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



Auxiliary Specialty Course (AUXPAT)



STUDENT STUDY GUIDE

PUBLISHED FOR EDUCATIONAL PURPOSES ONLY

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

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AUXILIARY PATROLS SPECIALTY COURSE Subi:

- 1. PURPOSE. This publication is intended for use as the student study guide for the Auxiliary Patrols Specialty Course. It is published for instructional purposes only and is not policy material.
- 2. ACTION. Area and district commanders, commanders of maintenance and logistics commands, and commanding officers of Headquarters units and assistant commandants for directorates shall ensure units under their command which oversee or direct Auxiliary operations adhere to this publication's provisions.
- 3. PUBLICATION AFFECTED. The Auxiliary Patrols Specialty Course, student study guide, Commandant Publication P16794.28, is canceled.
- 4. DISCUSSION. The Auxiliary Patrols Specialty Course is a substantial revision of earlier text materials.
- 5. SUMMARY OF CHANGES. A summary of major changes to this course are listed below:
 - a. Incorporation of policy changes as reflected in the Auxiliary Operations Policy Manual, Commandant Instruction M16798.3D.
 - b. Incorporation of policy changes as reflected in the Auxiliary Manual, Commandant Instruction M16790.1D.

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PREFACE

The Auxiliary Patrols Specialty Course has been created to provide Auxiliarists with the knowledge necessary to perform safe, effective and efficient safety and regatta patrols.

The Auxiliary patrols are a major service to the boating public and a long-time activity for the Auxiliary. Such patrols include helping the boater avoid emergency situations by providing assistance before such situations occur.

In order to conduct patrols safely and effectively. Auxiliarists must understand the principles of patrol activities and the best ways to perform patrols. The Patrols Specialty Course will provide the student with background material on how patrols are conducted and the organization and control of patrols. The training provided in this course, coupled with satisfying the requirements of the Boat Crew Qualification Program, will give Auxiliarists the necessary background to perform effective patrol operations.

While Search and Rescue (SAR) is included under the generic name "safety patrols," specific SAR functions are not addressed in this course. They are covered fully in the Search and Rescue Specialty Course. It is important for crew members to complete the SAR Specialty Course as any patrol can be diverted to SAR. As all patrol activities must meet the same requirements, the portions of this course which apply to equipment, facilities and to crew certification, knowledge and actions are fully applicable to SAR.

Similarly, the details for the conduct of Aids to Navigation (ATON) and Chart Updating (CU) patrols are not covered in this course. The information provided herein which pertains to equipment, facilities and crew requirements does apply. Further details on the Coast Guard Auxiliary's participation in the Aids to Navigation Program are provided in COMDTINST 16500.16A

The course goals for the Patrol specialty course are:

Develop an understanding of the different types of safety and regatta patrols in which Auxiliarists may participate.

Have a thorough knowledge of how to conduct marine parade, safety, regatta, pollution and disaster patrols.

Become acquainted with the safety and survival equipment used during Auxiliary patrols.

Develop a detailed understanding of crew member requirements for Auxiliary patrols and the responsibilities of Auxiliary crew members.

Acquire an understanding of the physiological factors of a marine environment that may affect the efficiency of patrol operations.

Specific course objectives include:

Acquaint the Auxiliarist with the purposes of Auxiliary safety and regatta patrols.

Provide the Auxiliarist with the knowledge necessary to participate in patrol activities and to serve as a crew member or coxswain aboard an Auxiliary patrol vessel.

Give the Auxiliarist a thorough understanding of the safety and survival equipment available for Auxiliary and other vessels.

Qualify the Auxiliarist to accomplish the administrative requirements prior to, during and after an Auxiliary safety or regatta patrol.

Prepare the Auxiliarist to recognize, avoid and treat the more common detrimental physiological effects of operating in a marine environment which may affect the efficiency and well-being of crew members and persons being assisted.

The AUXPAT Specialty Course consists of five chapters which can be adequately covered in five two-hour classes. The course is totally self-contained. The information needed to answer all questions in the individual lessons and the final examinations can be found in this Student Text. Students wishing to pursue the subject matter in greater detail are encouraged to consult the optional reading references listed in the individual chapters. However, the information contained in the optional reading material, except for that which is also covered in the text, will not be the subject of examination questions. This optional reading material is suggested solely to broaden the Auxiliarists' understanding of patrol operations.

For each chapter, the Student Text contains material for the topics covered, an optional reading assignment (except for Chapter 5), and applicable study questions.

The study questions have been selected to test the recollection and understanding of the most important subjects of the lesson.

There are no trick questions in the study questions or in the Final Examination. If the correct answer to a question in the test is not readily apparent, the student should reread the related section(s) of the text. If the correct answer is still not apparent, the student should consult the Course Instructor for an explanation.

A thorough final review of all study questions will greatly assist the student in preparing for the Final Examination.

Two practical demonstration exercises are a part of this course. Both must be completed prior to taking the final written. The instructor will assign the practical exercises and will ensure that they are completed prior to starting the final written examination. The practical demonstration exercises may be either written or oral with diagrams and may be accomplished in class or as homework. Evaluation of the exercise solutions will be made by the instructor or by another Auxiliarist who has been designated or approved by the instructor for that purpose. The required demonstration exercises are:

- a. Explain the position of screen and marker vessels during:
 - (1) a sailing regatta
 - (2) a rowing regatta
 - (3) a power boat regatta
 - (4) a marine parade
- b. Explain the major concerns of the Patrol Commander for each of the events listed in paragraph a. above.

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CHAPTER ONE- PATROL REQUIREMENTS

A. Eligibility

1. All BQ and AUXOP members of the Coast Guard Auxiliary who are appropriately qualified in the Boat Crew Qualification program are eligible to take part in patrol activities as crew members or coxswains. BQ and AUXOP members who are not Boat Crew qualified may be aboard as trainees or to perform non-crew duties which are part of the mission.

B. Facilities

- 1. Before any Auxiliary vessel, aircraft or radio facility is employed for Auxiliary patrols, it must meet specified requirements. The facility must display a current facility inspection decal with an operational wreath. A vessel facility may not display a CME decal. For issue of a facility decal, a vessel must have been inspected by a Vessel Examiner and an aircraft must have been inspected by an Aircraft Commander (AC) designated by the DIRAUX (or a specifically designated Coast Guard aircraft pilot). Radio facilities must have been inspected by a Communications Staff Officer who has successfully completed the communications specialty course or an AUXOP. Vessel and aircraft facilities must be inspected annually. Radio facilities must be inspected every three years. The facility must also satisfy any additional requirements established by the District Commander for the patrol to be performed. In addition, it must have on board all additional equipment that is required by the District Commander for the type of facility and the patrol for which the orders are issued.
- 2. While the majority of patrols are performed by vessel facilities, Auxiliary aircraft and radio facilities are also valuable assets for patrols. Aircraft can be used to provide an overview of an entire regatta area to keep the Patrol Commander and the vessel facility coxswains apprised of any unusual vessels or activities approaching the regatta area. Because of the speed and range of an aircraft, it is an excellent facility for patrolling a large area when searching for vessels or personnel who may need assistance. By serving as a communication relay, an aircraft facility can extend the communication range for a patrol commander. This may facilitate communication with distant stations or vessels on assignments that may preclude effective direct communication with the commander. Joint operations of vessel and aircraft facilities constitute a most capable patrol team. Radio facilities, similarly, can provide considerable assistance to patrol vessels and aircraft. Either fixed or land mobile stations can provide safety guard watches for aircraft. They can extend the patrol communication to land lines by relaying messages through the telephone system. A land mobile station can also serve as a communication point for a regatta sponsor, thereby permitting the use of a Coast Guard working radio channel for direct communication between the patrol commander and the sponsor.

3. In addition to having the specified equipment on board, a facility must be manned by at least a minimum qualified crew. For a vessel or aircraft to be employed on an authorized patrol, it must be manned by at least two qualified crew members including the coxswain or pilot. Only one qualified Auxiliarist is required for a mobile radio facility. District commanders may require additional crew members.

C. Signs and Flags

1. During a patrol, an Auxiliary vessel facility must display the National ensign, the Auxiliary Patrol Boat ensign, and patrol signs. The sizes of the National Ensign and patrol boat ensign vary with the vessel length and should be the largest practical within the limits shown in the following list with the patrol boat ensign never being larger than the National Ensign.

VESSEL LENGTH	NATIONAL ENSIGN	PATROL BOAT ENSIGN
14' - 18'	12" x 18"	9" x 15.5"
18' - 24'	16" x 24"	12" x 21"
24' - 30'	20" x 30"	15" x 24"
30" - 36'	24" x 36"	24" x 36"
over 36'	30" x 48"	30" x 48"

The Patrol Boat ensign is shown in Figure 1-1. The patrol signs are shown in Figure 1-2. The size of the Auxiliary patrol signboards will vary with the vessel length and should satisfy the criteria: Vessels 14' to 24' in length should use signs 10" high by 48" wide, vessels 20' to 30' should use signs 12.5" high by 60" long and vessels over 30' in length should use signs 15.5 " high by 72" long. In addition to a sign board on each side of the forward portion of the vessel, an optional third patrol



PATROL BOAT ENSIGN Figure 1-1

signboard may be used across the stern if the vessel is large enough to accept the sign. The stern signboard should be no larger than the port and starboard signboards, but may be smaller. These signboards, as well as the patrol boat ensigns, are available from the Auxiliary National Material Center. If Coast Guard personnel are on board for duty, the Coast Guard ensign will be flown in place of the Auxiliary Patrol Boat ensign. The Coast Guard ensign will be provided by the Coast Guard officer or petty officer in charge.

2. Control signs are an effective method for communicating with regatta or marine parade spectators under certain conditions. If the noise level is high, as during some periods of powerboat races or when public address systems are used during a marine parade, voice communications, even with a loud hailer, may not be possible. Under such conditions, the use of control signs with standard, easily understood messages can be most effective.

Similarly, if the use of power megaphones or loud hailers might interfere with the event, such as during a rowing regatta, control signs provide an excellent alternative. Control signs should have a yellow background and solid black block letters at least 4 inches in height. The signs may be fitted with handholds to facilitate displaying the signs. The signs may be square, rectangular, hexagonal, or diamond-shaped and should be large enough to accommodate the letters and yet provide an adequate background. Control signs may have different messages on the two sides. When two-sided signs are printed, the messages on the two sides should be inverted so that the message on the reverse side is upside down. In such cases, care must be taken that the alternate side is not visible to vessels on the opposite side of the patrol vessel. Control signs should be stored so that they are not visible to boaters when they are not in use.



Port Side

AUXILIARY PATROL SIGNBOARDS FIGURE 1-2

3. A patrol vessel may display an optional air-surface recognition banner (figure 1-3) to assist air crews in identifying the vessel. The color of the banner is international orange with a black letter "A" extending over about 80% of the banner height. The minimum size for the banner is 36" by 36". This banner must be displayed in a horizontal plane, such as the



AIR-SURFACE RECOGNITION BANNER FIGURE 1-3 foredeck pilot house or bimini top, with the base of the "A" toward the stern of the vessel The banner must not be permanently installed.

D. Uniforms

- 1. The uniform worn on patrols is normally the working blue or undressed blue uniform, although the District Commander may prescribe a different uniform. The Auxiliary jump suit may be worn on patrols only if worn by all members of the crew. In areas where they are required survival suits may be substituted for uniforms. However, wet suits may not be used as on-deck work garments.
- 2. The blue working utility cap or the dark blue unit baseball cap may be worn as part of the working uniform. The blue working utility cap will display a miniature Auxiliary cap device centered 1 ¼ inches above the visor. The dark blue unit baseball cap does not display the Auxiliary emblem but has a full-arched front panel displaying "U. S. C. G. AUX." in one-half inch high silver letters. The cap panel may also display the flotilla, division, district/region or the name of the group or station in similar letters. The member's office insignia (collar device) is worn between the 'U. S. C. G." and the "AUX.". DCPs and above may have a silver embroidered visor ornamentation similar to that on the combination cap visor. Caps may have mesh backs.
- 3. Uniforms are required for all crew members on an Auxiliary patrol. Auxiliary uniforms, including the working blue uniform, are similar to those worn by the regular Coast Guard officers. For the working uniforms, the differences will be that Auxiliary officer insignia will display a blue or red "A" on the insignia and the name tag will have a white background instead of a blue background. Uniforms must not be worn with articles of civilian clothing except that blue, brown or white boating shoes may be worn. Such shoes must have canvas, rubber or synthetic soles and must be of a plain design without decorations. Shirts, coats, jackets and raincoats should be buttoned (with only the collar button unbuttoned) and the sleeves should not be rolled.
- 4. Wind breakers shall be worn with the zipper at least two thirds (2/3) of the way up. Trousers and slacks should touch the shoe tops and not expose the socks when the wearer is standing. Only slacks (no skirts) are authorized for the women's undress blue summer and working blue uniforms, which are normally worn on patrols. Sewed-on navy blue (black) with ½ inch white lettering may used on the working blue uniform shirt and jump suits. The member's last name is over the right breast pocket 'USCO AUXILIARY" over the left breast pocket.
- 5. Officers are authorized to wear their insignia while on patrol but are encouraged to wear the member devices on their shirt collar. Men may not wear earrings.

