to fully participate in crew activities. Creating the proper climate is essential. This can be done by maintaining an "open" cockpit atmosphere; having the crewmembers speak up when things do not seem right or ask questions if they do not understand. It is up to the PIC to promote positive relations by providing non-punitive critique and feedback.

B.5. Assertiveness

Assertive behaviour indicates highly developed skills in both task and relationship and is most likely to produce an assertive response from other crewmembers and insure the open exchange of information. As a PIC, you have the authority to either accept or reject the advice or opinion of others. Listening and responding to your flight crew does not mean abdicating command.

Section C. Risk Management

Introduction

This section describes the use of Coast Guard Risk Management during the pre-flight planning and in flight as the mission and conditions evolve.

In this Section

This section contains the following information:

C.1. Risk Management

The flight crew shall complete the Coast Guard Aviation Risk Management Process, including PEACE, STARR, RAM, and GAR 2.0 prior to flight and during flight as conditions warrant. TCT/RM concepts can be found in reference (e) The entire crew should be involved in the risk assessment and mitigation process. Should the Risk Assessment Matrix indicate medium or high risk, the crew should determine if mission factors may be mitigated through such efforts as delaying takeoff time or changing mission parameters. If this results in risk factors that require command endorsement, the PIC will review the matrix with the AUXAIR leadership and Air Station command following local procedures and then determine the appropriate course of action.

C.2. Pre-Flight Planning

Risk Management is a critical component of the pre-flight planning required for all missions and should continue to be evaluated by the entire crew for any change in mission status or mission environment. Risks are to be identified and mitigated.

C.3. During the Flight

Risks are to be identified and mitigated throughout the mission and the risk assessment updated and communicated. For example, flight into and out of an uncontrolled airfield poses additional risk than flight in controlled airspace. Prior to entering or departing the airspace surrounding an uncontrolled airfield, flight crews should update their Risk Management assessment to identify and assess the hazards, evaluate the risk level, and mitigate the risk. Effective CRM is essential to reducing risk.

CHAPTER 13
Aviation Safety

Introduction

This chapter will discuss the overall Aviation Safety, Program, and Mishap policies and requirements.

In this Chapter

This chapter contains the following information:

Section A. Safety Program

Introduction

The fundamental reasons for a comprehensive aviation safety program are the well-being of personnel and the preservation of limited resources, with the goal of conducting flight operations in the safest possible manner consistent with mission requirements. To achieve this goal, the Coast Guard safety program establishes organizational requirements to identify hazardous situations, take corrective actions to reduce risks and/or eliminate danger, and disseminate information to promote the safety and occupational health of military and civilian personnel. Reference (f) provides specific guidance for the flight safety program.

In this Section

This section contains the following information:

A.1. Exchange of Safety Information

Free and open exchange of operational hazard assessments, risk management tools, crew/maintenance resource management activities, and mishap reports to inform all parties on effective mission accomplishment are vital to safe operations.

A.2. Command Emphasis

Effective aviation safety requires continuous command emphasis and leadership. If hazards are recognized and effectively reduced or eliminated, mishap potential will be reduced, and the operational effectiveness of the air unit will be enhanced. Experience has shown that a strong command mishap prevention (loss control) policy will reduce aircraft mishap potential and thereby enhance overall mission effectiveness.

A.3. Crew Participation

Each individual connected with air operations, whether in an operational or supporting role (e.g., flight crew, scheduling, maintenance), contributes directly to the effectiveness of the aviation safety program. Effective safety is a team effort and requires the active participation of all hands. Specific responsibilities and requirements are prescribed in reference (f).

A.4. Requests for Grounding

A voluntary request for temporary grounding should not be considered a sign of weakness. It should be treated as an indication of the maturity and sound judgment of the individual involved. Flight crew personnel should consult their flight surgeon or other qualified aviation medicine provider when the slightest doubt as to their fitness exists. Air Station Commanding Officers should support an unbiased and healthy attitude toward grounding of flying personnel in the interest of mission readiness and operational safety

Section B. Organization

Introduction

The Auxiliary Aviation Safety Program functions through the established Auxiliary Chain of Leadership (COL), in concert with Aviation Forces Command (CG-711), the Office of Safety and Environmental Health (CG-113), the Chief Director of Auxiliary (CG-BSX), and the Auxiliary National Executive Committee (NEXCOM), setting policy and program requirements. The Auxiliary National Air Operations Division is responsible for keeping Auxiliary aviators informed of safety requirements, health hazards, and safe operating procedures. The National Air Operations Division shall communicate information as quickly as possible.

In this Section

This section contains the following information:

B.1. Responsibility

The Auxiliary leadership shall carry out the policies and tailor program requirements to their particular operations. Safety shall be an integral part of all Auxiliary aviation mission planning and execution. All Auxiliarists shall commit to a personal responsibility to safeguard themselves, fellow crewmembers, and the property entrusted to their care.

Leadership and responsibility for the aviation safety program shall start with the National Commodore and follow the COL to each individual in the program. Auxiliarist at each level shall amplify the message of safety and enforce the rules and standards. The organizational components and individuals described in the following paragraphs have specific responsibilities in the Aviation safety program.

B.2. Coast Guard Headquarters

The following active-duty commands are integrally involved in the Auxiliary Aviation Flight Safety Program:

B.2.a. Office of Safety and Environmental Health

The Office of Safety and Environmental Health, Commandant (GG-113), is responsible to ensure that Coast Guard people, systems, infrastructure, and processes are integrated to maximize mission effectiveness, mitigate workplace hazards, and sustain healthy operations.

B.2.b. Office of Aviation Forces	The Office of Aviation Forces, Commandant (GG-711), mission is to provide Coast Guard aviation with capability in the form of resources, doctrine, oversight, flight standards, and training programs to support safe and effective execution of Coast Guard missions.
B.3. Coast Guard Air Station	The following Air Station personnel are integrally involved in the Auxiliary Aviation Flight Safety Program:
B.3.a. Commanding Officer	Air Station Commanding Officers shall ensure the Auxiliary District Flight Safety Officer (DFSO) is part of a robust aviation safety program and stays engaged with the active-duty Flight safety Officer (FSO).
B.3.b. Flight Safety Officer (FSO)	The active-duty Flight Safety Officer (FSO) at the Air Station is the critical partner for the Auxiliary DFSO. The FSO can assess and oversee the Auxiliary Flight Safety Program, provide CRM refresher training and other valuable flight safety training. The DFSO shall become familiar with and work closely with the FSO in coordinating the Auxiliary flight safety program as specified in this process guide.
B.4. National Aviation Staff	The following National Aviation Staff leadership are actively involved in the Auxiliary Aviation Safety Program:
B.4.a. Division Chief of Air Operations	The Division Chief of Air Operations (DVC-RA) is responsible to oversee the Air Operations Program nationally, including flight safety. The DVC-RA shall liaise with CG-1131 and CG-711 to assess the program effectiveness and recommend improvements. District DSO-AVs and DFSOs shall immediately communicate air mishaps or district issues concerning flight safety to either the DVC-RA or BC-RAS. The DVC-RA advises CG-1131 and CG-711 on all Auxiliary aviation mishaps.
B.4.b. National Flight Safety Officer	The Branch Chief of Flight Safety (BC-RAS) also serves as the National Flight Safety Officer. The BC-RAS is responsible to implement an effective national flight safety program. The BC-RAS acts as the Auxiliary subject matter expert for the DFSOs and ADFSOs.

