

Lesson 9

SURFACE RESOURCES AND AVIATION RESOURCES

Overview

Introduction

An OSC needs to be knowledgeable of the capabilities and limitations of the SRUs that may be assigned to a SAR mission. In this lesson, we'll discuss the capabilities of different types of SRUs including regular CG assets, Auxiliary facilities, and other agency resources.

Coast Guard surface vessels fall into three broad categories; small boats (standard and non-standard), patrol boats, and cutters. Surface vessels can also be categorized by their primary mission; SAR, LE, AtoN, or Ice Breaking. Regardless of its mission, all Coast Guard surface vessels are capable of performing SAR missions.

Coast Guard aircraft fall into two categories: rotary-wing (R/W) helicopters and fixed-wing (F/W) aircraft. Each has specific capabilities that might make it more suitable than another for a particular mission. The R/W SAR fleet is comprised of the HH-65 and HH-60 helicopters. The F/W inventory of SAR aircraft includes the HC-130 and HU-25.

Objectives

After completing this lesson, you should be able to:

- **IDENTIFY** the Standard and Non-Standard Coast Guard surface resources and their capabilities.
- **IDENTIFY** the Coast Guard air assets used to conduct SAR and their capabilities.
- **SUMMARIZE** the limitations of resources and personnel.

References

The information contained in this lesson can be found in the following references:

1. Coast Guard Addendum, Chapter 5.3, 5.4, 5.6, 5.7, 5.8
 2. Boat Operations and Training (BOAT) Manual, Part 2, Ch 4, Sec. B
 3. CG Air Operations Manual, Ch 3, Sec. C
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Personnel Limitations

Crew Rest and Utilization

Evidence exists to associate a high percentage of MISHAPs with prolonged operations and crew fatigue. Since fatigue adversely affects operational capability and safety, it is necessary to establish reasonable boat crew utilization criteria. In doing so, mandatory boat crew mission hour limits have been established.

Fatigued personnel may not realize when their physical or mental state is compromised. A fatigued boat crew is physically and mentally unprepared for the rigors of a mission or to safely manage an underway emergency. They make judgmental errors in boat handling and seamanship and exhibit decreased coordination, a narrowed attention span, and a lower standard of performance. In addition, they show a decreased concern for safety and a willingness to “cut corners.”

Maximum Underway Limits

These totals may be an accumulation of several missions (SAR, ELT, MS, etc.) over a 24-hour period. However, there are occasions, especially during periods of severe weather, where operations will require a long amount of time to complete. In such cases, the prolonged hours and heavy weather will have an accelerating effect on the onset of fatigue as will the amount of time a crewmember has been on duty or working prior to the mission. In evaluating boat crew utilization, Operational Commanders should consider the cumulative effects of fatigue-inducing factors (heavy weather, temperature, boat motion, etc.), and human factors (motion sickness, survival clothing, changes in sleep and work cycles, work-duty time, etc.).

Boat Size	Maximum Underway Hours (1)			Rest
	Seas < 4'	Seas > 4'	HWX (2)	
40' and above (3)	10	8	6	8
30' -39'	8	6	N/A	8
Less than 30'	8	6	N/A	8

Notes:

(1) Maximum hours within a 24-hour period.

(2) Heavy weather is defined as seas and swell conditions combining to exceed 8 feet and/or winds exceeding 30 knots.

(3) Time spent at a sheltered anchorage can reduce the maximum underway hours for crew on watch by 50%.

Personnel Limitations

Aircrew Utilization Standards

Aircrew utilization standards help reduce fatigue-induced accidents. Safety experts agree that human error is one important, if not the most significant, factor in aviation mishaps. Although “to err is human,” fatigue causes errors to be made more frequently. An alert aviator will catch and correct most errors, but a tired aviator, making more frequent errors, is less likely to catch and correct all errors and is more likely to have a mishap.

The spirit of these standards is to ensure that flight crews are well rested, alert, and capable of performing their duties safely. Although ground duties not related to a specific sortie are not counted as crew mission time, they must be considered in crew scheduling.

Flight Standards

Within any 24 consecutive hours, a flight crewmember should not be scheduled to exceed the hourly limits shown below. Flights which are scheduled for the maximum time allowed should not be extended except for urgent mission requirements.

The standards from **Table A1-1** of the Auxiliary Operations Manual are shown bellow and are necessary to combat the effects of fatigue as a factor in aircraft mishaps. These standards are not intended to restrict authority for call-outs when urgent operations are required. Air Station Commanding officers may establish more stringent, comprehensive requirements considering the variety of conditions that affect the Auxiliarist assigned to their units. However, conforming to these standards is necessary to reduce the risk of fatigue related mishaps.

Mission	Flight Time	Crew Mission hours
R/W Single Pilot	6	12
R/W Multi Pilot	8	12
Fixed Wing	8	12

The table above indicates the maximum air use per 24-hour period. A new 24-hour period begins any time a crewmember has completed 10 hours of rest, 8 hours of which must be available for bed rest. IFT and CMT are cumulative unless 10 hours of rest are completed between sorties.

Personnel Limits

Urgent Operations

These standards are not intended to unduly restrict Operational Commanders when urgent operations are necessary; they are designed to modify how we pursue missions to increase safety and improve the overall quality of the services provided. No standards can cover every situation that may arise. Common sense and sound judgment must be applied. The Operational Commander must determine the best course to follow in accomplishing certain urgent missions. It is not intended, except for emergencies, that additional crews be recalled when fatigue limits are reached. Other means of assistance such as adjacent Coast Guard units, Coast Guard Auxiliary, Federal, State, local government or commercial resources should be considered in responding to non-urgent cases.