E. Conduct while on Patrol

In addition to wearing the prescribed uniform correctly, Auxiliarists must conduct themselves in the most professional and judicious manner. Regardless of the actions or words used by boaters or other individuals, Auxiliarists must be polite and circumspect in their requests and responses to all individuals. As Auxiliarists never have law enforcement authority, they may only "request" compliance with directions. Auxiliarists on patrol should always be professional in the conduct of patrol activities whether or not visible to the public. They must be qualified for their assigned positions in accordance with the Boat Crew Qualification program and any additional directives issued by the District Commander. While on patrol, the following general rules also apply:

- 1. Comply with paragraph 4.F.11 of the Auxiliary Operations Policy Manual, COMDTINST M16798.3D which requires that personal flotation devices (PFDs) be worn on all occasions when on or near the water. Attached to or carried in pockets of the PFD must be:
 - a. A whistle
 - b. Reflective tape
 - c. a PML (cyalume stick, flashlight or strobe light)
 - d. a mirror
 - e. CG approved flares or smoke when operating more than 3 miles from land.
- 2. Use no alcohol or drugs (including medically prescribed drugs) that may affect performance prior to or during a patrol.
- 3. Perform no courtesy marine examinations while on patrol except when the vessel is moored in a standby status. Under these conditions, at least one Auxiliarist must maintain a communications watch, and the entire crew must be nearby and prepared to return to the vessel immediately. No CME advertising may be displayed and CME activities must not interfere in any way with patrol duties
- 4. Ensure that Auxiliarists carry no weapons aboard while the vessel is on a Coast Guard ordered activity.

F. Assistance as a Citizen

1. If an operational Auxiliary vessel facility that is not on patrol, but has a qualified crew aboard, either in uniform or not, encounters a vessel or persons needing assistance, it may report the situation to the Coast Guard station handling the case. The fact that the reporting vessel is an operational Auxiliary facility with a qualified crew should accompany any offer or request to provide assistance. It the Coast Guard station authorizes the Auxiliary vessel to provide assistance, the vessel is under official orders and enjoys the normal facility damage and liability protection. If authorized funding, the Auxiliarist may also claim reimbursement for expenses for the assistance effort in which case the verbal orders must be backed up with written orders. However, if the Auxiliary vessel provides assistance, either

without placing a request with the Coast Guard or if no authority to assist is received from the Coast Guard in response to a request, it is probable that such action will be strictly as assistance from a private citizen and not from a Coast Guard Auxiliary vessel. In this situation, the Auxiliarist may be considered to be acting as a private citizen and not eligible for reimbursement for expenses or facility damage, or liability protection from the Coast Guard.

G. Public Safety Vessel ID Lights

- 1. Coast Guard Auxiliary facilities are authorized to display the Public Safety Vessel ID Light while patrolling during marine parades, regattas, special water celebrations, fire fighting and traffic control. Installation of the lights is optional.
- 2. The Public Safety Vessel ID Light may not be displayed as towing lights or during the prosecution of a routine SAR case except for brief periods to assist the distressed vessel in locating the SAR vessel or to warn other vessels away from a hazardous situation. The light may be displayed continuously during SAR activities that take place within the boundaries of a regatta, marine parade or security zone.
- 3. The Public Safety Vessel ID Light is alternately-flashing red and yellow (amber).

H. Optional Reading Assignment

- 1. U. S. Coast Guard Auxiliary Operations Manual, COMDTINST M16798.3D
 - a. Chapter 1
 - b. Chapter 2, Paragraph A
 - c. Chapter 3
 - d. Chapter 4
- 2. U. S. Coast Guard Auxiliary Manual, COMDTTNST MI67980.1D
 - a. Chapter 3, Paragraphs A.2, B. 1 and B
 - b. Enclosure (1), Paragraphs A.3, A.5.c, C and D.

I Study Questions

- 1 1. The categories of Auxiliary members authorized to be crew during operational patrols includes ______
 - a. Retired Status members
 - b. Honorary Members
 - c. Boat Crew Qualified members
 - d. Basically qualified and AUXOP members
- 1-2. Before an Auxiliary facility can participate in a patrol it must display a current facility inspection decal with ______

1-3. Auxiliary vessel facilities must be inspected by _____

- a. a staff officer for operations
- b. a designated Coast Guard officer
- c. a certified Auxiliary Vessel Examiner
- d. an elected Auxiliary officer
- 1-4. An Auxiliary vessel on an authorized patrol must display
 - a. the National ensign, delta flag and Auxiliary patrol sign
 - b. the yachting ensign, flotilla pennant and Auxiliary ensign
 - c. the Auxiliary Patrol Boat ensign, National Ensign, and Auxiliary facility patrol signs
 - d. the National Ensign, Auxiliary Patrol Boat ensign and an Auxiliary officers flag
- 1-5. when a Coast Guard officer is aboard an Auxiliary facility for duty during a patrol, the Patrol Boat ensign should be replaced by the Coast Guard ensign.
 - a. True
 - b. False

1-6. Auxiliary aircraft on patrol are generally most effective when _____

- a. used alone
- b. used with a vessel facility
- c. used with other fixed-wing aircraft
- d. used with Coast Guard fixed-wing aircraft

- 1-7. Auxiliary radio station facilities may be of considerable value in patrol operations.
 - a. True
 - b. False
 - 1-8. An excellent method for communicating with spectator craft during the patrol of a high-powered boat race is ______.
 - a. a loud hailer
 - b. a CB radio
 - c. VHF-FM. radio
 - d. control signs
 - 1-9. When two-sided control signs are used to communicate with spectator craft, care must be taken to prevent
 - a. the Patrol Commander from seeing the reverse side of the sign
 - b. other spectator vessels from seeing the reverse side of the sign
 - c. participants from seeing the sign
 - d. other patrol craft from seeing the sign

1-10. The Auxiliary working blue uniform may be worn with ______.

- a civilian boating shoes
- b. a blue civilian jacket
- c. brown uniform shoes
- d. a yacht club pin

1-11. A boater who does not respond to the request of an Auxiliarist on patrol should

- a. be threatened with a violation
- b. have the boat registration confiscated
- c. again be requested to comply
- d. not be contacted further

1-12. If an Auxiliary patrol vessel with a qualified crew of four is in its slip on standby, the maximum number of crewmen who may leave the vessel to conduct CMEs is

a. one

- b. two
- c. three
- d. four
- 1-13. A qualified Auxiliary vessel that is not on patrol may be assigned by the Coast Guard to assist a disabled vessel.

a. True

- b. False
- 1-14. A vessel that belongs to an Auxiliarist, but is not on patrol, is prohibited from assisting another vessel unless such assistance is authorized by the Coast Guard.
 - a. True
 - b. False
- 1-15. Additional equipment beyond National requirements to meet the unique needs of a district may be required by _____.
 - a. the District Commander
 - b. the District Operations Officer
 - c. the District Commodore
 - d. the Flotilla Commander
- 1.16. An Auxiliarist may carry a weapon aboard an Auxiliary vessel on a Coast Guard authorized patrol
 - a. if the Auxiliarist is a local law enforcement officer
 - b. only if Coast Guard personnel are armed
 - c. under no circumstances
 - d. when authorized in writing by the District Commander
- 1-17. An Auxiliary operational vessel facility may display a Public Safety Vessel ID Light
 - a. at all times when engaged in Coast Guard authorized functions
 - b. during a regatta or marine parade patrol
 - c. only when towing a disabled vessel
 - d. any time that a disabled vessel is being towed

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CHAPTER TWO - CREW DUTIES AND RESPONSIBILITIES

A. Introduction

- 1. This chapter explains the requirements for an Auxiliarist to be a crew member during an Auxiliary patrol outlines the appearance and conduct for crew members and describes crew and patrol commander actions. It also covers the various documents and administrative actions during and subsequent to a patrol.
- 2. Auxiliarists and Auxiliary facilities are by intent, highly visible to the public. They are associated with the Coast Guard as well as the Auxiliary. To instill confidence in the public and to promote admiration for both the Coast Guard and the Auxiliary, Auxiliarists must present a very positive image while on patrol. Auxiliarists must wear proper, approved uniforms which are in excellent condition and must conduct themselves in a most professional manner. They must be thoroughly qualified to perform their assigned duties and must demonstrate their competence by the manner in which they perform these duties. Improper uniforms and hesitant or incorrect performance of duties reflect adversely on the Auxiliary and the Coast Guard as well as the individual and the facility to which assigned.
- 3. An Auxiliarist on official orders is not a military member of the Coast Guard. Auxiliary members may not be assigned any authority or responsibility specifically reserved by regulation for military personnel. Law enforcement authority and military operations are examples of such functions and as such are prohibited activities for Auxiliarists.
- 4. No weapons may be carried by Auxiliarists on Auxiliary facilities under Coast Guard orders for any reason. As non-military members of the Coast Guard, Auxiliarists are specifically prohibited from carrying firearms when performing Auxiliary activities regardless of their civil authorization to carry weapons by permit or occupation.

B. Crew Duties

1. Auxiliary personnel required to man effectively an Auxiliary vessel which has been placed under orders are referred to in the composite as "boat crew." Boat crew duties and assignments are structured to contain specific positions or jobs that are necessary for the underway operation of a patrol boat and successful completion of missions assigned by the Coast Guard. These positions must be manned by Auxiliarists who have qualified by satisfactorily demonstrating prescribed tasks. The qualification skill levels; associated titles and general duties are presented below.

2. Trainee

a. An Auxiliarist who is in the process of qualifying as a boat crew member is a trainee. This entry level designee may be carried on board to observe actual operational missions but cannot be counted as a member of the crew for minimum crew requirements. b. The duties of a trainee are to learn and perform the practical tasks prescribed for a crew member in the Auxiliary Boat Crew Training and Qualification Guide/Crewman and Coxswain COMDINST Ml 6798.28, or Boat Crew Qualification Guide/Crewman COMDTINST Ml 6798.21 (until Aug. 1997) under the supervision of a qualified crew member or Auxiliary coxswain. If the trainee is performing the task to demonstrate competence as part of crew member qualification, only a qualified Qualification Examiner(QE) or designated Coast Guard officer or petty officer may sign the trainee's Guide to certify satisfactory performance of the task.

3. Crew Member

- a. A crew member's duty is to undertake cheerfully and efficiently any task assigned. However, this period as a follower is part of the training to become an Auxiliary coxswain and thus a leader. It provides valuable experience for future responsibilities.
- b. Crew members must acquire an understanding of their limitations and capabilities. This includes knowing the job and capabilities of the people with whom they work. Additionally, crew members must know what is, can and should be expected of a crew member, must set a good example for those around them and be enthusiastic. Enthusiasm is the driving force that causes one to give extra effort in order to accomplish whatever is to be done. A crew member's enthusiasm transfers to others. It is catching and can carry an Auxiliarist successfully through a difficult situation.
- c. In performing crew duties, each member must function within the framework of a team effort each having not only an appreciation for the duties of the other crew members but also a complete understanding of those duties. Often, in the midst of an emergency situation, each crew member must discharge assigned duties automatically without direction, but in coordination with the efforts of other crew members. How well crew members learn their duties and the procedures associated with accomplishing the various Coast Guard Auxiliary missions, may well constitute the difference in a life-or-death situation. It will also produce a feeling of self-satisfaction of doing a job well in conjunction with other members of the crew.
- d. Boat crew personnel under the supervision and direction of the qualified Auxiliary coxswain employ onboard gear and equipment, stand prescribed watches, carry out seamanship evolution's and perform such other tasks as may be assigned by the coxswain To be designated a crew member, the Auxiliarist must be certified as having successfully completed the appropriate tasks prescribed in the certification checklist.
- e. Specific Duties
 - (1) **Deck.** Some specific tasks that are expected of a crew member are line handling, tending fenders, and standing watch. A deck crew member can expect to be assigned just about any task that is a part of operating the vessel.