B.5. Coast Guard Auxiliary District	The following Auxiliary leadership are actively involved in the Auxiliary Aviation Safety Program:
B.5.a. National Commodore	The National Commodore is responsible for the formulation, implementation, and management of the Auxiliary Aviation Safety Program. As necessary, the National Commodore shall develop a separate mechanism for monitoring and testing the overall program.
B.5.b. District Commodores	The District Commodore shall appoint, within those districts with an aviation program, a DFSO to implement the provisions of the program. These individuals shall report directly to the District Commodore and shall advise their Commodore and DSO-AV on the effectiveness of the program. The DFSO shall also maintain a healthy dialogue with the DSO-AV to effect changes where change is warranted. The DFSO shall be engaged with the Air Station FSO. In districts containing more than one air station, the District Commodore in encouraged to appoint an assistant(s) to the DFSO (ADFSO) to liaise with each FSO.
B.5.c. District Flight Safety Officer	The DSFSO is responsible for implementing the Aviation Safety Program within the District. They are also responsible for implementing details of the program to the divisions and flotilla with aircraft facilities. The DFSO shall advise the District Commodore and DSO-AV on all aviation safety matters. Communicating with all elements participating in the Auxiliary Aviation Program is a major function of the DFSO, including coordinating aviation program safety issues with the National Flight Safety Officer (BC-RAS). The DSFO shall be a current Coast Guard Auxiliary Aircraft Commander (AC) and, when practicable, a FAA licensed certified flight instrument instructor (CFII). Candidates for DFSO shall show a personal dedication to flight safety, and a willingness to work throughout the district on this program.

Section C. Aviation Safety Reporting System (ASRS)

Introduction

The National Aeronautics and Space Administration (NASA) aviation safety reporting system (ASRS) was designed and is operated by NASA to ensure the confidentiality and anonymity of the reporter and all other parties in a reported occurrence or incident. The FAA will not seek, and NASA will not release or make available to the FAA, information that might reveal the identity of any party involved in an occurrence or incident reported under ASRS.

In this Section

This section contains the following information:

C.1. Purpose

This cooperative safety-reporting program invites pilots and other users of the National Aviation System to report to NASA actual or potential discrepancies and deficiencies involving the safety of operations. The effectiveness of this program in improving safety depends on the free, unrestricted flow of information from the users of the National Aviation System. Based on information from the program, the FAA will take corrective action as necessary to remedy defects or deficiencies in the National Aviation System. The reports may also provide data for improving the current system and planning for the future.

A NASA ASRS advisory committee conducts periodic meetings to evaluate and ensure the effectiveness of the reporting system.

C.2. Reporting Procedures

Reporting procedures are found in NASA ARC Form 277B (see *Appendix A*), which is preaddressed and postage free, and is available at FAA offices. This form or a narrative report should be completed and mailed to: Aviation Safety Reporting System, P.O. Box 189, Moffett Field, CA 94035-0189.

ASRS reporting is also available online at:

NASA Aviation Safety Reporting System

C.3. NASA Responsibilities

The NASA ASRS provides for the receipt, analysis, and sterilization of aviation safety reports. In addition, periodic reports of findings obtained through the reporting system are published and distributed to the public, aviation community, and FAA.

C.4. Use of Reports for Enforcement

Section 91.57 of the FARs (14 CFR 91.57) prohibits the use of any report submitted to NASA under the ASRS (or information derived there from) in any disciplinary action, except information concerning criminal offenses or accidents. While certificate action and fines are not allowed, letter of correction or warning can still be issued. These will be removed from the pilot's files in 2 years if no other violation occurs.

C.5. Non-Field Report of Violation

When a violation of the FAR comes to the attention of the FAA from a source other than a field report filed with NASA under ASRS, appropriate action will be taken.

C.6. FAA Enforcement Policy

It is the policy of the FAA Administrator to perform the responsibility under the Federal Aviation Act for the enforcement of the Act and the FAR in a manner that will best reduce or eliminate the possibility of, or recurrence of, aircraft accidents. The FAA enforcement procedures are set forth in Part 13 of the FAR (14 CFR Part 13) and FAA enforcement handbooks. In determining the type and extent of enforcement action to be taken in a particular case, the following factors are considered:

- Nature of the violation
- Whether the violation was inadvertent or deliberate
- The certificate holder's level of experience and responsibility
- Attitude of the violator
- The hazard to safety of others which should have been foreseen
- Action taken by employer or other Government authority
- Length of time which has elapsed since violation
- The certificate holder's use of the certificate

- The need for special deterrent action in a particular regulatory area, or segment of the aviation community

Presence of any factors involving national interest, such as the use of aircraft for criminal purposes.

C.7. Violations w/o Civil Penalty or Suspension

Filing a report with NASA concerning an incident or occurrence involving a violation of the Act or the FAR is considered by the FAA to be indicative of a constructive attitude. Such an attitude will tend to prevent future violations. Accordingly, though a violation may be found, neither a civil penalty nor certificate suspension will be imposed if all of the following criteria are met:

- The violation was inadvertent and not deliberate
- The violation did not involve a criminal offense, or accident, or action under Section 609 of the Act which discloses a lack of qualification or competency, which are wholly excluded from this policy
- The person has not been found in any prior FAA enforcement action to have committed a violation of the Federal Aviation Act, or any regulation promulgated under that Act for a period of 5 years prior to the date of the occurrence

The person proves that, within 10 days after the violation, he or she completed and delivered or mailed a written report of the incident or occurrence to NASA under ASRS. When filing a NASA form, the crew members should send a return receipt to protect themselves and have a record of filing within 10 days of a potential violation.

Section D. Mishaps

Introduction

A Coast Guard mishap is defined as any unplanned, unexpected, or unintentional event that causes injury, occupational illness, death, material loss or damage. The Air Station who issued the orders must submit the mishap report.

In this Section

This section contains the following information:

D.1. Mishap Classes

Mishaps are divided by class (A, B, C, D and E) according to resulting severity of injury or cost of property damage/loss. Class A mishaps are the most serious while class D mishaps are the least severe. Class E mishaps are reserved solely for aircraft engine damage mishaps. Reference (m) provides detailed definition.

D.2. Standards and Guidelines

The standards and guidelines contained in reference (e) apply to all Auxiliary personnel and facilities under orders. Reference (e) includes standards and protocols to reduce operational risk, minimize preventable mishaps and enhance air mission success.

D.3. Pre-Mishap Planning

The DFSO shall liaise with the Air Station order-issuing-authority (OIA) to ensure the Auxiliary is covered by the Mishap Response Plan.

D.4. Toxicology

See reference (a).

D.5. National Transportation Safety Board

The National Transportation Safety Board (NTSB) has the authority to investigate all Coast Guard Auxiliary Class A and B aviation mishaps.

Section E. Mishap Response

Introduction

This section will describe Mishap reporting, notifications, and response duties and requirements

In this Section

This section contains the following information:

E.1. Mishap Reporting

The individual or unit with first knowledge of a mishap shall immediately report all available information to the OIA. This reporting requirement applies to all aviation mishaps, incidents, overdue aircraft, and those incidents listed in the FARs that occur either during flight operations or associated ground operations. All mishaps shall be reported in accordance with reference (m).

It is the responsibility of the Auxiliary PIC to report the mishap or incident to the District Flight Safety Officer (DFSO) and the District Chief of Staff (DCOS). If the PIC is unable to report, a flight crewmember shall assume reporting responsibility.

The DFSO and DCOS shall notify the District Commodore (DCO) as soon as possible. The DFSO shall notify the National Flight Safety Officer (BC-RAS).

The DCO shall notify the District Director of Auxiliary (DIRAUX) and maintain continuing communication with the DIRAUX as needed.

If the DCO deems it warranted, the DCO shall notify the Vice National Commodore (VNACO) and the cognizant Deputy National Commodore (DNACO). The VNACO shall notify the National Commodore (NACO).

If at any point in the notification process it is not possible to contact the next level as directed herein, or if there is any doubt that the incident notification will be forwarded in a timely manner to the next level, the reporting member will continue to attempt to contact the next higher level until confirmation is received that the information has been successfully passed.

E.2. Aviation Specific Reportable Events

Additionally, the following are aviation specific reportable events:

Property Damage - Any damage to aviation assets below the reportable mishap threshold ($5,000).

Aeromedical Event - A psychological, physiological, or pathological condition occurring to a crewmember when intent for flight exists and the condition results in interference with a crewmember's duties. This includes flight delays, diverts, or aborts due to conditions affecting a crewmember or passenger (e.g., airsickness, vertigo, suspected or actual hypoxia, toxic exposures, decompression events, preexisting illness, spatial disorientation, other in-flight incapacitation, or injury, etc.).

Precautionary or Forced Landing (Aborted Flight or Takeoff) - Any precautionary landing, aborted takeoff, or failure to get airborne because conditions or circumstances make further flight inappropriate or impossible must be reported, with the following considerations. Precautionary landings without confirmed failure, malfunction, or damage (e.g., suspected blade strike, warning lights, bird-strike, etc.) and no additional damage occurs during landing are not reportable.

Power Loss - Any engine flameout, failure, substantial loss of power or required engine shutdown, regardless of successful restart. Unintentional shutdowns or shutdowns of the incorrect engine are reportable, regardless of restart. Intentional engine shutdowns not associated with a related emergency procedure (e.g., training, test flight) are not reportable, unless the engine fails to restart or other circumstances surrounding the event can be of value to the fleet.

Propeller, Rotor or Engine Wash - Damage or injury resulting from propeller backwash, rotor down wash, or engine exhaust.

Weather Related Mishaps - In-flight encounters with natural hazards such as turbulence, lightning, volcanic ash, windstorms, severe static discharge (hoisting), or other weather anomalies.

Things Falling Off Aircraft (TFOA) - Any object unintentionally dropped or falling from an aircraft must be reported regardless of damage or injury.

E.3. Notification

The reporting procedure specified above applies not only to an incident involving an Auxiliarist assigned to duty, including incidents occurring during travel to and from the location of the authorized Auxiliary activity, but also includes incidents defined below that did not occur while assigned to duty:

- Any occurrence causing personal injury requiring medical care beyond basic first aid, death, any occupational illness, property damage, personal injury, or loss that will generate a claim against the Coast Guard must be reported.
- Any occurrence reported to Active-Duty Coast Guard is to be reported to the designated Auxiliary officer as described.
- Any unusual occurrence which significantly interferes with, or negatively impacts, the performance or outcome of a mission is to be reported.
- Any occurrence which results in intervention or a response by a federal, state, or local agency must be reported.
- Any incident which results in damage in excess of $300.00 (Three Hundred Dollars) or more to an Auxiliary facility or structure must be reported to NACO through the process described.
- Any other incident, whether or not occurring while a member is assigned to duty or executing a Coast Guard mission, which, in the judgement of the member, is likely to result in positive or negative publicity for the Auxiliary, must be reported.

E.4. Mishap Response

Coast Guard Auxiliary aviation has three separate processes which address mishaps: a Mishap Analysis Board (MAB), an administrative/ major incident investigation, and an Aviator Evaluation Board (AEB). Mishap analysis is governed in reference (f). Administrative investigations and aviator evaluation boards are described in Section F of this Chapter.

The outcomes of a safety analysis are not punitive and are to be used solely for prevention of future mishaps. Commandant (CG-113) manages the mishap analysis process, including participation on aviation mishap analysis or investigations between the USCG and other agencies. Contact Commandant (CG-113) and (CG-BSX) immediately after any event that could be of interest to FAA/NTSB/DoD.

E.5. e-AVIATRS

All Auxiliary aviation mishaps must be entered in e-AVIATRS regardless of class.

E.6. Coast Guard and Civil Aviation

Regardless of what agencies are involved, free and uninhibited exchange of safety information is vital to the interest of mishap prevention. Title 49, United States Code, Section 1132 allows the NTSB to serve as the primary investigative agency for any mishaps involving both civil and Coast Guard aircraft or in instances where Coast Guard aircraft have played a role in civilian fatalities, casualties, or property damage. Mishaps involving a violation of an FAA rule by Coast Guard Auxiliary personnel may be investigated by the NTSB.

Section F. Administrative Actions Following a Mishap

Introduction

In addition to the mishap response actions described in this Chapter and the mishap analysis governed by references (f). Reference (m) describes the standard procedure for investigating incidents in the Coast Guard.

In this Section

This section contains the following information:

F.1. Administrative Investigation

Administrative action, including documentation of a mishap or flight rule violation in a pilot's flight records, shall not be taken against a Coast Guard Auxiliary member based on the findings contained in a Safety/Mishap analysis. Administrative actions shall be based upon a separate investigation conducted in accordance with the reference (m)

F.2. Violation/Mishap Entries

Aviator and flight crewmember mishap records shall be maintained by the District Aviation Board and made available to DIRAUX, Air Station and Auxiliary District Leadership upon request.

F.3. Legal Investigation

Investigations of Auxiliary aircraft incidents and ground accidents shall be conducted in accordance with FAA, National Transportation Safety Board (NTSB) and Coast Guard regulations. The Coast Guard may request assignment of a Coast Guard and/or an Auxiliary representative to the NTSB investigation. Additionally, the Coast Guard may elect to conduct a Coast Guard Mishap Analysis Board (MAB) to independently investigate the same mishap.

F.4. Flight Restrictions Following Aircraft Mishaps

Flight Crew personnel shall be temporarily grounded following involvement in any Class A or B mishap. Temporary grounding of flight crews following Class C or Class D mishaps may be advisable in certain situations and shall be at the discretion of the Air Station Commanding Officer or a designated representative. An Aviator Evaluation Board (AEB) is required for all class A mishaps. The flight crew members involved in Class A mishaps will remain grounded until the AEB process is complete.

F.5. Auxiliary Aviator Evaluation Board (AEB)

If the Air Station, DIRAUX or Auxiliary leadership develops serious doubts as to a pilot or other flight crewmember's performance, potential, or motivation, they shall request the District Aviation Board to work jointly with the Air Station and make a thorough investigation. The AEB will function in an advisory capacity to the convening authority and will recommend appropriate action to ensure only those aviators who can satisfactorily perform the duties required are continued in a flying status.

The Board is not a disciplinary agency in any respect; any action resulting from board recommendation is not disciplinary in nature, but rather is intended solely to support the safety of flight operations. An AEB is mandatory for any class A mishap and is optional for other mishap classes or multiple mishaps.

A Coast Guard Auxiliary Aviator Evaluation Board will consist of two Auxiliary aviators and at least one active-duty aviator. The Auxiliary aviator members should be senior to the aviator whose performance is under evaluation and should be familiar with the category and type of aircraft involved. Unless otherwise directed by the commanding officer, the District Senior IP-FE should act as the senior member of the board.

F.6. Disciplinary Action

Where events leading to board action also require disciplinary action, the DIRAUX, acting with the advice of the Air Station Commanding Officer and Auxiliary District Leadership, will make that determination. Any disciplinary action will be taken as specified in reference (d).

Section G. Midair Collision Reporting Requirements

Introduction

This section describes reporting requirements for midair or near midair collision.