- (2) **Radio**. A specific task that a crew member may be expected to perform is that of radio operator. A Radio operator will turn the radio on, select the proper channel, adjust the volume and squelch and select the proper power output for the communication to be accomplished. Using the phonetic alphabet and the proper "prowords" and procedure, the operator will send patrol initiation, operations normal and request permission to secure messages as directed by the Coast Guard and other sources, handle distress, urgent and safety traffic, maintain a radio log and perform other tasks associated with radio communication to and from the facility. The position of radio operator is a rather complex assignment for which completion of the Communication Specialty Course is a valuable additional educational accomplishment.
- (3) Navigator. Another specific task a crew member may be expected to perform is position determination and maintenance of a plot. In some cases, this task can require skills beyond the scope of the certification checklist and should be approached on a specialty basis. Completion of the Navigation Specialty Course or completion of tasks ACX-1-2-03 through 06 and tasks ACX-2-3-05 through 08 of the Auxiliary Boat Crew Training and Qualification Guide/CREWMAN AND COXSWAIN, COMDTINST MI 6798.28 or Auxiliary Boat Crew Qualification Guide OPERATOR/COXSWAIN COMDINST MI 6798.22, until August 1997 present excellent background information for this position.
- (4) *Engineer*. An Auxiliarist will not normally be designated as the engineer for an Auxiliary Patrol Vessel. An engineer may be assigned if the vessel is large and relatively complex. In such cases, the Auxiliarist so designated must have the training and experience to handle the mechanics of the power plants of the vessel. In the majority of situations, the coxswain functions as the engineer.
- (5) *Swimmer*. No Auxiliarist may be designated as a rescue swimmer. Auxiliarists under orders may <u>not</u> enter the water during rescue operations and may <u>not</u> enter submerged or capsized boats, vehicles or aircraft.
- (6) *Lookout*. In accordance with the Navigation rules, there must always be someone m the crew designated as the lookout. The lookout must have no other responsibilities. This position may be rotated as the situation dictates as long as there is one person so designated at all times. The individual performing as lookout must be completely alert, well briefed, protected from adverse environment by suitable clothing and provided with a means of communicating with the coxswain when necessary, i.e., when on a large vessel.
 - (a) Although a boat may be equipped with radar and a depth finder, there are still some objects of importance and/or danger which these electronic aids may not detect. Smoke, certain buoys, oil slicks, life rafts, visual signs of a vessel in distress, debris, tide rips, and breakers are but a few examples. A lookout must report all that is seen or heard. A lookout can never assume that the coxswain or

some other crew members have already seen the object or event A report is essential.

- (b) How to search sounds easy, but effective searching requires special skills. The lookout's method of searching is called scanning and is a step-by-step method of looking. In the daytime, the eyes have to rest on an object to really see it. To demonstrate, try sweeping your eyes around a room or across the water. As long as your eyes are in motion, you will see almost nothing. Now let your eyes move in short steps, like reading a line of type. This time you can see what is there. Scanning doesn't come naturally, so a good lookout must concentrate and should practice frequently.
- (c) The area for which a lookout is responsible is called a "sector". In Figure 2-1, lookouts are posted at four sector stations (A B C & D). Each sector overlaps the adjacent sectors. Each lookout observes approximately ten degrees -- ideal to fifteen degrees -- maximum (15 shown) in each progressive step until the scan of the sector is completed. A lookout repeats this scanning sequence until the



SCANNING SECTORS Figure 2-1 target is found, the search is concluded or the lookout is relieved. The more lookouts assigned, the greater will be the probability of detection. Frequent practice is ESSENTIAL in maintaining effectiveness.



SCANNING STEP Figure 2-2

The use of binoculars for scanning assigned sectors can occasionally be helpful, but has its limitations. There is a tendency for a lookout to "jump" when using binoculars. This may cause the lookout to miss something that is important. Binoculars are seldom a preferred tool for searching but are invaluable when attempting to identify or explore further characteristics of a reported sighting.

(d) A lookout on a small vessel will usually be required to perform as a surface and/or fog lookout. The following rules apply for surface lookouts.

- 1. Direct your eyes just below the horizon. Start in that part of your sector nearest the bow and move your eyes through your sector in as small steps as possible. (See Figure 2-2)
- 2. Complete a scan of your sector at a rate of about 10 degrees per second.
- <u>3.</u> When you complete a sector scan, rest your eyes by blinking them a few times. Then repeat the process.
- <u>4.</u> Whenever you sight a contact, report it, then use binoculars if necessary to identify it.
- 5. A good pair of dark glasses which eliminate glare can be helpful during daylight hours. Polarized lenses are very effective.
- 6. If you believe you hear or see something, report it.
- (e) Fog lookouts scan slowly and rely greatly on their ears. They are positioned where they can hear without interference from radios, conversations, etc., as well as observe, usually at the bow if conditions permit.
- (f) Just seeing is not enough when acting as a lookout. A lookout must promptly and accurately report sightings. This report should include what is seen, where it is in relation to the patrol vessel and how far away it is . To report a sighting, relative bearings are used - that is, the direction the sighting is in relation to the vessel's bow. Relative bearings run clockwise from 000 degrees (dead ahead) through 090 degrees (starboard beam), 180 degrees (dead astern), 270 degrees (port beam) to 000 degrees (or 360 degrees) (dead ahead) (see Figure 2-3).
- (g) When reporting a sighting, a lookout should try to identify the target, state the relative bearing by using three digits and estimate the distance to the target i.e. "Buoy bearing two nine five degrees, five hundred yards." If the object is small and not easy to see, such as a person in the water or debris which appears momentarily on top of a swell, lookouts must not take their eyes off of it. The lookout should shout the report and continuously point to the item or person until the object or person is identified or brought alongside.
- (h) General rules for performing duties as a lookout are:
 - 1. Make sure that you understand your duties
 - 2. Remain alert and give full attention to your assigned duty.
 - 3. Remain on lookout until relieved.

- 4. Do not sit or lounge.
- 5. Do not become distracted.





- 6. Speak loudly and clearly when making a report.
- 7. Ensure that your report is acknowledged.
- 8. Report everything you see
- (7) Helmsman. On most Auxiliary vessels, this position is assumed by the coxswain, but any member of the crew may be assigned to this position. A separate helmsman, if used, is responsible for the safe steering of the vessel by maintaining the course directed by the coxswain. Steering may be conducted either by compass or by reference to terrestrial objects: i.e.: point of land, corner of pier, steeple, etc.
 - (a) A helmsman should know the significance of the markings of the compass card as well as the handling characteristics of the vessel at various engine speeds (RPMs) under different sea conditions. It is important to turn the wheel just enough when making course corrections. Erratic courses are the result of applying either too much or too little rudder when compensating for the effects of current, wind, sea, or swell on the vessel.
 - (b) It takes a second or two for the boat to respond after the wheel is turned. This lag must be kept in mind, and corrections made accordingly. Knowing how many turns of the wheel are required to turn the rudder from full in one direction to full in the opposite direction is essential knowledge for a helmsman.
 - (c) A helmsman must develop a feel for the vessel and how it will act under various conditions. With concentration and attentiveness the helmsman will be able to anticipate how the vessel will react and, as a result, the helmsman can compensate with the rudder and be able to hold a steady course in a seaway.
 - (d) When relieving as a helmsman, the new helmsman should check with the coxswain for any special instructions and for the course to steer. While on watch a helmsman who is not the coxswain should repeat all commands given by the coxswain; execute all commands given by the coxswain; maintain a given course; remain at the helm until properly relieved; and make no course or speed changes without the direction of the coxswain. However, minor changes in heading to avoid debris which could damage screws or rudders are the helmsman's responsibility as is immediate action to avoid collision or other harm to the vessel.

- (e) Every crew member should become competent at steering the boat using both the primary steering system and, if available. any emergency steering means.
- (f) The helmsman should also be familiar with clutch and throttle controls and be prepared to respond in case the coxswain should give an "all-stop" command.
- (8) Radar. If the vessel is equipped with radar, crew members should be familiar with its operation and be able to stand radar watches. The Navigation Rules require vessels which have operational radar to use it. Any crew member of a small vessel may be assigned to the radar watch.
 - (a) During periods of darkness or restricted visibility, radar is a prime navigational aid. Therefore, it is important that all crew members become proficient to the point where meaningful information may be discerned from the radar. An individual must know how to tune and control the type of set that is being used.
 - (b) Once familiar with how the radar works, the crew member must be able to interpret what is displayed on the scope. This may best be accomplished by committing to memory the actual basic features of the local operating area and their radar images, such as land masses, aids to navigation, jetties, etc. Repeated transits of the area during periods of good visibility, comparing what is seen visually with that depicted on the scope and chart will develop an ability to navigate throughout the operating area by "steering" the heading flasher through the memorized targets. (This is not to infer that you should rely totally on your memory. You should be constantly comparing what you see with the same area of your chart.) CAUTION: Radar operators must rest their eyes occasionally and not stare at the radar scope for long periods of time, otherwise changes (new or moving pips) may not be recognized. Radar operators must not become "hypnotized" by the scope!
 - (c) Another important function of the radar watch is to inform both the coxswain and the lookout of unidentified presentations on the scope. These presentations, or "pips" may be vessels operating in your vicinity. A target which remains on a steady bearing while decreasing in range poses a risk of collision.
 - (d) A good navigator uses all available tools. Although the radar is a prime navigational tool, complete reliance on it to the exclusion of the compass, visual information, the depth finder, the direction finder, LORAN or GPS to fix the position of the vessel is unsafe. In all cases, the local chart must also be used along with any other available navigation aids.

- (e) The radar watch must ensure that the coxswain and lookout are constantly advised and appraised of what the radar is depicting. They are the visual "eyes" of the boat and can be greatly assisted by the information obtained from the radar watch. The coxswain, as the individual in charge and responsible, will base decisions on all information received.
- (9) Towing Watch. A towing watch is normally performed in the vicinity of the towing bit or towing bridle of the vessel. The primary duty of the towing watch is to keep the towed vessel under constant observation. This may be the most important watch on an Auxiliary vessel. Specific rules for the towing watch are:
 - (a) Observe how the tow is riding . (Is it listing, veering, or yawing?)
 - (b) Report any change to the coxswain.



CHAFING GEAR (W0RN) Figure 2-4

- (c) Ensure that the chafing gear for the towline and bridle (Figure 2-4) is riding in place and that any damage has been reported.
- (d) Adjust the scope of the towline when directed by the coxswain.
- (e) Immediately report any actual or potential equipment failure to the coxswain.
- (f) Use CAUTION when performing this watch. Never stand near a towing bit in case of a towline failure. Always stay clear of the towline.
- (g) Be ready to release or cut the tow line in an emergency when directed to do so by the coxswain.

(h) Serve as lookout aft - watching for building seas, overtaking vessels, etc.

(i) Wear a PFD at all times.

- (10) Anchor watch. The primary responsibility of this watch is to make sure the anchor is holding and not dragging. To accomplish this, positive checks of the vessel's position must be made on a regular basis. Many variables regarding the proximity of other vessels, your boat type and length, prevailing weather, the state of the tides and currents, the topographical surroundings, bottom characteristics and water condition, and navigational equipment available will affect the frequency and method(s) used in performing this responsibility. LORAN or a fathometer may be helpful in detecting a dragging anchor. Some such devices have alarms for this purpose. If, during routine position checks, it is determined the anchor is dragging, immediate action must be taken. First and foremost, the coxswain should be notified. Generally, paying out additional line will be sufficient to get a dragging anchor to hold . If however, the anchor hasn't held by the time the length of anchor line deployed is about ten times the depth of the water, weighing the anchor and reanchoring may be in order.
- (11) Night operations. Operations at night are much more hazardous than daytime operations.
 - (a) Additional precautions to be followed at night are:
 - 1. Never wander about the weather decks without letting someone know where you are going. Better yet, establish a "buddy" system where the buddies are in continuos contact.
 - 2. Wear a PFD at all times. (your PFD should have a PML and distress signals attached per Paragraph 1.E.1.)
 - <u>3.</u> Always maintain at least one firm handhold. In heavy weather, wear a safety harness.
 - <u>4.</u> Do not look at bright lights. Protect your night -vision by avoiding white lights.
 - (b) As a boat crewman, you will undoubtedly be required to perform duties as a lookout at night. A lookout at night is confronted with a particular visual problem. If you assume lookout duties immediately after leaving a lighted compartment (or looking at a lighted compass, radar screen, or having just lit a cigarette), you will seem to be almost blind for a few minutes. This is basically the same experience as walking from a lighted theater lobby into the darkened theater. Gradually your vision improves as your eyes become accustomed to

the weak light. It takes upwards of 30 minutes for you to reach your best night vision. This improvement is called night adaptation.

- (c) After your eyes are dark-adapted, you must correctly use this night vision. In the daytime you learned to look directly at an object to see it best. In the dark you may have to look away from or to one side of an object to see it. You use "off-center" vision. The reason for this difference between day and night vision techniques is due to the construction of the eye.
- (d) Night scanning procedures for the naked eye can be described in three simple rules:
 - 1. Move your eyes on a level about 10 degrees above the horizon or above what you want to see.
 - 2. Scan swiftly through the sector.
 - 3. At the end of your sector, blink your eyes, but don't rub them, and then repeat the process.
- 4. Auxiliary Coxswain.
 - a. An Auxiliary Coxswain is a boat crew member who is qualified to operate an Auxiliary patrol vessel (operational vessel facility under orders) and to direct the actions of the crew. The coxswain is the most highly skilled individual in the Auxiliary surface operations program. A coxswain may fill any position in an Auxiliary patrol vessel crew. To qualify as a coxswain, an Auxiliarist must satisfactorily complete specified requirements in the Auxiliary Boat Crew Training and Qualification Guide/ Crewman and Coxswain, COMDTINST M16798.28 or Boat Crew Qualification Guide, Operator/ Coxswain, COMDTINST M16799.22 (until August 1997). When placed in charge of a patrol vessel, the coxswain assumes responsibility for managing all aspects of the vessel and crew. Auxiliarists designated at this level may be assigned to perform tasks described for crew members and coxswain.
 - b. A coxswain has the responsibility for directing and supervising others. However, a coxswain cannot always obtain maximum effort from the crew by exercising authority alone. The coxswain's influence, through leadership, is essential for optimum crew performance.
 - c. Discipline is the group attitude that ensures prompt obedience to orders and initiation of appropriate actions in the absence of orders. It is the control developed through the achievement of day-to-day tasks that motivates the team to work in mutual cooperation, not wasting time or effort. Above all, a well trained and disciplined

team does not break under the pressure of hardship or the stress of danger. Each member has confidence that he can depend on the others. Discipline comes from training and the recognition of the rules of behavior. This involves the "why" and the "when" applied to the "how". It begins with self-discipline. It is important to be able to see yourself as others see you.