In this Section

This section contains the following information:

G.1. Midair Collision

A mid-air collision is an incident where two or more aircraft actually collide. Make a critical incident notification of all mid-air collisions, regardless of the amount of injury or damage, to the National Command Center, CG-DCO-NCC, via telephone (1-800-323-7233 or 1-202-372-2100) within 5 minutes of becoming aware of the mishap and to the DFSO and Air Station FSO as soon as possible. The DVC-RA and/or BC-RAS shall be alerted as soon as practicable. The Air Station shall alert Commandant (CG-1131) within 12 hours via preliminary mishap report.

G.2. Serious Near Midair Collision

A serious near mid-air collision is an event where the possibility of collision existed and either aircraft took evasive action or bodily injury occurred. Make a critical incident notification of any serious near mid-air collision as soon as practicable through the chain of command to the National Command Center via telephone (1-800-323-7233 or 1-202-372-2100). The Air Station shall report all serious near mid-air collisions without damage to Commandant (CG-1131) within 24 hours as Aviation Flight-Related mishaps. Damage during evasive manoeuvring shall be reported within 24 hours as an Aviation Flight mishap. Serious near mid-air collisions with injuries or aircraft damage shall be classified in accordance with reference (m). Serious near mid-air collisions without injuries or aircraft damage shall normally be reported as Class D mishaps. Apply the High Potential Events (HIPO) label as appropriate for the mishap event.

G.3. Near Midair Collision	A near mid-air collision is an incident where the possibility of collision results from an aircraft passing within 500 feet of another aircraft (excluding normal formation or air intercept flights), or a pilot or crewmember of either aircraft reported that a possible collision hazard occurred between two or more aircraft (including Unmanned Aircraft Systems (UAS)). Report near mid-air events with no Coast Guard aircraft damage and no resulting injuries aboard Coast Guard aircraft as Class D Aviation Flight- Related mishaps
G.4. Voice Report	Report events involving a Traffic Collision Avoidance System (TCAS) alert that results in taking evasive action as Class D Aviation Flight-Related mishaps.
G.5. Reporting Responsibility to the FAA	The following information shall be reported to the FAA for all actual and near mid-air collisions: • Type of flight plan • Station altimeter setting used • Detailed weather conditions at altitude or flight level • Approximate courses of both aircraft, indicating if one or both aircraft were climbing or descending • Reported separation in distance at first sighting, proximity at closest point horizontally and vertically, and length of time in sight prior to evasive action • Degree of evasive action taken, if any (from both aircraft, if possible) • Injuries, if any Safeguarding of all pertinent information upon landing for subsequent investigation may be warranted.
G.6. NTSB Involvement	Commandant (CG-1131) will request NTSB participation in all investigations of actual mid-air collisions between Coast Guard Auxiliary and non-Coast Guard aircraft.
G.7. Public Statements	Statements which might indicate responsibility for a mid-air collision or near mid-air collision shall not be made before completion of the investigation. Voluntary statements to the press are not encouraged. If any statement is given to the press, it shall be limited to the known facts concerning the incident.

Section H. Flight Safety for Non-Flight Crew Mission Essential Personnel

Introduction

This section will describe all flight safety requirements for non-flight crew mission essential personnel.

In this Section

This section contains the following information:

H.1. Equipment

The PIC shall ensure all non-flight crew mission essential personnel are equipped with the appropriate protective clothing, flotation equipment, supplemental oxygen, or any other mission applicable safety equipment required by this process guide.

Air Station Commanding Officers can authorize temporary deviations from the provisions of this Section for mission essential personnel when necessary to respond to urgent incidents requiring unusual levels of flight activity.

Unit Commanding Officers shall ensure flight equipment is maintained in accordance with the manufacturer's standards or guidance of in reference (i).

H.2. Non-Flight Crew Mission Essential Personnel Flight Requirements

Non-flight crew mission essential personnel have additional training and safety equipment requirements.

F.2.a. Required Orientation Training

In addition to the required aircraft orientation for all mission essential personnel described in Chapter 8 of this process guide, non-flight crew mission essential personnel shall have received orientation training in the following topics related to the applicable aircraft type and model:

- Inflight emergency procedures
- Ditching procedures
- Use of aircraft safety equipment
- Use of personal protective equipment
- Emergency egress procedures

APPENDIX A
AUXAIR Program Concept of Operations (CONOP)

Introduction

This appendix discusses the Auxiliary Air Operations Program Concept of Operations.

In this Section

This section contains the following information:

A.1. General

The Auxiliary Air Operations Program enlists a group of dedicated volunteers and their aircraft to promote boating safety, extend the Coast Guard's maritime domain awareness, and provide search and rescue capability to the citizens of the United States and its territories. The Auxiliary's air operation fleet provides a visible Coast Guard presence over the nation's ports, coastal areas, and other waterways. By virtue of their training and qualification, this force stands ready to respond providing a surge capacity for the US Coast Guard.

Auxiliary multi mission patrols are conducted aboard aircraft accepted for use and equipped to conduct the mission profile. Aircraft of all sorts, including piston, gas turbine and helicopters, can be Auxiliary facilities. Auxiliary members train to rigorous standards, patterned after the Coast Guard's own air qualification program.

Assignment to duty to conduct multi-mission patrols is made by the Coast Guard Air Station based on Coast Guard need and the availability of a suitable Auxiliary aircraft. All mission assignment by the Coast Guard and mission acceptance by the Auxiliary Pilot-in-Command should be governed by the principles of risk assessment and operational risk management.

The CG Auxiliary's Air Operations program provides a ready resource to assist the Coast Guard in ensuring the safety of America's waterways by maintaining vigilance, increasing maritime domain awareness, and assisting the recreational boating public.

A.2. Missions

Authorized missions in accordance with reference (a) and reference (b) see Chapter 6 in this process guide.

APPENDIX B
Glossary

Introduction

This appendix contains a list of terms that may be useful when reading this process guide. In addition to standard Auxiliary aviation terminology, this glossary also includes standard active-duty aviation terminology to enhance the professional knowledge of Auxiliary aviators.

TERM	DEFINITION
Auxiliary Aviation Coordinator (AAC)	Auxiliary Operations Officer for the squadron.
Actual Instrument Conditions	Conditions external to the aircraft, which require the pilot to control the attitude of the aircraft primarily through reference to flight instruments. Time is credited to all pilots at flight control positions, but only the pilot logging first pilot time during an approach may be credited with that approach.
Adequate Crew Rest Facilities	At a minimum, adequate crew rest facilities consist of an enclosed building, sheltering the crew from the elements, capable of maintaining a comfortable temperature/humidity environment, equipped with comfortable furniture, food/storage preparation capability, head facilities, water supply, lighting, and providing a comfortable noise level. NOTE: Adequate crew rest facilities for crews on alert duty for more than 12 consecutive hours must provide suitable sleeping quarters.
Aerial Port of Debarkation (APOD)	A station which serves as an authorized port to process and clear aircraft and traffic for departure from the country where located.
Aerial Port of Embarkation (APOE)	A station which serves as an authorized port to process and clear aircraft and traffic for entry into the country where located.
Aircraft	A device that is used or intended to be used for flight in the air (i.e., helicopters, airplanes, unmanned aircraft, airships and lighter than air vehicles).

Aircraft (DHS)	Any aircraft owned, leased, chartered, or rented and operated, or a commercial aircraft hired as Commercial Aviation Services (CAS), by an Organizational Element of the Department of Homeland Security. All Coast Guard aircraft are DHS aircraft.
Aircraft Category	A broad classification of aircraft (i.e., fixed-wing or rotary-wing).
Aircraft Commander (AC)	A pilot who has completed more training and flight hours than a First Pilot (FP). Authorized to be assigned all missions including those flown in IMC and RWAI (if Air Station training completed).
Aircraft Operating Hours	Operating hours begin when an aircraft departs its unit on a specific sortie and ends when the aircraft returns to that unit. Normally, all time spent away from an assigned unit except maintenance and storage time will be included.
Air Crew	Auxiliary qualification that provides the pilot a capable assistant during all phases of Auxiliary missions and especially during times of high cockpit workload. Well trained Auxiliary air crew are able to fulfill all air observer duties, while also assisting the Auxiliary pilot with radio communications, weather gathering and recording, navigation in both visual and instrument meteorological conditions, and visual and instrument approaches to airports.
Air Defense Identification Zone (ADIZ)	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.
Air Traffic	Aircraft operating in the air or on the airport surface, exclusive of loading ramps and parking areas.
Air Traffic Control (ATC)	A service operated by the appropriate authority to promote the safe, orderly, and expeditious flow of air traffic.
Alert Duty	A person is on alert duty when in a ready status to proceed on a mission as soon as the need becomes known. Applies to BRAVO ZERO or STRIP ALERT status.
Annual Requirements	Annual requirements must be met within 12 calendar months, with expiration on the last day of the calendar month. Annual requirements may be extended to the end of the 15th calendar month with Air Station Commanding Officers approval.

Approach with Vertical Guidance (APV)	Term used to describe RNAV approach procedures that provide lateral and vertical guidance, but do not meet the requirements to be considered a precision approach.
Area Navigation (RNAV)	A method of navigation that permits aircraft operations on any desired course within the limits of self-contained system capability.
Autorotation	A rotary-wing aircraft flight condition in which the lifting rotor is driven entirely by action of the air when the rotary-wing aircraft is in motion.
AUXLO	Active-duty pilot assigned as the Air Station's Auxiliary Aviation Liaison Officer. Primary POC for the Auxiliary squadron.
AVCERT	Certification required to operate aircraft on a US Navy or MSC vessel. UAS related.
Basic Hoist Evolution	A non-personnel hoist; including HIFR
Calendar Year Requirement	A training evolution which must be completed no less than once per year, from 1 January to 31 December.
Calibrated Airspeed	The indicated airspeed of an aircraft, corrected for position and instrument error. Calibrated airspeed is equal to true airspeed in standard atmosphere at sea level.
Cargo	Materiel carried aboard an aircraft that is not standard mission equipment and is not personal equipment used by crewmembers for inflight duties. Crew overnight bags and passenger luggage is considered cargo for weight and balance purposes.
Certification	Formal command verification that an individual has met all requirements and is authorized to perform the flight crew duties at a specific level aboard a Coast Guard Auxiliary aircraft. Certifications are officially entered in AUXDATA II by the Director.
Cocked	An aircraft in a BRAVO ZERO (B-0) readiness status is said to have been cocked when the pre-engine start portion of an approved rapid response checklist has been completed but takeoff is not necessarily imminent. This is done to minimize launch time, refer to Strip Alert and Special Alert.
Confined Areas	An area that contains objects or obstacles that may be a strike hazard within one wingspan or rotor disk diameter in any direction and along the path of an aircraft.

Controlled Airspace	An airspace of defined dimensions within which air traffic control service is provided to IFR flights and to VFR flights in accordance with the airspace classification.
Copilot	An Auxiliary pilot qualification who has accrued a minimum of 200 hours as PIC. Co-pilots are authorized to fly as PIC on standard missions.
Copilot Time	That time a pilot spends at a flight control position of multi-piloted aircraft but is not the pilot operating the flight controls. For any flight, the total copilot time credited to pilots shall not exceed the aircraft time.
Coupled Approach	An instrument approach performed by the autopilot which is receiving steering commands from onboard navigation equipment.
Crash Equipment	Aircraft fire fighting and rescue equipment appropriate for the aircraft being protected.
Crew Bags	For weight and balance purposes, crew bags include personal equipment carried by crewmembers to perform inflight duties.
Crew Endurance Management (CEM)	A systematic process for balancing organizational (e.g., 24/7 operations, number of B-0 resources, etc.) and mission (e.g., environmental factors, time -of-day, etc.) requirements with the physical and mental capabilities and needs of the crew. CEM uses a systems approach to evaluate the effects of all factors, and interaction of these factors, to control adverse effects, like fatigue, of our operations.
Crew Mission Hours	Commences with the start of preflight duties and ends with the completion of post flight duties for each sortie. Crew mission time for multiple sorties is cumulative unless 10 hours of rest occurs between sorties. If adequate crew rest facilities are not available between multiple sorties, crew mission time shall continue to accrue.
Critical Engine	The engine whose failure would most adversely affect the performance or handling qualities of an aircraft
Currency Requirements	Tasks which are required to be repeated a certain number of times at regular intervals to maintain currency.

Designated Trainer	A Designated Trainer is a certified member who has successfully completed the resident training course for their competency, is designated in writing by the CO/OIC, and demonstrates the maturity and demeanor to teach
Duty	Signifies a person who is engaged in the performance of any official Coast Guard business, whether ground or flight. This includes time subject to immediate recall for flight crew or other assignment,
Emergency Breathing Device	Any underwater breathing device designed and authorized for aircraft egress.
Employment Hours	The flight hours which are expended while benefiting a particular mission area.
Endurance	An aircraft's ability to remain aloft for a period of time, limited by the amount of fuel an aircraft carries, the rate at which the fuel is burned, and by the requirement to maintain an adequate fuel reserve for landing.
External Load	A load that is carried, or extends, outside of the aircraft fuselage.
Fatigue	A condition of impaired mental and physical performance brought about by extended periods of exertion and stress which reduces the individual's capability to respond to external stimuli. Some factors contributing to fatigue are sleep loss, exposure to temperature extremes (hypothermia and heat stress), motion sickness, changes in work and sleep cycles, physical exertion, workload, illness, hunger, and boredom. While an individual or crew may be considered to be fatigued at any time, at a minimum, they are considered to be fatigued when they exceed the underway or alert posture standards.
Federal Traveler	A person who travels on a government aircraft and who is either a civilian employee in the Government service, a member of the uniformed or foreign services of the United States Government, or a contractor working under a contract with an executive agency.
Ferry Flight	A flight from the original point of departure to the movement destination for the exclusive purpose of transferring the aircraft between two locations.
Ferry Pilot	A Coast Guard aviator designated as Pilot-in-Command (PIC) of a ferry flight.
First Pilot (FP)	A pilot who has completed more training and flight hours than a Copilot (CP) and has accrued at least 500 hours as PIC. First Pilots are eligible to be assigned as Pilot-in-Command (PIC) on SAR missions.