- d. Leadership is the art of influencing people to accomplish a mission. Through good leadership; obedience, confidence, mutual respect, loyalty and cooperation can be instilled. It's a rare person who doesn't have a need to "belong" to something, to become a part of some group. This psychology of the group can be used to advantage. Group activity will build spirit, improve results and make any job easier. A good leader will:
 - (1) Recognize and compliment good work.
 - (2) Encourage a sense of responsibility in subordinates.
 - (3) Develop understanding.
 - (4) Ensure that the crew members know their assigned duties.
 - (5) Train crew members to:
 - (a) Do their jobs well.
 - (b) Be prepared to "take over" in an emergency.
 - (c) Become competent leaders.
- e. The Auxiliary coxswain is responsible, in order of precedence, for the safety and conduct of passengers and crew, the safe operation and navigation of the vessel and the completion of the sortie or mission(s) assigned or undertaken pursuant to Coast Guard policy and regulations. Coxswains, when underway, will respond, within the limits of their capabilities, to reports of hazards to life and/or property. The effectiveness of this response will result primarily from:
 - (1) Knowledge of the strengths and weaknesses of the vessel including the design parameters described in the owners manual. This knowledge will promote prudent decisions which will help ensure that the mission is safely and successfully accomplished.
 - (2) Awareness of the abilities and limitations of crew members which will help in making sound and informed decisions and in determining the proper courses of action. Success can be expected from a well-trained crew comprised of members who have a sense of pride, self-confidence and personal responsibility.

- (3) A good self-evaluation of your own capabilities and limitations. Safe and efficient procedures can best be promulgated, and are more willingly accepted by the crew, when the coxswain is not only technically proficient but also is aware of and compensates for weaknesses or lack of experience of the entire crew including the coxswain. Calm, reasoned and well thought out decisions are the mark of a confident and mature Auxiliary coxswain.
- 5. Designation as a Qualification Examiner (QE).
 - a. An Auxiliary coxswain who satisfies additional requirements may further be designated a Qualification Examiner (QE) by the Director of Auxiliary. A QE may be utilized to certify onboard and shoreside practical demonstrations by crew members and coxswain in training and for requalification..

C. Patrol Commander

- 1. Patrol Commander. When the Coast Guard approves the application of a sponsor for a marine event, a determination is made regarding the need for a patrol of that event. If a patrol is authorized and if two or more facilities are assigned to the patrol, the Coast Guard will designate a person as Patrol Commander (PATCOM). The PATCOM is in overall command of the patrol vessels and coordinates the details of the patrol. The PATCOM generally handles all communication between the patrol and the Coast Guard station controlling patrol operations. When Coast Guard facilities are included in the patrol or Coast Guard personnel are assigned aboard an Auxiliary facility for duty (and not to fill a normal Auxiliary crew position), a Coast Guard officer or petty officer will be assigned as PATCOM. When the Coast Guard provides the Patrol Commander, an Auxiliarist may be designated by the PATCOM as the Auxiliarist Facilities Commander (AUXCOM) to coordinate Auxiliary facility activities and to serve as the Auxiliary communication point between Auxiliary facilities and the Coast Guard PATCOM. If only Auxiliarists constitute the patrol, an Auxiliarist may be designated as PATCOM. When so designated, the Auxiliary PATCOM's authority does not include any law enforcement powers.
- 2. Auxiliary Patrol Commander. After designation as PATCOM, the Auxiliarist will generally be furnished details of the event and provided a copy of the approved Permit of the Marine Event, CG-4424, together with other applicable material. The Auxiliary PATCOM is then responsible for:
 - a. Contacting the event sponsor(s) to arrange for any necessary meeting between the sponsor(s) and patrol personnel.
- b. Ensuring that the sponsor(s) understand the conditions set forth for the event including that the patrol may be terminated if control of the participants or spectators is lost, violations of the permit stipulations occur or any dangerous conditions develop.
- c. Advising the sponsor(s) that the sponsor(s) are completely responsible for the conduct of the event including the placement and retrieval of course marks and obstructions or menaces to navigation.
- d. Verifying weather conditions and forecasts prior to and during the event including wind and sea conditions, temperature ranges, tides, currents, visibility's and precipitation.
- e. Determining what medical and transportation facilities will be available in the event of an emergency.
- f. Instructing patrol craft crews to carry out their duties with firmness, diplomacy and tact including the frequent use of the words "please " and "thank you".
- g. Ensuring that the patrol craft are displaying proper identification signboards and ensigns and that they are properly equipped and manned for the patrol.
- h. Supervising circuit discipline on all radio channels used by the patrol vessels.
- i. Releasing the patrol vessels at the termination of the patrol and advising the cognizant operational commander that the patrol has been concluded.
- 3. Post patrol actions. After the event has been completed, the Auxiliary PATCOM will submit a letter report to the operational commander with a copy to DIRAUX which will include:
 - a. The number of vessels that participated in the event.
 - b. An estimate of the number of spectator craft.
 - c. A summary of any vessel casualties and personal injuries.
 - d. A recommendation concerning the need for the patrol and if a patrol is considered necessary should the event be held again.
 - e. An evaluation on the adequacy of the patrol.
 - f. Any recommendations for improvements.

D. Personnel Other than Auxiliarist Aboard an Auxiliary Facility.

- 1. Coast Guard Personnel. Coast Guard personnel are assigned on board an Auxiliary facility for duty (as opposed to being aboard solely for area familiarization, indoctrination, observation of Auxiliary operations or to fill a normal Auxiliary crew position or similar activities), the facility ensign will be different as explained in Chapter 1. Also, the Auxiliarist must understand the relationships between the Coast Guard personnel and the Auxiliarists.
 - a. When Coast Guard personnel are aboard, an Auxiliary facility may be used for law enforcement purposes. However, only the Coast Guard personnel have law enforcement powers and Auxiliarists may not exercise any law enforcement action nor may they be required to do so by the Coast Guard personnel. The use of Coast Guard personnel aboard an Auxiliary facility for law enforcement purposes will be limited to situations where there is a low probability of encountering unlawful activities which will involve the exercise of general police powers.
 - b. Only when stated in the orders may a member of the Coast Guard serve as coxswain aboard an Auxiliary vessel. Generally, an Auxiliary coxswain will be in command of the facility, will be fully responsible for its operation and will retain all command authority. The Coast Guard officer or petty officer aboard may request the Auxiliary coxswain to pursue, overtake, or come alongside another vessel for law enforcement or other purposes. In complying with such a request, the Auxiliary coxswain has sole responsibility for the safety of the facility and its crew.
 - c. The Auxiliary coxswain has the right to refuse any order from Coast Guard personnel which is considered to be hazardous or otherwise detrimental to the crew or facility. Coast Guard personnel aboard an Auxiliary facility will never intentionally or knowingly request or demand unrealistic action. However, should any difficulties arise or misunderstandings occur, administrative procedures will be instituted by the Coast Guard to investigate complaints by either party.
- 2. Guest Aboard an Auxiliary Facility. Guests are not permitted aboard an Auxiliary patrol facility during a patrol unless they are specifically authorized by cognizant Coast Guard authority. The authorization should be in writing. When guests are authorized, they must not be permitted to assist in any crew member activity or function on the facility, and should be cautioned not to interfere with official activities.

E. Entitlements, compensations and contributions.

 Compensation. Auxiliarists are volunteers in public service and are by law not eligible for compensation of any kind for personal services. Neither may an Auxiliarist accept any monetary contributions or gifts of any significance from the owner or operator of any vessel that is assisted. Every reasonable effort must be made to refuse such contributions and gifts. If the refusal cannot be sustained without causing embarrassment or hard feelings on the part of either the Auxiliarist or the contributor, the contributor should be referred to the Director of Auxiliary or other competent Coast Guard Authority who can act for the District Commander on the matter. If the value is \$2000 or less, the district commander or his representative may accept the gift for the Auxiliary unit if it is not from a prohibited source. Gifts having a value over \$2000 must be referred to the Commandant, for disposition. In no instance should the Auxiliarist accept any monetary or other contribution.

- 2. Reimbursement for Expenses. Coast Guard regulations provide for reimbursement to Auxiliarists for specified expenses incurred during the operation of facilities under reimbursable orders. Authorized payment may be made to an Auxiliarist for fuel, oil, ice and similar expenses in addition to a basic allowance for subsistence to cover meals. When authorized, reimbursement may also be made for specified expenditures incurred in trailering a boat to and from a patrol. Included in this category are vehicle fuel, tolls, launching fees, ramp or hoist fees, and park entrance fees. For any expense in excess of twenty five(\$25), a dated receipt signed by the vendor is required to accompany the claim for reimbursement. Form CG-5132, which is the Coast Guard Auxiliary patrol order form, is used to request reimbursement.
- 3. Claims for Damages to Facilities. An Auxiliarist may file a claim with the Coast Guard for reimbursement incident to the loss or damage of a facility or equipment during any authorized patrol. This claim may be submitted whether or not reimbursement for operating expenses was authorized. This authorization extends to the loss or damage of a trailered vessel and the trailer when it is being transported to or from a patrol. Generally, reimbursement will not be made for damage or loss between active periods of an extended patrol if the vessel is secured from the patrol. However Auxiliary vessels dedicated to Coast Guard use for an extended operation that are available or on standby at a location for the Coast Guard's convenience may be covered while not in actual use. Generally, reimbursement will not be made for damage resulting from gross negligence or willful misconduct on the part of the claimant.
 - a. When a facility is damaged, only those repairs necessary to safeguard the facility from further damage may be made prior to Coast Guard approval. Further, the Auxiliarist may not file the patrol orders for a claim until authorized to do so by the order-issuing authority. The owner of a facility that has been lost or damaged must notify the order-issuing authority and DIRAUX by the most rapid means available. If the Auxiliary facility is in radio contact with as Coast Guard unit at the time the damage or incident occurs, the Coast Guard unit should be notified by radio. Auxiliarists should also notify their insurance companies as additional protection should the Coast Guard determinethat it is not responsible for the loss or damage. An Auxiliarist makes a claim in accordance with local, district and Maintenance and Logistic Command (MLC) directives. DIRAUX and the order-issuing authority will provide guidance and assistance in preparing the claim. Claims should be submitted as soon as feasible after the loss to ensure remaining within the permitted claim period.
- 4. Personal Injury or Illness While on Patrol. An Auxiliarist who is injured or becomes ill while on an authorized patrol, whether under reimbursable or non-reimbursable orders, is

entitled to the same hospital treatment as a member of the Coast Guard. Emergency treatment may include medical, surgical and dental treatment as well as examination and hospitalization at a government or civilian medical facility. Medical care and hospitalization beyond emergency treatment at government expense requires that the injury or sickness be caused in whole or part by the mission that the Auxiliarist was performing.

- 5. Death and Disability Benefits. If an Auxiliarist is physically injured or dies as a result of physical injury while on patrol or in transit to or from the patrol, the law authorizes certain compensation. That law is administered by the Secretary of Labor. For benefit computations, the member is considered to have a monthly pay equivalent to the minimum rate of basic pay in effect for Civil Service grade GS-9 on the date that the injury is incurred. In the event that death occurs on patrol or as a result of injury or illness sustained while on patrol, limited payment for funeral and burial expenses may be provided by the government. In order to receive benefits, the cause of the death or disability must be related to the patrol activities being performed by the Auxiliarist.
- 6. Filing a Claim. If an Auxiliarist becomes ill or is injured or dies incident to patrol duty, the order-issuing authority and the Director of Auxiliary should be notified immediately. This will enable Coast Guard personnel to provide prompt assistance and arrange for appropriate benefits within the full limits of the law.