First Pilot Time	That time actually spent operating the aircraft flight controls. When two pilots are at flight control positions, credit for first pilot time is given to whichever pilot is operating the flight controls. For any flight, the total first pilot time credited to pilots must equal the aircraft time.
Flight Crewmember	Any person holding an Auxiliary flight crew qualification, or in training to be designated, who performs inflight duties relating to the operation of the aircraft e.g., Pilot, Air Crew, Air Observer, Pilot Candidate, Air Crew Candidate, Observer Trainee.
Flight Examiner	A pilot who has been designated, in writing, by the Director (DIRAUX) to conduct ground and flight checks.
Flight Hours	Flight hours comprise all time officially creditable to an individual aircraft. Flight hours begin when the aircraft first moves forward on its takeoff run or, in case of rotary-wing aircraft, when it takes off from the surface or flight deck. Flight hours end after airborne flight when the aircraft is on the surface and either the engines are stopped, or a change is made in the PIC. If the engines are kept running for maintenance tests, or any other purposes and no further flight is intended, aircraft time shall end when the aircraft is stopped for such purpose.
Flight Information Publication (FLIP)	Military or civilian publication that provides information on aeronautical procedures and airport facilities.
Flight Level	A level of constant atmospheric pressure related to a reference datum of 29.92 inches of mercury. Each is stated in three digits that represents hundreds of feet. For example, flight level 250 represents a barometric altimeter indication of 25,000 feet; flight level 255, an indication of 25,500 feet.
Flight Standards Team	Auxiliary lead team that develops and recommends aviation policy, rules and regulation to Coast Guard and Auxiliary Leadership. Consists of the DVC-RA, BC-RAF, BA-RAF, DIR, BSX designee, CG-711 designee, DIR-R and others as required.
Flight Verification Check	An airborne functional check of components or systems whose failure would not adversely affect flight safety or seriously affect mission accomplishment.
Flight Visibility	The average forward horizontal distance, from the cockpit of an aircraft inflight, at which prominent unlighted objects may be seen and identified by day and prominent lighted objects may be seen and identified by night.
Ground Visibility	The prevailing horizontal visibility near the earth's surface as reported by the United States National Weather Service or an accredited observer.

High Potential Events (HIPO)	A HIPO event is a Class C, D, E mishap, or 'near miss' event that had the potential to result in catastrophic loss (e.g., fatality, severe injury, loss of asset, etc.).
Hot Refueling	Refueling an aircraft with the engine(s) and/or the auxiliary power unit operating.
Indicated Airspeed	The speed of an aircraft as shown on its pitot static airspeed indicator uncorrected for airspeed system errors.
Individual Flight Time	Individual flight time comprises all time officially creditable to individual flight crewmembers, technical observers, and other mission essential non-crewmember personnel on flight orders.
Instructor Pilot	A pilot who has been designated, in writing, by the Director (DIRAUX) to conduct ground and flight syllabus instruction.
Instructor Pilot Time	That time actually spent exercising control over a flight in which syllabus instruction or a flight check is given. Training given during normal operational flights is not instructor pilot time.
Instrument Flight Rules (IFR)	Set of procedures that must be followed when flying in Instrument Meteorological Conditions (IMC).
Instrument Meteorological Conditions (IMC)	Meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling less than the minima specified for visual meteorological conditions.
Instrument Time	That time a pilot occupies a flight control position while under actual instrument conditions or simulated instrument conditions, regardless of whether day or night. Flying On Top shall not be credited as instrument time unless conditions actually require reliance on instruments.
Maintenance Status (Code Title: CHARLIE)	Signifies aircraft that are inoperable because of required maintenance. This maintenance cannot be done as part of the normal preflight or post flight inspections, or in an amount of time that would not delay a BRAVO ZERO aircraft departure. The degree of Maintenance Status shall be assigned on the basis of total time estimated for repairs or to perform such work required to prepare the aircraft for Readiness Status and will be stated using a Ready for BRAVO (RFB) date-time group (e.g., CHARLIE RFB 031200Z or 031200 (local)).

Minimum Descent Altitude	The lowest altitude expressed in feet above sea level, to which descent is authorized on final approach or during circling to land maneuvering when executing a standard instrument approach procedure where no electronic glide slope is provided.
Mission Essential Personnel	A person, approved by the unit Commanding Officer, on an aircraft whose skills or expertise are required to carry out or contribute to any authorized DHS or Coast Guard responsibility, mission, or function for which the aircraft is being operated (e.g., law enforcement personnel being transported to the location of a drug case, marine inspectors being transported to inspect offshore facilities, ATON personnel being transported to repair a light structure, or search teams). Mission essential personnel are not passengers.
Mission Expert	Any person with specific expertise related to an aspect of a mission undertaken by Coast Guard aviation whose participation can increase safety or operational effectiveness. Mission experts are considered mission essential personnel for non-routine missions.
Mission Requirements Use	Activities that constitute the discharge of DHS or the Coast Guard's official responsibilities, which may include authorized assistance to other government agencies. Mission Requirements Use include, but are not limited to, the transport of active-duty personnel and/or equipment, training, evacuation (including medical evacuation), intelligence activities, law enforcement (including transport of prisoners, detainees, and illegal aliens) and search and rescue.
National Capital Region	Consists of the District of Columbia; Montgomery, Prince George's, and Frederick Counties in Maryland; Arlington, Fairfax, Loudoun, and Prince William Counties in Virginia; and cities now or hereafter existing in Maryland or Virginia within the geographic area bounded by the outer boundaries of the combined area of the counties listed above
Nighttime	The time a pilot occupies a flight control position inflight between the official time of sunset and sunrise (on the surface below the aircraft) regardless of whether visual or instrument conditions
Non- Compliant Vessel (NCV)	A vessel subject to examination that refuses to heave to after being legally ordered to do so.
Night Vision Goggle (NVG) Time	That time when a pilot occupies a flight control position inflight between official sunset and official sunrise (on the surface below the aircraft) and is using NVGs.

Non-Flight Crew Member	A person, other than a flight crewmember, who is aboard an aircraft. Non-flight crewmembers are either mission essential personnel or passengers.
Non-Precision Approach Procedure	A standard instrument approach procedure in which no electronic glide slope is provided.
Official Purpose	Activity to carry out or contribute to any authorized DHS or Coast Guard responsibility, mission, or function.
Official Transportation	Authorized movement of persons in an official travel status on DHS aircraft. Such transportation includes movement to meet Mission Requirements Use, Required Use, and other requirements to carry out an authorized DHS or Coast Guard responsibility, mission, or function.
Operational Commander	For the purpose of this process guide, Operational Commanders are defined as those who exercise *direct* operational control of a Boat Force unit. This definition specifically does not include the **Station** CO/OIC exercising operational control of a **Station (small)**.
Operational Control (OPCON)	Those functions involving the composition of subordinate forces, the assignment of tasks, the designation of objectives, & the authoritative direction necessary to accomplish the mission. It does not include such functions as administration, discipline, internal organization, and unit training, except when a subordinate commander requests assistance.
Operations	Time spent on pre-mission planning, underway, and post mission reporting or follow-up.
Operational Missions	All missions directly performing Coast Guard operations. For the purposes of this process guide, training, ferry, and maintenance flights are considered nonoperational flights.
Operating Status (Code Title: ALPHA)	Status achieved when aircraft is performing a specific mission or task (e.g., an aircraft engaged in a specific search and rescue, law enforcement, administrative, patrol, training, test, ferry, logistics, or other operation). Aircraft temporarily deployed from their assigned station to another unit for other than SAR readiness or for duty under Navy operational control are in ALPHA status.
Orientation Flights	Flights intended to afford firsthand opportunities to observe the missions of Coast Guard aviation, secondary to an assigned primary purpose of the flight and not used for point-to-point transportation.

Passenger	Any person transported on a Coast Guard aircraft other than the flight crewmembers and mission essential personnel.
Pilot-in-Command (PIC)	The pilot who has been assigned by proper authority to take charge of the aircraft and be responsible for a specific flight or mission. In the case of UASs the PIC is the pilot controlling the aircraft unless he or she is under instruction.
Pilot Monitoring (PM)	Interchangeable with legacy terms Safety Pilot (SP) or Pilot Not at Controls (PNAC) still referenced by other Coast Guard aviation documents.
Positive Control	Control of all air traffic, within designated airspace, by air traffic control.
Precision Approach Procedure	Procedure in which an electronic glide slope is provided, such as ILS or PAR.
Prohibited Area	Designated airspace within which the flight of aircraft is prohibited.
Proficiency	Status of a crew currency
Public Aircraft	Aircraft used only in the service of a government or political subdivision, not including government-owned aircraft carrying persons or property for commercial purposes.
Qualification	The satisfactory completion of the appropriate qualification tasks.
Readiness	The ability of an aircraft to perform the functions and missions for which it was designed.
Readiness Status (Code Title: BRAVO)	Signifies aircraft in potential working status when not in Operating Status or Maintenance Status. An aircraft in Readiness Status shall be ready to proceed within a status period after receipt of orders or information requiring its movement. BRAVO ZERO shall be construed to mean that facilities (material and personnel) are ready to proceed with a minimum of delay. The crew of an aircraft in BRAVO ZERO status need not be kept in the immediate vicinity of the aircraft. The crew shall be readily available so that the aircraft can proceed within 30 minutes from the time of notice. Similarly, the crew of a BRAVO X aircraft must be able to proceed within X hours. The degree of Readiness Status shall be assigned solely on the basis of personnel availability and not for material or maintenance purposes.
Ready For BRAVO (RFB)	An indication of the degree of Maintenance Status, which is assigned on the basis of total time, estimated for repairs or to perform such work

	required to prepare the aircraft for Readiness Status. The date and time when the repairs will be completed is part of this designation.
Remote Locations	Geographic locations not reasonably accessible to regularly scheduled commercial airline service, specified by Area/District Commanders.
Required Use Transportation	Use of a Coast Guard aircraft for the transportation of a DHS or Coast Guard officer or employee where use of the aircraft is required because of predetermined, bona fide communications or security needs of the traveler's organization, or exceptional scheduling requirements.
Resource Hours	Hours accumulated by an aircraft when operating, refer to Operational Reporting, COMDTINST M3123.13 (series).
Restricted Area	Designated airspace within which the flight of aircraft, while not wholly prohibited, is subject to restriction.
Rotary-Wing Aircraft	A heavier-than-air aircraft that principally depends on the lift generated by one or more rotors for its support inflight.
Rotary-Wing Air Intercept (RWAI)	Actions of specially trained and authorized Coast Guard rotary-wing aircraft and crews, to visually detect and close with other aircraft (fixed-wing, helicopters, etc.) to identify, communicate, determine intent and compel compliance with airspace restrictions.
SAR	A Search and Rescue (SAR) mission is one that involves the probable loss of life unless the Coast Guard intervenes.
Simulated Instrument Conditions	Conditions external to the aircraft are visual, but the pilot flies the aircraft solely by reference to instruments. Time and approaches are credited only to the pilot logging first pilot time.
Small Aircraft	Aircraft of less than 12,500 pounds maximum certificated weight.
Space Available	Transportation where additional seating is available on a Coast Guard aircraft that is already scheduled for an official purpose without degrading mission capability.
Special Alert	A special type of readiness status in which ready crews are capable of achieving takeoff within a launch window specified by TACON.
Special VFR Operations	Aircraft operating in accordance with clearances within controlled airspace in meteorological conditions less than the basic VFR weather minima.

Squadron	A group of Coast Guard Auxiliary aircraft and flight crewmembers assigned to an Air Station.
Squawk	To transmit a specific IFF transponder code in a specific mode, as in Squawk Mode 3 Code 1277.
Standard Boat	A special type of readiness status construed to mean that facilities are ready to proceed within a specified number of minutes from notice (i.e., less than 30 minutes, but not less than 15 minutes).
Strip Alert	A three- to five-member deployable evaluation team that consists of highly trained and experienced professionals specializing in the operational/deck and engineering aspects of each standard boat platform. Each team conducts biennial assessment visits to ensure the goals of the Readiness and Standardization Assessment (outlined in this process guide) are achieved. These teams act as a deployable asset to the centers of excellence (BFCO/NMLBS/NATON) for each standard boat platform, and in addition to providing field units with technical information, they support the centers by providing guidance and feedback to improve school training and program functions.
Standards and Standardization	The uniform application of processes, procedures, or techniques to ensure air crew safety, proficiency, configuration, and aircraft reliability. Standards are promulgated by the Office of Aviation and (CG-45) and are contained in various publications and directives
Station	A Station is a shore facility with a designated OPFAC, Command Cadre, permanently assigned duty-standards, unit boat allowance and equipment.
Station (small)	A Station (small) is a minimally staffed and resource constrained unit that receives operational direction, command, and support from its parent unit.
Surf	Surf is defined as the waves or swell of the sea breaking on the shore or reef.
Task	A separate training step learned in order to perform a particular job skill.

Technical Observer	A person other than an aviator or flight crew member who is needed for a flight because of special knowledge, experience, or skill, when these qualities are required in flight to accomplish Coast Guard missions more effectively. A Technical Observer can be either active duty, DoD, active-duty Coast Guard, a Coast Guard civilian employee or a civilian technical expert.
Test Flight	An airborne functional check to establish if an airframe or equipment, while subject to design environment, is operating properly.
Total Pilot Time	Total Pilot Time includes that time in an authorized aircraft or simulator in which a Coast Guard aviator or student pilot who is assigned duty involving flying - • Serves as a required pilot flight crewmember. • Receives training from an authorized instructor in an aircraft, flight simulator, or flight training device; or • Gives training as an authorized instructor in an aircraft, flight simulator, or flight training device.
True Airspeed	The airspeed of an aircraft relative to undisturbed air.
Type	A specific kind of aircraft, such as MH-65, HC-27, HC-130, etc.
Unit Commander	A CO or OIC of a unit with a standard or non-standard boat assigned.
Vertical Replenishment (VERTREP)	The helicopter transfer of personnel or cargo by methods other than landing; such methods include external cargo sling and hoist.
Visual Flight Rules (VFR)	Set of procedures, which must be followed when flying in Visual Meteorological Conditions (VMC).
Visual Meteorological Conditions (VMC)	Meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling equal to or better than specified minima, allowing flight by visual reference to the ground to be safely conducted.

APPENDIX C
List of Acronyms

Introduction

This appendix contains a list of terms that may be useful when reading this process guide. In addition to standard Auxiliary aviation terminology, this glossary also includes standard active-duty aviation terminology to enhance the professional knowledge of Auxiliary aviators.

ACRONYM	DEFINITION
AAC	Auxiliary Aviation Coordinator
AC	Aircraft Commander
ADC	Aircrew Dry Coverall
ADF	Automatic Direction Finder
ADS-B	Automatic Dependent Surveillance – Broadcast
ADSO-AVM	Auxiliary District Staff Officer for Aviation Management. Squadron Administrative Officer.
ADSO-AVT	Auxiliary District Staff Officer for Aviation Training. Squadron Training Officer.
AFMAN	Air Force Inter-Service Manual
AGL	Above Ground Level
AIM	Aeronautical Information Manual
ALC	Aviation Logistics Center
ALMIS	Asset Logistics Management Information System
AMC	Air Mission Commander
ANACO	Assistant National Commodore
AOR	Area of Responsibility
APOD	Aerial Port of Debarkation
APOE	Aerial Port of Embarkation
APU	Auxiliary Power Unit
ASC	Auxiliary Sector Coordinator
ASM	Aviation Special Missions
ASRK	Air-Sea Rescue Kit
AST	Aviation Survival Technician
ATC	Aviation Training Center, Mobile, AL
ATON	Aids to Navigation
ATTC	Aviation Technical Training Center, Elizabeth City, NC
AQEC	Area Qualification Examine Coordinator
AUF	Airborne Use of Force