F. Third Party Claims.

- 1. Determining Responsibility. Third party claims are claims asserted against an Auxiliarist or the Coast Guard arising from an incident that occurs while the Auxiliarist is under orders. When an Auxiliarist receives a claim or suit papers from a person alleging that personal injury or property damage was caused by an Auxiliarist while on an authorized patrol, such documents should be immediately forwarded to the Director of Auxiliary. Duplicate copies should be sent by the Auxiliarist to his/her insurance company to keep them informed and in the event that the Government should determine that it is not responsible. If the Government determines that the Auxiliarist was properly and legally representing the Government, the Government will substitute itself for the Auxiliarist and the Auxiliarist will be dismissed from the suit. On the other hand, if the Coast Guard declines responsibility, the need to provide any defense will remain with the Auxiliarist.
- 2. Assistance to the Government on a Claim. While the Coast Guard may provide protection to the Auxiliarist in the event of a third-party claim, it is incumbent upon the Auxiliarist to help the Government defend against the claim.
 - a. An Auxiliarist must immediately report any incident which might lead to a third-party claim being filed. The incident must be as fully documented as possible. The names and addresses of the witnesses must be obtained, photographs should be taken, and the impressions and observations of all crew members should be recorded at the first opportunity. The use of a tape recorder or video recorder will be beneficial.

- b. If possible, a Boating Accident Report Form, CG-3865, or an equivalent state boating accident form should be obtained and all applicable sections should be filled in.
- c. Both the order-issuing authority and the Director of Auxiliary must be advised of the incident as soon as possible. The district commodore and the district legal officer should also be advised directly without using the chain of command.

G. Optional Reading Assignment

- 1. U. S. Coast Guard Auxiliary Operations Policy Manual, COMDTINST M16798.3 D.
 - a. Chapter 2, paragraphs A, B, C and D.
 - b. Chapter 4, paragraph B, C and F
- 2. U. S. Coast Guard Auxiliary Manual, COMDTINST M16790.1D.
 - a. Chapter 1, paragraph 1.B.2
 - b. Chapter 5, paragraphs G and K.
 - c. Chapter 9, paragraphs E.3 and K

H. Study Questions.

- 2-1. Boat crew duties and assignments are structured to ______
 - a. permit Auxiliarists to select those tasks that they will perform
 - b. contain specific positions or jobs
 - c. permit each crew member to try all crew positions
 - d. ensure that all vessels are crewed in the same manner
- 2-2. Auxiliary boat crew positions will be manned by Auxiliarists who have demonstrated a skill level that meets the ______ requirements to perform prescribed tasks.
 - a. minimum
 - b. maximum
 - c. optimum
 - d. typical
- 2-3. An Auxiliarist who is in the process of qualifying as a boat crew member
 - a. is a crewman second class
 - b. is a deck hand
 - c. is a trainee
 - d. counts as a member of the minimum crew

2-4. The entry level designee may be on board to ______.

- a. observe operational missions
- b. perform a specialized crew assignment
- c. fill regular crew position
- d. satisfy minimum crew requirements
- 2-5. Members of the crew of an Auxiliary vessel who may be counted as members for the minimum crew requirements are ______ or _____.
- 2-6. To qualify for service as a member of the crew aboard an Auxiliary vessel on a patrol, the Auxiliarist must be certified as having successfully completed the requirements in the
 - a. Boat Crew Manual
 - b. Boat crew qualification guide crewman
 - c. Operations Specialty Courses
 - d. Auxiliary Operations Policy manual

- 2-7. Assignment to deck duties of an Auxiliary vessel crew involves tasks which include
 - a. engineer, navigator or the radio operator
 - b. towing watch, helmsman or the navigator
 - c. tending fenders, towing watch or radio operator
 - d. line handler, tending fenders or standing watch
- 2-8. Crew positions which may require more background and experience than is required for the first level of crew qualification are the ______ and the
 - a. fender rigger-towing watch
 - b. towing watch navigator
 - c. coxswain navigator
 - d. coxswain line handler

- 2-9. In the majority of Auxiliary vessel crews, the facility owner or other Auxiliarist in charge of the vessel and crew will function as the ______.
 - a. engineer
 - b. navigator
 - c. swimmer
 - c. radio operator

2-10. Auxiliarist crew members on a patrol should not ______ during a rescue.

- a. ask for assistance
- b. advise the Coast Guard Station
- c. enter the water
- d. provide first aid
- 2-11. To comply with Navigation Rules requirements, at least one additional member of the crew must be assigned as ______. This member must have

•

- b. a navigator extensive experience
- c. a lookout no other responsibilities
- d. a radio operator restricted FCC radiotelephone permit

a. an engineer - special training

2-12. When a member of an Auxiliary patrol vessel crew is searching visually, it is called ______ which is a ______ method of looking.

- a. scanning step-by-step
- b. sweeping special Coast Guard method
- c. patrolling Auxiliary developed
- d. scouting random

2-13. The area for which a lookout is responsible is called a _____.

- a. scan
- b. search
- c. sector
- d. datum

2-14. A lookout scans about ______ degrees-ideal to ______ degrees-maximum at a given time until the sector is searched.

- a. two four
- b. four eight
- c. five ten
- d. ten fifteen
- 2-15. Lookout reports should include:
 - a. ______ b. _____
 - C. _____
- - a. ten
 - b. fifteen
 - c. twenty
 - d. thirty

2-17. When a lookout sights an object, the lookout should ______.

- a. first verify that it is the search object.
- b. wait until another crew member confirms the sighting
- c. report it
- d. look at the coxswain to verify that the object has been seen

2-18.	During fog, lookouts scan slowly and rely greatly on
	a. especially good visionb. radio signalsc. LORANd. their ears
2-19.	Lookouts report sightings using
	 a. relative bearings b. true bearings c. magnetic bearings d. clock positions
2-20.	An object sighted off the starboard quarter would be reported at
	a. 045 b. 135 c. 225 d. 315
2-21.	As a lookout you sight a person in the water. It is essential that you
	a. make sure that your observation is valid.b. report your sighting by clock positionc. do not take your eyes off the person and report

d. alert the navigator to take a fix

2-22. The eight general rules for performing duties as a lookout are:

- 2-23. When a vessel has an operational radar, the Navigation Rules
 - a. allow visual lookouts to be eliminated
 - b. require that it be used
 - c. encourage its use when visibility is poor
 - d. leave the possible use of the radar to the vessel master

2-24. During periods of darkness or restricted visibility, the prime navigational aid is

a. a sharp visual lookout

- b. a functioning direction finder
- c. radar if available
- d. a fathometer

2-25. The best time to obtain experience in using a radar is during periods _____.

- a. of good visibility
- b. when in open water well removed from the shore
- c. when visibility is poor
- d. when the vessel is anchored or moored

2-26. When a radar operator observes an unidentified target on the radar,

- a. the DF operator should be asked to confirm the target
- b. the radio operator should be notified
- c. confirmation that the target remains for at least five minutes must be made
- d. both the coxswain and the lookout should be informed
- 2-27. A radar target that remains at the same relative bearing but has a decreasing range

_____f

- a. is running parallel to your vessel
- b. poses a risk of collision
- c. will pass well ahead of your vessel
- d. will pass well behind your vessel
- 2-28. A radar that is functioning properly and is the prime navigational tool eliminates the need for other navigation methods.
 - a. True
 - b. False

2-29. Name at least three duties of a towing watch.

- a. _____ b. _____
- C. _____

2-30. The primary responsibility of an anchor watch is to _____.

- a. re-anchor the vessel if the anchor drags
- b. fend off other vessels if the anchor drags
- c. ensure that the vessel remains in position
- d. check the depth of the water if the anchor drags
- 2-31. The first step an anchor watch should take when it is determined the vessel's anchor is dragging is
 - a. start the vessel's engine
 - b. put out a second anchor
 - c. notify the coxswain
 - d. wait one hour to see if it stops
- 2-32. Generally, the following action will be sufficient to make a dragging anchor hold:
 - a. pay out additional line
 - b. put out a drogue
 - c. engage the engine at quarter speed ahead
 - d. get the wind abaft the starboard beam
- 2-33. It takes upward of ______ minutes after exposure to a bright light before a person reaches the best ______.
 - a. ten night blindness
 - b. five rods and cones
 - c. twenty augmentation
 - d. thirty night vision
- 2-34. The three simple rules for scanning at night with the naked eye are:
 - a._____
 - b._____
 - C. _____

2-35. The art of influencing people to accomplish a mission is _____

- a. command
- b. leadership
- c. authority
- d. delegation

2-36. The primary responsibility of a coxswain is _____.

- a. The completion of the patrol as scheduled
- b. complying with Coast Guard directives
- c. the safety and conduct of passengers and crew
- d. providing assistance to disabled vessels

2-37. The mark of a confident and mature coxswain is _____

- a. strict compliance with Coast Guard regulations
- b. calm, reasoned and well thought out decisions
- c. acceptance by crew members
- d. qualification as an Qualification Examiner
- 2-38. When otherwise qualified an Auxiliary coxswain is authorized to serve _______aboard an Auxiliary vessel.
- 2-39. An Auxiliary member may not be assigned any authority or responsibility specifically reserved by regulation for ______.
- 2-40. The Coast Guard may appoint ______ as Patrol Commander.
 - a. qualified Auxiliarists only
 - b. Coast Guard officers only
 - c. Coast Guard officers and petty officers only
 - d. Coast Guard officers, petty officers and qualified Auxiliarists
- 2-41. The duties of an Auxiliary Patrol Commander include all of the following except
 - a. control the activities of the sponsor's vessels
 - b. supervise radio circuit discipline
 - c. submit a report to the operational commander
 - d. determine the readiness of each patrol facility

- 2-42. The owner of an Auxiliary facility, who is a qualified coxswain, accepts a patrol. On board as crew are a Coast Guard officer, the District Commodore and a Qualification Examiner. The ______ will be in command of the vessel.
 - a. Coast Guard officer
 - b. District Commodore
 - c. owner
 - d. Qualification Examiner
- 2-43. A guest may be aboard an Auxiliary facility on a patrol if approved by
 - a. the vessel owner/coxswain
 - b. cognizant Coast Guard authority
 - c. the Patrol Commander
 - d. the District Commodore
- 2-44. The Coast Guard will compensate an Auxiliarist for services during a patrol if any vessel was assisted.
 - a. True
 - b. False
- 2-45. In the event that a vessel owner who has been assisted insists on making a contribution to the Auxiliary, the Auxiliarist ______.
 - a. may except the contribution for the flotilla
 - b. may except the contribution and turn it over to the DSO-FN.
 - c. should refer the contributor to competent Coast Guard authority
 - d. should tell the contributor to send the contribution to the DSO-FN
- 2-46. The Coast Guard will accept a claim on Form CG-5132 of \$24.23 for fuel for a patrol without a receipt that has been signed and dated by the vendor.
 - a. True
 - b. False
- 2-47. An Auxiliarist who is a local police officer may not carry a service revolver aboard an Auxiliary facility during an ordered patrol.
 - a. True b. False

2-48. An Auxiliarist whose facility was extensively damaged during an authorized patrol should contact the District Commodore and the District Commander for assistance in preparing the claim.

a. True

- b. False
- 2-49. If injured during a patrol, an Auxiliarist is entitled to the same medical treatment as a member of the Coast Guard.

a. True

b. False

2-50. When an Auxiliarist causes damage to a private vessel being assisted during a patrol, the coxswain need take no action as the Coast Guard is responsible.

a. True

- b. False
- 2-51. For a reimbursable Auxiliary patrol, the Coast Guard will normally cover all of the following expenses except:
 - a. damage to the facility
 - b. cost of fuel
 - c. overnight hotel costs
 - d. meal allowances
- 2-52. When a boater places a claim against an Auxiliarist for property damage alleged to have been caused by the Auxiliarist during a patrol, the Coast Guard _____ provide legal assistance.
 - a. may b. will not

CHAPTER THREE - PATROL ORGANIZATION

A. Introduction.

- 1. Patrolling is the basis for major activities in the operations cornerstone of the Auxiliary and has been since the Coast Guard Auxiliary was founded in 1939. Patrols initially were for marine parades and regattas. However, this most valuable service to the boating public has been expanded to cover other functions and activities including SAR call outs, aids to navigation patrols, chart updating patrols, port security patrols, pollution patrols and disaster patrols.
- 2. Any use of an operational facility under Coast Guard orders which involves the movement of a facility is classified as a patrol. Knowledge of proper patrol procedures is a necessity for any Auxiliarist who desires to participate in operational activities.
- 3. The primary purpose of all patrols is to enhance boating safety: specifically to avoid personal injuries/loss of life and to prevent property damage. As indicated below, we give names to the patrols for various activities. However, multipurpose patrols are encouraged. For example, during a safety patrol we might check the ATONs in the area, collect data for updating the local chart and search for pollution and its sources.
 - a. Safety patrols provide safety information to boaters and assistance in the event of potential or actual difficulties.
 - b. Regatta patrols and patrols of marine parades help keep the spectators and transient vessels out of the way of participants, thereby minimizing the possibility of collisions.
 - c. Aids to Navigation patrols are directed toward ensuring that navigational aids (such as buoys, lights, etc.) are in their correct positions and functioning properly. ATON patrols report discrepancies to the Coast Guard for corrective action, thereby precluding accidents by boat operators who are relying on aids which are out of position or delivering incorrect information. Another common ATON patrol is to check the location and condition of private aids to navigation.
 - d. Chart updating patrols help maintain the accuracy of the charts used by boaters to assist them in avoiding dangers.
 - e. The port security program of the Coast Guard is designed to safeguard vessels, harbors, ports, and waterfront facilities of the United States. Pollution patrols help locate sources of pollution so that they can be removed or vessels and people can be kept from them, thereby minimizing damage to vessels and dangers to health.
 - f. Disaster patrols alert possible victims of impending dangers and provide assistance to those who are endangered by the effects of the disaster.

B. Official Patrols.

- 1. All Coast Guard Auxiliary patrols are conducted under the purview of the Coast Guard even when in support of state or local agencies. These activities include regatta patrols, marine parade patrols, chart updating patrols, ATON patrols, disaster patrols, pollution patrols and safety patrols. A SAR call-out is initiated at the request of the Coast Guard to support the Coast Guard during a potential, actual or suspected emergency. A SAR call-out is classified as a safety patrol if movement of the facility is involved, but is classified as operational support if no facility movement occurs. For example, if the Coast Guard places an Auxiliary facility on standby for a specified period to respond to any emergency that may occur, but none occurs during the standby period and the facility is not moved, the event is an operational support mission and not a safety patrol.
- 2. All patrols must be conducted under Coast Guard orders. The orders may be either reimbursable orders or non-reimbursable orders. Both types of orders provide financial protection to the Auxiliarist-owner for damage to the facility and protection from personal liability for damage to property of or injury to others. Reimbursable orders also provide for payment by the Coast Guard for specified expenses. Non-reimbursable orders do not provide for payment of these expenses. Coast Guard orders, either written or verbal, must be received prior to any patrol. Formal written Coast Guard orders are usually issued prior to a reimbursable-order patrol.
- 3. Coast Guard Auxiliary Patrol Order Form CG-5132 is used for written orders. However, designated Coast Guard authorities may issue verbal orders in an emergency provided that the verbal orders are followed by written orders. Normally non-reimbursable patrol orders should be written but in an emergency or for other reasons may verbal, with or without subsequent written orders. If , during a non-reimbursable patrol, injury, property damage or a mishap occurs, any verbal orders must be followed by written orders.

C. Safety Patrols.

- 1. Safety patrols performed by the Auxiliary directly support the Coast Guard's mission of promoting boating safety. They are scheduled for the specific purpose of having a facility in the area to locate and assist persons and vessels that may encounter difficulties or become involved in a distress situation.
- 2. Safety patrols are extremely important in providing the public with an opportunity to observe the Coast Guard Auxiliary in action. A properly executed patrol enhances the image of both the Coast Guard Auxiliary and the U. S. Coast Guard. It develops a sense of confidence among members of the boating public that, in the event of trouble, competent assistance will be available. Patrol schedules should be publicized to let the boating public know that the Coast Guard Auxiliary is concerned with and looking out for their safety afloat.

- 3. Safety patrols can increase the opportunities for the boating public to obtain boating safety information, sea condition reports, and navigational hazard notices.
- 4. Safety patrols usually are conducted on holidays and weekends during the height of the boating season, as well as during special observances for boating safety such as National Safe Boating Week. Such patrols may require several facilities to effectively cover the areas designated by the Coast Guard. Patrol vessels may be assigned sectors for a portion of a day, a full day, a full weekend or other mutually agreed specific periods of time. Patrols which are scheduled for the period just before sundown or which are performed upon receipt of a severe storm warning are to assist boaters who may be having difficulty getting to a secure harbor. Patrol activity of this nature renders assistance before the boat becomes the objective of a search and rescue effort.
- 5. Many facilities carry additional equipment to assist boaters in difficulty. An extra battery, extra fuel and a means to dispense it and a good array of tools are among the items that can be provided for boater assistance. The district commander, of course, may require additional equipment to meet the unique needs of the district.
- 6. Patrols can often be scheduled in conjunction with a planned recreational outing. However, while engaged in the patrol portion of the weekend, the proper appearance must be presented to the public. When the recreational period of the outing commences, all patrol items (such as uniforms, signboards, and the patrol boat ensign) must be removed from public view. The Auxiliary ensign can and should be displayed during the recreational period and then replaced with the Auxiliary patrol ensign if and when the official patrol is resumed.

D. Duties of a Safety Patrol Vessel.

- 1. The first duty of a Auxiliary coxswain is to know the area to be patrolled. Tidal action, weather patterns, fishing areas and navigational aids are among the factors that should be reviewed and understood.
- 2. Prior to a patrol, the Auxiliary coxswain should check the vessel for proper operation, verify that fuel tanks are full and inspect all equipment. The Auxiliary coxswain is also responsible for ensuring that the required crew is aboard (never less than the coxswain plus at least one qualified crew person) and that the crew is qualified, competent and familiar with the vessel, its equipment and operation. At least one additional member of the crew should be capable of handling the vessel in case it becomes necessary for the coxswain to seek relief. If the crew is not familiar with the vessel, the operator should provide a thorough briefing on the vessel including its equipment and operation.
- 3. When the coxswain is satisfied that everything is in order, the vessel may proceed to the patrol sector which has been assigned. The coxswain must notify the Coast Guard controlling unit of the departure of the vessel from its mooring and the names and Auxiliary numbers of all Auxiliarist on board aslong with information regarding any authorized non-

Auxiliarists who are on board. This information may be conveyed by land line or by radio. After the patrol unit arrives on station, the cognizant Coast Guard station must be notified. Local Coast Guard authorities must always be informed beforehand of all scheduled patrol activity, and communications must be maintained with the unit when operating within radio range of a Coast Guard station. It is desirable that the patrol's location and operational status be reported to the cognizant Coast Guard station at regularly scheduled intervals. Similar rules apply if the Auxiliary vessel is supporting another federal, state or local agency. OPSNORMAL reports should be made at least hourly by a patrol vessel (every 15 minutes by a single-engine aircraft and every 30 minutes by a multi-engine aircraft).

- 4. The patrol unit usually makes a preliminary sweep of the area in order to become familiar with the prevailing conditions and locations where trouble might develop. This initial check also shows the boaters in the patrol sector that the Auxiliary unit is on scene and watchful. A safety patrol vessel should be prepared at all times to answer distress or assistance calls in the shortest time possible, even when ordered to stand by at a pier, slip or buoy. When responding to an assistance call, due care to potential wake damage must be exercised.
- 5. When a patrol vessel in an adjoining area is assigned an assistance mission, the patrol vessel should move to the line between the two sectors to allow it to answer a call in either of the sectors.
- 6. Speed should be kept down while patrolling to enable the crew to keep a sharp lookout in all directions for vessels that require assistance and to conserve fuel. Remember, **BIG** wakes can be generated at **SLOW** speeds.
- 7. During bad weather, it is important that the patrol continue as long as possible. In the event of a sudden storm many pleasure boats will probably be in need of some type of assistance. However, the coxswain should not jeopardize the vessel or crew. The patrol vessel should not be the first to leave an area when adverse conditions develop. Conversely, the patrol should not be continued once effective assistance can no longer be provided or when further operation may be hazardous to the patrol vessel or its crew.
- 8. A patrol vessel may report current weather to the public by arranging a broadcast program with a local radio station. The patrol vessel can establish a communications link with the radio station and report the wind, visibility and wave conditions in simple terms which the boating public can understand. The patrol vessel's report will normally be magnetic-taped so that it can be replayed several times during the day. Arrangements with the radio station must stipulate that no endorsement of any sponsor's products or services is implied by the association with the Coast Guard Auxiliary. It is important that only actual conditions be described; weather forecasting must be left to professional meteorologists.
- 9. Assistance situations should be approached with caution. All consequences of the assist should be taken into consideration, such as the welfare of the survivors, the ability and capability of your facility and crew, Coast Guard policy regarding commercial salvage and

towing, the proper way to assist the vessel and the need for additional patrol vessels to help. Additional help, if necessary, must be requested without delay.

- 10. A log of significant patrol activities must be maintained. Events should be logged with a brief and accurate description of situations, procedures, actions and activities. From the log, reports that have been forwarded to the Coast Guard can be substantiated and inquiries can be answered.
- 11. While on patrol, Auxiliarists should check the navigational aids in the sector. Any deviations from the chart, Light List, Local Notice to Mariners, or any other published information should be reported to the nearest Coast Guard unit. If additional aids to navigation are needed or the existing aids to navigation need repair, this need should also be reported.
- 12. Navigational hazards found by vessels on safety patrol should be reported to the Coast Guard. If there is no local Coast Guard unit, the appropriate SECURITY radio message should be transmitted describing particulars regarding the hazard. Such messages should be repeated at regular intervals during the boating day until the hazard is removed. Discretion should be used when evaluating whether an obstacle warrants a report.
- 13. When it is time to terminate the patrol, the Coast Guard station should be advised and permission requested to terminate. A final sweep normally will be made through the patrol area before securing. If conditions warrant, patrol vessels should rendezvous at the end of the patrol to discuss the patrol and record suggestions and recommendations for more efficient future operations. After the Auxiliary vessel has returned to its home port or mooring and is secured, the controlling Coast Guard unit should be so notified.
- 14. Auxiliary coxswains should recommend changes to policy and/or procedures issued by the Coast Guard group commander, Director of Auxiliary, or order-issuing authority when unique situations and/or changing local conditions dictate a need for such changes.

E. Regatta Patrols

- 1. A regatta is an organized marine event having to do with racing, water skiing, demonstrations, predicted log contests and similarly grouped or classed marine skills and equipment. Both participant and spectator vessels are involved. The safety of the participant vessels is the responsibility of the sponsoring organization.
- 2. Usually, the events are staged over a closed course and patrol sectors will be established alongside and at each end of the course. Patrol vessels move only within their assigned sectors. The size and shape of the course depends upon the type of regatta. However, regardless of the length of the course, it is usually divided for patrolling purposes into a minimum of one to three sectors along each outer side of the course, and at least two at each end. This configuration facilitates regulation of traffic and keeps obstructions or vessels from the race course itself. More sectors may be established at the discretion of the

order-issuing authority. This decision will usually be based on the size of the course, the number of spectator craft expected or some unusual circumstance which requires the presence of additional patrol facilities. All sectors should be as small as is reasonable. If a sector is too large, it is difficult for the patrol vessel to cover it effectively. Spectator craft might get too close to the race course before the patrol boat can get close enough to issue a warning. Conversely, a sector that is too small can restrict the facility's mobility.

- 3. There are two ways in which patrol vessels are used: either as marker vessels or screen vessels. Marker vessels are positioned at designated places, either stationary or mobile, to mark limits of restricted areas. Marker vessels employed to locate turning points for the regatta participants must be provided by the sponsor, not the Auxiliary.
- 4. Screen vessels may be used in either a moving or stationary screen. These vessels maneuver in formation around the perimeter of the race course to be continually between the participants and the spectators. A stationary screen vessel performs in approximately the same manner as a marker vessel.
- 5. Speeds must be kept to a minimum except in an emergency. Wakes from patrol craft or spectator craft can create a hazard to race craft in certain types of events.
- 6. Under certain conditions, the Coast Guard may need to close a section of the course or the area in which the event is being held. The number of patrol vessels may not be sufficient in some instances, thereby dictating the use of a sequence of floats or a log boom to help control traffic. Patrol vessels must constantly be in attendance in these areas as the log booms and floats may be so low in the water that spectator craft cannot see them. It is a responsibility of patrol vessels to warn spectators of such hazards.
- 7. When anchoring areas are defined, spectator craft must anchor only in those designated areas. The anchoring should be accomplished so that the vessels will not swing into restricted zones. It is necessary to be continually alert for weather changes; a wind shift or a current condition that might cause anchored vessels to swing into restricted zones.

F. Powerboat Regattas.

1. A powerboat regatta is generally held on a large rectangular or long oval course. These courses are of various lengths, depending upon the class of the powerboats and the particular area in which the race is being held. The largest courses are used for the unlimited class of powerboats famed in Gold Cup racing and similar events; boats with 3000-horsepower engines reaching speeds which exceed 200 miles per hour. Classes extend down in size to small outboard boats. The hulls of most racing powerboats are designed to minimize contact with the water and to obtain lift from air moving under the hull. Such designs make the hulls sensitive to disturbance by wakes from passing craft. Violent overturning, or even end-over-end tumbling, can occur if a portion of the hull digs into a wake. A prime responsibility of patrol vessels in such regattas is to keep spectator craft wakes minimal and to move about on patrol with caution.