ACRONYM	DEFINITION
AUX	Auxiliary
AUXLO	Auxiliary Liaison
AUXUAS-SRRP	Auxiliary Short-Range Unmanned Aircraft Systems Remote Pilot
AUXUAS-SRIP	Auxiliary Short-Range Unmanned Aircraft System Visual Observer
AVDET	Aviation Detachment
AWL	Above Water Level
BLOS	Beyond Line of Sight
C2	Command and Control
C4ISR	Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance
CATCH	Computer Approach to Coupled Hover
CBR	Chemical, Biological, and Radiological
CFR	United States Code of Federal Regulations
CGIS	Coast Guard Investigative Services
CGTO	Coast Guard Technical Order
CISM	Critical Incident Stress Management
CO	Commanding Officer
COA	UAS Certificate of Authorization
CONUS	Continental United States
BECCE	Basic Engineering Casualty Control Exercises
CHDIRAUX	Chief Director of Auxiliary
CO	Commanding Officer
COLM	Chain of Leadership and Management
COMDTINST	Commandant Instruction
CQEC	Chief Qualification Examine Coordinator
CS	Creeping Line Search
CSP	Commence Search Point
CRM	Crew Resource Management
DAB	District Aviation Board
DCDR	Division Commanders
DCO	District Commodore
DFSO	Auxiliary District Flight Safety Officer
DGPS	Differential Global Positioning System
DH	Decision Height
DHS	Department of Homeland Security
DIRAUX	Director of Auxiliary
DIW	Dead in the Water
DME	Distance Measuring Equipment

ACRONYM	DEFINITION
DME	Distance Measuring Equipment
DOD	Department of Defense
DR	Dead Reckoning
DSO	District Staff Officer
DSO-AV	Auxiliary District Staff Officer for Aviation
DSO-OP	District Staff Officer, Operations
DSS	Decision Support System
DVC-RA	Auxiliary Division Chief of Air Operations
EAL	Electronic Aircraft Logbook
EBD	Emergency Breathing Device
EFB	Electronic Flight Bag
E-SAR	Electronic Search and Rescue Fundamentals Course
ESCAT	Emergency Security Control of Air Traffic
EBL	Electronic Bearing Line
EMT	Emergency Medical Technician
ENG	Engineer
ETA	Estimated Time of Arrival
FAA	Federal Aviation Administration
FBO	Fixed Base Operator
FC	Flotilla Commander
FDC NOTAMs	Flight Data Center Notice to Airman
FE	Flight Examiner
FEB	Flight Examining Board
FLIP	Flight Information Publication
FM	Flight Mechanic or Frequency Modulation
FOD	Foreign Object Debris
FP	First Pilot
FS	Flight Surgeon
FSO	Flotilla Staff Officers
FSO-OP	Flotilla Staff Officers for Operations
GAR	Green-Amber-Red
GCS	Ground Control Station
GPS	Global Positioning System
HELP	Heat Escape Lessening Position
HF	High Frequency Radio
HIFR	Helicopter Inflight Refueling
HITRON	Helicopter Interdiction Squadron
IAS	Indicated Airspeed

ACRONYM	DEFINITION
ICS	Intercommunication System
ICW	Intracoastal Waterways
IFF	Identification, Friend, or Foe
IFR	Instrument Flight Rules
ILS	Instrument Landing System
IMF	International Medium Frequency
IMO	International Maritime Organization
IR	Infra-Red
IP/FE	Auxiliary Instructor Pilot /Flight Examiner Qualification
IR	Infrared
ISAR	Inverse Synthetic Aperture Radar
KTS	Knots
LE	Law Enforcement
LM	Loadmaster
LOP	Line of Position
LOS	Line of Sight
LRS	Long Range Surveillance
MAB	Mishap Analysis Board
MARB	Marine Assistance Request Broadcast
MATCH	Manual Approach To Controlled Hover
MCE	Mission Control Element
MDA	Minimum Descent Altitude
MDA/DA	Minimum Descent Altitude/Decision Altitude
MEA	Minimum Enroute Altitude
MEDEVAC	Medical Evacuation
MEP	Marine Environmental Protection
MHz	Megahertz
MLC	Maintenance and Logistics Command
MOB	Man Overboard
MPC	Maintenance Procedure Card
MRR	Medium Range Recovery
MRS	Medium Range Surveillance
MSL	Mean Sea Level
MSO	Mission System Operator
NACO	National Commodore
NAS	National Airspace System
NAVRULS	Navigation Rules
NDB	Non-directional Beacon

ACRONYM	DEFINITION
NM	Nautical Miles
NMC	Not Mission Capable
NMCM	Not Mission Capable - Maintenance
NMCS	Not Mission Capable - Supply
NMEA	National Marine Electronics Association
NORAD	North American Aerospace Defense Command
NTSB	National Transportation Safety Board
NVG	Night Vision Goggles
OCONUS	Outside Continental United States
ODO	Operations Duty Officer
OIA	Order Issuing Authority
OIC	Officer-in-Charge
OPAREA	Operational Area
OPBAT	Operation Bahamas and Turks and Caicos
OPCEN	Operations Center
OPCON	Operational Control
OPFAC	Operating Facility
OPS	Operations Officer
OTO	Operations Training Officer
ORM	Operational Risk Management
P	Pilot
PAR	Precision Approach Radar
PATCH	Precision Approach to a Coupled Hover
PED	Portable Electronic Device
PF	Pilot Flying
PFD	Personal Flotation Device
PIC	Pilot-in-Command
PIW	Person-in-the-Water
PLB	Personal Locator Beacon
POB	Person Onboard
PPE	Personal Protective Equipment
PPS	Precise Positioning Service
PQS	Personnel Qualification Standard
PS	Parallel Search
PWC	Personal Watercraft
QA	Quality Assurance
QE	Qualification Examiner
RM	Risk Management

ACRONYM	DEFINITION
RNAV	Area Navigation
RPM	Revolutions per Minute
RS	Rescue Swimmer
RWAI	Rotary-Wing Air Intercept
SAR	Search and Rescue
SCUBA	Self-Contained Underwater Breathing Apparatus
SMC	SAR Mission Coordinator
SO	Division Staff Officers
SO-OP	Division Staff Officers for Operations
SOG	Speed Over Ground
SOP	Standard Operating Procedures
SPE	Severity-Probability-Exposure
SPE/GAR	Severity-Probability-Exposure/Green-Amber-Red
SPS	Standard Positioning Service
SRR	Short Range Recovery
SS	Square Search
SSB-HF	Single Side Band-High Frequency
SSO	Sensor Systems Operator
SWET	Shallow Water Egress Training
TACAN	Tactical Aid to Navigation
TAC-FR	Tactical Fast Roping aircrew qualification or operation
TACON	Tactical Control
TCAS	Traffic Alert and Collision Avoidance System
TCT	Team Coordination Training
TD	Time Difference
TOI	Target of Interest or Track of Interest (RWAI)
TSN	Track Line Single-Unit Non-Return
TSO	Tactical System Operator
TSR	Track Line Single-Unit Return
U/W	Underway
UHF	Ultra-High Frequency
UTC	Universal Coordinated Time
VERTREP	Vertical Replenishment
VFR	Visual Flight Rules
VHF	Very High Frequency
VMC	Visual Meteorological Conditions
VOX	Voice Operated Transmitter
VRM	Variable Range Marker

ACRONYM	DEFINITION
VS	Vertical Speed; Vertical Surface
VS	Sector Search
WX	Weather
XTE	Cross Track Error