- 2. Many powerboat regatta sponsors have safety vessels operated by personnel who are experienced in the operation of high-powered racing boats. Auxiliary personnel patrolling powerboat races should take advantage of every available opportunity to meet and exchange boating techniques and knowledge with these safety crews.
- 3. Most powerboat regattas are sanctioned by boating organizations such as the American Power Boat Association (APBA). Rules and regulations are standard for each event sanctioned by such organizations. An important part of training for regatta patrols is a study of these rules. Rescue craft are specially trained and only assist where absolutely necessary. The niceties of this situation should be well understood beforehand. A racing boat could be disqualified if an attempt at assistance conflicts with a race regulation.
- 4. In situations involving high-speed racing boats, precipitous action by untrained or inexperienced Auxiliary crews can hazard not only the patrol facility but also other racing boats. Keep in mind that it is the responsibility of the race committee to provide rescue facilities and protection for participants while the Auxiliary regatta patrol is responsible for the safety of spectator craft. However, in the event of an accident on the course, assistance from the Auxiliary patrol may be requested by the race committee. Only then is it proper to act, but only with PATCOM approval.
- 5. The course layout for powerboat racing often includes the escape valve feature. This layout enables participant craft to leave the course if troubled or unable to make the turn. The escape valves are usually diagonally opposite at the end of the course straight-aways.



- 6. Operating sectors for patrol vessels involve the sides and ends of the course. Figure 3-1 shows a typical course with patrol sectors. Vessels may be used as moving or stationary screens along the sides of the course to establish a line behind which spectator craft are required to anchor or stay. Straight-aways for long courses may require moving screens. This is because traffic will tend to cruise the long length of the body of water and must be kept from the course when races are in progress.
- 7. Special communications problems may arise when operating near the noise of loud engines and may require special preparation such as traffic control signs, headphones, etc.

G. Sailboat Regattas

1. There is a tremendous difference between sailboat and powerboat regattas as to speed, type of craft and hazards. Sailboat regattas can be dangerous for the participants as there is always the possibility of capsizing. The patrolling vessels must be just as alert as during a powerboat event. The lack of noise and the fact that sailboats are usually closely grouped make it difficult to determine when a boat has capsized.



TYPICAL SAILBOAT REGATTA COURSE Figure 3-2

2. Although other courses may be used for Figure 3-2 sailboat regattas, a triangular course in which one side is sailed three times is the most common. This course involves all three of the basic sailing positions -- the beat, the reach and the downhill run. As shown in figure 3-2, the first leg from A to B is beat into the wind. This leg is followed by reaches from B to C and from C to A. The fourth leg is a second beat from A to B while the fifth and last leg is downwind from B back to the finish at A. When a sailboat regatta lasts several hours or days, it may be necessary to move or rotate the course because of shifting winds. Regatta patrol commanders must be alert to this possibility and should advise patrol vessels accordingly.

3. Because of the type of course and the maneuvering of the participants, a combination of stationary marker and moving screen patrol vessels is necessary. Figure 3-3 shows a typical configuration. Under these circumstances, any vessel that might pass the stationary patrol vessels can be stopped by the moving screen vessels before entering the course. The moving screen is as important to this type of event as it is to a marine parade because the participants are moving over the course. The stationary patrol vessels cannot block spectators or transient craft as effectively as the moving screen patrol vessels.

4. Racing sailboats must take advantage of all wind conditions during the race and, as a result, are tacking back and forth along the course. For this reason, it is not advisable to place any patrol vessel in the infield because these vessels could be in the way of the tacking sailboats. The best positions for patrolling sailboat regattas are downwind and astern of the participating craft as shown in figure 3-3.



Figure 3-3

5. Spectator or transient vessels have a difficult time determining whether an event is in progress or whether it is just a group of sailboats enjoying an outing. These craft presume that if the navigation rules are adhered to, they can proceed between these sailing vessels.

The patrolling vessel has to exercise skill, knowledge, tact and courtesy to keep this interference from happening.

- 6. Most sailboat regattas are governed by the regulations of yachting clubs or associations which publish regulations for each particular class of sailboat racing event. Under some sailing association racing rules, a sailboat that receives assistance in righting after a capsizing will be disqualified. For this reason, the patrolling vessel should ask the skipper if assistance is desired before taking any actions.
- 7. When going to the assistance of any participant craft that has capsized, care should be taken in attempting to right or tow the craft. The skipper of the sailboat is, in practically all instances, able to direct this operation and should definitely be consulted as to the preferred procedure. Sailboat characteristics vary, and the skipper knows more about the safest way to handle the boat than does the assisting vessel's crew. This phase of patrolling should be discussed at the pre-race briefing and the correct methods of assisting or towing the sailboats outlined.

H. Rowing Regattas

- 1. Rowing regattas, also known as the sport of crew racing, are popular among colleges and prep/high schools. The water craft are very light one or two-place sculls or four or eight-place shells. These craft have a very low freeboard and require relatively quiet water. The races are held on a straight course with marker craft to either side and a moving screen behind (as shown in Figure 3-4) to prevent spectator craft from interfering. These crews seldom wear personal flotation devices.
- 2. Patrol vessels at a rowing regatta should ensure that all spectator craft are in place well before the start of the race so that wake-driven wave action will have subsided. Stationary positions should be used by patrol craft and not be left unless a capsizing or casualty occurs and assistance is requested. All operations should be accomplished with a minimum of wake if any racing shells are in the vicinity.
- 3. A racing-shell crew follows the instructions and rowing cadence should by a coxswain. The use of hailing equipment by patrol vessels should be minimized whenever the crews are nearby to avoid interfering with their cadences.
- 4. Other types of rowing regattas feature dories, lifeboats, whaleboats, canoes and even bathtubs. These regattas are all patrolled in the same manner as crew races except that the sensitivity to wakes may be different.

I. Marine Parades

1. The term "marine parade" denotes a vessel or a group of vessels participating in a parade. The grouping may either be rigidly maintained or permitted to vary, depending upon the nature of the event. The event is usually moving, and does not ordinarily retrace its path, although the parade may terminate at its starting point.



TYPICAL ROWING REGATTA PATROL Figure 3-4

- 2. In marine parades, patrol craft may be assigned to moving sectors as moving screen vessels, and to stationary sectors. The moving sectors might consist of patrol vessels ahead, behind and alongside the participating vessels. In events such as vessel escorts and vessel welcomings, patrol craft may be assigned sectors between the welcomed vessel and the remainder of the moving welcoming fleet. The stationary sectors can be areas along the parade course which contain spectator vessels that remain within prescribed limits.
- 3. The patrol commander (PATCOM) should choose a vantage point which will provide maximum visibility of the event; ordinarily this will be aboard a moving vessel facility.
- 4. Communication must be maintained between the PATCOM and the marine parade marshal or committee. If the sponsors are stationed ashore, an Auxiliary land mobile radio facility can be co-located with the sponsors to provide communication with the PATCOM.

J. Regatta Patrol Vessels Operations

- 1. The primary functions of a regatta patrol are to control the spectator fleet and transient craft for their protection and to prevent the introduction of a safety hazard into the event area. The primary responsibility for protecting participants from the hazards of the event rests with the sponsoring organization.
- 2. Cooperation with the sponsors of a regatta or marine parade must begin several weeks before the event. Coordination usually begins with the "Application for Approval of a Marine Event" which is forwarded by the sponsor to either the local Coast Guard group commander, the district commander or the state boating law administrator (or similar agency), depending upon the direction of the Coast Guard commander. Detailed requirements and procedures are provided in COMDTINST 16751.3, REGATTAS AND MARINE PARADES. The application must be received by the Coast Guard at least thirty days prior to the event (or longer as determined by the district commander) to allow adequate time to assess the impact of the event upon other marine interests and to review it for overall safety considerations. The Coast Guard also determines if it is necessary to assign a Coast Guard or Auxiliary patrol, or both, to the event.
- 3. Either Coast Guard vessels, Auxiliary facilities or both may be used to patrol events. All Auxiliary vessels on regatta patrol must display proper identification signs and flags (see paragraph 1.C.1). All crew members must be in proper uniform.
- 4. A Patrol Commander (PATCOM) will be placed in overall charge of the patrol. PATCOMs for the events are normally Coast Guard commissioned, warrant or petty officers designated by the district commander, captain of the port or Coast Guard group commander. They are provided with the details of the event including who the event committee chairman is, how the chairman can be reached before and during the event and other pertinent details, including any specific local regulations to be imposed to enhance safety.

- 5. When a regatta or marine event is to be patrolled by only Auxiliary personnel, an Auxiliarist will be designated as the PATCOM. The authority of the Auxiliary Patrol Commander will be governed by written instructions. The Auxiliary will make every effort to cooperate with any law enforcement agency which is on scene.
- 6. A Coast Guard PATCOM may be embarked on an Auxiliary facility. When this is done, the Auxiliary ensign should be replaced by the Coast Guard ensign (see paragraph 1.C.1). When a regatta or marine event is under the control of a Coast Guard PATCOM, coordination of multiple Auxiliary facilities and personnel may be accomplished through a Coast Guard Auxiliary facility commander (AUXCOM), designated by the Coast Guard PATCOM acts as liaison between the PATCOM and the Auxiliary facilities in the preparation, conduct and termination of the patrol.
- 7. Large areas to be patrolled can be divided into sectors. When using this method, all facilities must operate from the same charts and the patrol sectors are marked on the charts. Each patrol vessel is assigned to a patrol sector. A large vessel should not be assigned to a sector where maneuverability is restricted. It is important that the patrol commander know each facility's location at all times so that its movements can be directed. The grid system is an effective method of organizing patrol area operations. A grid of the correct size is drawn on transparent material, such as glass or plastic. The grid consists of two sets of parallel straight lines, intersecting at right angles to form the squares of the grid as shown in Figure 3-5. All squares are the same size, and each can be identified by a letter on the side of the chart and a number on the top or bottom.
- 8. It is absolutely necessary that all grids be identical in size and identification. When these grids are placed over the charts and correctly aligned the PATCOM and the patrol facility captains will be reading grid coordinates exactly the same.
- 9. An Auxiliary coxswain on patrol can request assistance by giving a location identified by the grid on the chart, and the PATCOM can assign additional patrol facilities to the position accordingly. Likewise, the location of a distressed craft can easily be indicated.
- 10. After all pre-race activities have been completed, the PATCOM dispatches the facilities to their patrol positions. Enroute to and within its sector, each patrol vessel should examine the course for objects or debris that could affect race safety. Any hazards should be removed or reported to the PATCOM. This is especially important for events involving high-speed racing craft since even seemingly insignificant items, such as a partially submerged soft drink container, can cause a disaster when struck by a race boat at a speed which may exceed 150 miles per hour.
- 11. Spectator vessel areas should be patrolled to determine that all craft are positioned safely clear of the course. If a spectator vessel is not in a proper position, it should be so advised. This must be handled courteously.

- 12. When a boater fails to comply with a request, all facts regarding the situation should be reported to the PATCOM for action.
- 13.If a patrol vessel observes a casualty, pertinent details should be relayed to the PATCOM. The proper patrol vessel will then be directed to the scene by the PATCOM. When an accident occurs within a patrol vessel's sector, it has the responsibility to assist immediately except that participants will be assisted only if arrangements have previously been made with the race committee. Otherwise, as long as lives are not immediately endangered, Auxiliary patrol personnel should stand by and observe but defer action to the committee boats designated for that purpose. If the PATCOM assigns a vessel to assist outside of its sector, it must report back upon the completion of the assistance. It is mandatory that the PATCOM be advised of all problems as it may be necessary to stop the event temporarily in order to clear the course or handle an accident.



- 14. In response to the serious responsibility placed upon each patrol craft, it is necessary to maintain a sharp lookout at all times. Patrol crew members should not become so engrossed in a racing event that they ignore the movement of participants and spectators within their vessel's sector.
- 15. In case of an emergency, personal safety and the protection of lives are more important than saving of property. The rescue of people should be accomplished before any attempt is made to salvage a boat.
- 16. No patrol vessel is to leave its sector unless so ordered by the PATCOM even though it may seem that assistance is needed elsewhere. Action is taken only upon direction from the

PATCOM. Failure to abide by this rule can completely disorganize a patrol and compromise its effectiveness.

- 17. A regatta patrol operation should not be secured until the course area has been cleared. One or more patrol vessels should be designated to make a final sweep of the area to see that the course is in satisfactory condition. Any debris or markers that have not been picked up should be reported to the PATCOM for relay to the sponsoring organization, which has the responsibility of policing the area.
- 18. REMEMBER no patrol craft may take any action without authorization from the PATCOM.

K. Aids to Navigation (ATON) Patrols

- 1. One of the purposes for ATON patrols is to inspect aids to navigation to verify that they are in accordance with chart and Light List information and that they have not been damaged, moved or destroyed. A second purpose is to provide logistic support to Coast Guard personnel while they perform these functions or repair aids. "Detailed guidance for the employment of Auxiliarists by district commanders in the Coast Guard Aids to Navigation Program is contained in Commandant Instruction 16500.16A which specifies that district directors are responsible for establishing an appropriate training program. Additional details on NAVAID activities as well as ATON patrols is provided in the AUXILIARY AIDS TO NAVIGATION AND CHART UPDATING GUIDE which must be requested on an individual basis through the district DSO-AN. Information on Auxiliary activities in the Coast Guard Bridge Administration Program (BAP) is contained in Memorandum of Understanding for the Coast Guard Auxiliary in support of the Coast Guard's Bridge Administration Program executed on 29 February 1996, a copy of which may be obtained from the district DFSO-AN." Extensive details on conducting ATON patrols are not covered in this course. However, as any Auxiliary facility on a patrol, regardless of classification, has an obligation to report any noted NAVAID discrepancies, a brief review of various defects and how they should be reported is included.
- 2. Any aids to navigation which are seen to be damaged or otherwise not serving their intended purpose that is, not functioning properly should be reported to the nearest Coast Guard station. The method used to report a discrepancy should be related to the hazard associated with the discrepancy.
- 3. Radio, telephone and the U. S. Mail are the primary transmittal methods to be used when reporting discrepancies. Regardless of how the initial NAVAIDS discrepancy report is made to the Coast Guard, it is necessary that a follow-up written report be made on Form CG-5474 (AUX) and submitted via the DSO-AN. The report should include the Auxiliarist's name, member number, address, and telephone number as well as the identification of the ATON covered by the report, the nature of the discrepancy, the Coast Guard unit to which the discrepancy was reported, the time and date when the observation was made and when it was reported to the Coast Guard. The following criteria have been

developed to establish the priority when selecting which method is to be used for reporting a discrepancy:

- a. Radio Critical: Failure to report by the most expeditious means may result in loss of life and/or damage to a vessel. Some examples are:
 - (1) Aid missing, sinking, submerged, off station, adrift, capsized or stranded.
 - (2) Aid totally covered or shrouded in ice.
 - (3) Light signal not functioning or obscured; light signal showing improper characteristics or rhythm.
 - (4) Radiobeacon not transmitting or transmitting improper characteristics.
 - (5) Aid being vandalized or showing evidence of having been vandalized.
 - (6) Aid showing evidence of damage suspected of having been caused by collision with a vessel.
- b. Telephone Urgent: Failure to report will result in no danger of loss of life or vessel damage. However, the discrepancy may contribute to the stranding of a vessel. Some examples are:
 - (1) Daymark missing or damaged by causes other than vandalism or collision with a vessel.
 - (2) Sound signal not functioning.
 - (3) Radiobeacon timing sequence incorrect.
 - (4) Light dim (make sure that atmospheric conditions such as smoke, haze or fog are not causing the reduced intensity).
 - (5) Light obscured by dayboard.
- c. U S. Mail **Routine**: Failure to report will result in a very low likelihood of a grounding or stranding but corrective maintenance is necessary. Some examples are:
 - (1) Aid obscured by foliage or other objects.
 - (2) Aid faded; retro-reflective material peeling, faded, missing or inadequate; numbers not easily read, paint peeling or bird fouling to the extent that identification is compromised.

- (3) Structure leaning, dayboard missing or not facing as intended, dayboard delaminated, supporting structure deteriorated and/or rotting.
- (4) Bird nests on aid.
- (5) Missing or severely damaged radar reflectors.
- (6) Missing vent valve on lighted buoy.

L. Chart Updating (CU) Patrols.

- 1. Since 1962, the Auxiliary has operated under terms of a formal agreement with the National Ocean Service (NOAA-NOS) an agency of the Department of Commerce. That agreement calls for mutual liaison and cooperation providing accurate and up-to-date chart information to the boating public. Guidance for CU patrols is provided in the AUXILIARY AIDS TO NAVIGATION AND CHART UPDATING GUIDE.
- 2. CU patrols are specifically to verify the accuracy and completeness of information contained on charts and in related navigation documents and to furnish correct information where errors or changes are noted. CU patrols are not restricted solely to areas covered by NOAA-NOS charts. Other federal and state agencies also publish charts or maps used by boaters. Chart updating patrols on local, state and federal waters covered by these charts are also authorized. CU patrols may be conducted by aircraft and corrections for aircraft charts and maps (including sectionals and WACs) are encouraged.
- 3. Any discrepancies noted should be reported via the DSO-AN in accordance with standing instructions using NOAA Form 77-5. Such reports should be submitted for discrepencies, additions and/or deletions to charts, the Light List, the Coast Pilot or similar documents. A mark-up of the affected chart section and the chart identification plate should be included in the report.
- 4. Members of the Auxiliary need not be performing a scheduled patrol to report navigational aid discrepancies. Alert and vigilant Auxiliary coxswains should always be comparing chart information with the actual conditions and reporting any differences. Mobile radio facility patrols should also note and report errors and changes to navigation charts and documents. Conversely, members of the Auxiliary on scheduled chart updating patrols should be alert to the actions and activities of other boaters and persons in the vicinity and be ready to render assistance whenever the need arises. No matter what type of patrol is scheduled, SAR and safety are the prime missions for any Coast Guard Auxiliary patrol.

M. Disaster Patrols,

1. Disaster patrols are classified as safety patrols. However they are special boating safetyoriented support missions that are usually performed in conjunction with the Coast Guard and/or local agencies. These patrols deal with emergency situations which are imminent or in progress. Disaster patrols are called for hurricanes, storms, waterfront explosions, fires, floods, earthquakes, etc.

- 2. Modern weather forecasting makes possible the early detection of hurricanes, storms, or floods. Rapid dissemination of the information to the public is effected through television, the press and radio. Timely preparation for natural disasters and the understanding of their characteristics can lessen damage and loss. Each Auxiliary division or flotilla should evaluate its potential contribution to its own locality based on consideration of the capabilities and limitations of its members and facilities. The evaluation should be extended to consider what assistance might be provided in the event of various types of disasters in other parts of the District.
- 3. Auxiliary units or individual members and facilities may be utilized, subject to their consent, for transmitting warnings to waterfront and isolated areas, transporting supplies and personnel, evacuating stricken areas, coordinating boat traffic by dispersing and guiding vessels to safe moorings, securing small craft and waterfront facilities, providing radio telephone links and other tasks that need expedited preparations for, or relief from emergency conditions.
- 4. While members of the Auxiliary are not prohibited from enrolling in Civil Defense organizations, their involvement with these groups must be considered in contingency planning. This caution is not intended to preclude the use of Auxiliary members and facilities for emergency Civil Defense purpose but rather to avoid inclusion of the Auxiliary in Civil Defense planning. In an actual emergency involving the Coast Guard, it is improbable that there will be an excess of Auxiliary facilities and members beyond the primary needs of the Coast Guard.

N. Disaster Patrol Plans.

- 1. Planning for disaster patrol activities can never begin too soon. Preparation for such a patrol after severe weather is bearing down on a locality is "too little, too late". District directors of Auxiliary should involve Auxiliarists during the preparation of district emergency plans and exercises. Flotilla commanders are encouraged to have emergency contingency plans completed. To this end, the following actions should be taken:
 - a. Develop liaison with the local sheriff, police and fire department; the American Red Cross; the Civil Air Patrol (CAP); the Federal Emergency Management Agency (FEMA); the U. S. Power Squadrons; commercial and sports fishermen groups; the local marine public correspondence (marine radiotelephone) company and any other organizations or individuals who are expected to be active in providing services during an emergency. Any local Amateur radio groups should be contacted. They may be prepared to supply operators and equipment to augment and extend communication during disaster-response activities.

- b. Generate a list of flotilla members and facilities that are likely to be available for service during an emergency. Arrange the available personnel as crew members to be aboard the available facilities and in groups that will operate separately from the facilities.
- c. Arrange for all flotilla members to be instructed in the characteristics and dangers of weather-produced and other calamities indigenous to the area. Establish the actions to be taken by flotilla members before, during and after any potential disaster. Ensure that members understand what action they can take to safeguard private and public property.
- d. Arrange for the owner of an Auxiliary radio facility to contact flotilla members to pass or receive information. Planning should provide for at least two alternates. A pre-planned telephone tree is an effective and efficient method for notifying members if telephone service remains available.
- e. Provide copies of flotilla disaster plans to DIRAUX and the division captain and keep them informed on the state of readiness of flotilla members and facilities.
- f. Communication by radio during disaster patrols and other disaster response activities can be conducted on a Coast Guard working channel if so authorized (obtaining authorization should be part of disaster planning). Also, when properly authorized, communication may be conducted on disaster communications services frequencies.

O. Duties of Disaster Patrol Vessels

- 1. When a disaster patrol plan is put into effect, no briefing, or at best, a very short briefing, should be necessary for Auxiliary coxswains if the plan has been properly written. The plan should be so prepared that every patrol member knows exactly what to do and how to carry out assigned patrol tasks. The perfect situation is for a correctly equipped patrol vessel with a qualified crew to be ready to go with a clear understanding of what the patrol members are to do and with a thorough knowledge of how to deal with the hazards and incidents that may be encountered.
- 2. As the Auxiliary does not have law enforcement powers, Auxiliarists cannot force anyone to move against their wishes even when a potential disaster threatens. In all cases, the Auxiliarist must be diplomatic when conveying messages of importance to potential victims of a disaster situation.
- 3. During a flood, severe storm or hurricane, patrol members should be constantly prepared for action even when the situation is too severe to conduct patrol operations. It is best to remain "inside" during a hurricane as the most dangerous place is on or near the shore. As the storm abates, and when requested, patrols should go into action as soon as it is safe to do so.

P. Port Security and Pollution

- 1. The port security program of the Coast Guard is designed to safeguard vessels, harbors, ports and waterfront facilities of the United States. The District Commander may designate a Captain of the Port (COTP) for a defined port area to safeguard these facilities. The COTP is not necessarily the senior SAR officer.
- 2. Boats, radios, aircraft and personnel resources of the Auxiliary may be assigned to the administrative and operational control of the COTP to support the port security program. The COTP may request assistance from these facilities as authorized by the Port Security Manual and current directives. The primary tasks within this assignment are pollution reporting and providing platforms for port security activities. All such activities are administered by and under the direction of the Captain of the Port. (The COTP will provide the necessary guidance, training and special hardware for the conduct of such missions.)
- 3. Activities associated with the port security and pollution program are:
 - a. Detecting and reporting pollution.
 - b. Providing information on abnormal/illegal activities in the port.
 - c. Providing support during disasters and casualties affecting the port.
 - d Transporting Coast Guard personnel performing port security or pollution control functions. Auxiliary aircraft are particularly effective platforms for observing port areas and detecting pollution. Mobile radio facility patrols are an excellent source of information on activities in the port area and for detecting pollution near piers and roads.

Q. Optional Reading

- 1. U. S. Coast Guard Auxiliary Operations Policy Manual COMDTINST M16798.3 D:
 - a. Chapter 4
- 2. U. S. Coast Guard Auxiliary Aids to Navigation and Chart Updating Guide. (Beause quantities are limited, guide orders submitted through materials officers must be countersigned by the district DSO-AN)
- 3. Memorandum of Understanding for Employment of the U>S> CoastGuard Auxiliary in Support of the Coast Guard's Bridge Administration Program, (a copy may be requested from the district DSO-AN.
- 4. Commandant Instruction 16500.16A, Subj: Coast Guard Auxiliary Aids to Navigation Program, (Available from the USCG Auxiliary National Supply Center).

R. Study Questions

- 3-1. Since the Auxiliary's chartering in 1939, one of its most important operational functions has been ______.
 - a. regatta and safety patrols

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- b. the fourth cornerstone
- c. support of Coast Guard law enforcement
- d. holding conferences
- 3-2. Safety patrols by the Auxiliary directly support the Coast Guard mission of
- 3-3. A properly executed patrol enhances the ______ of both the Coast Guard Auxiliary and the Coast Guard.
- 3-4. Patrols for aids to navigation and chart updating purposes can obtain information for
 - a. federal, state, and local agencies
 - b. the Coast Guard only
 - c. federal agencies only

_____•

- d. non-government agencies
- 3-5. Safety patrols increase the opportunity for the boating public agencies responsible to obtain _______ information.
- 3-6. A principal purpose of safety patrols is to render assistance to a vessel
 - a after it makes a MAYDAY call
 - b. when it transmits a SECURITY message
 - c. before it becomes the object of a search and rescue effort
 - d. only when directed by the Coast Guard

3-7. When a safety patrol is suspended for a combined recreational outing, all patrol items

a. should continue to be displayed

- b. may be removed from display only if another Auxiliary vessel is on patrol
- c. must be removed from public view except for the patrol signs
- d. must be removed from public view

3-8. The first duty of a Auxiliary coxswain on a safety patrol is to know ______

- a. what vessels are in the sector
- b. who will relieve him
- c. the area to be patrolled
- d the names of the patrol vessels in the adjacent sectors
- 3-9. The minimum number of qualified Auxiliarists, including the coxswain, required as crew for a safety patrol is ______.
 - a. one
 - b. two
 - c. three
 - d. four
- 3-10. When a patrol unit arrives on station for a safety patrol, the _____ must be notified.
 - a. District Commander
 - b. District Commodore
 - c. Director of Auxiliary
 - d. cognizant Coast Guard station
- 3-11. To determine prevailing conditions and locations where trouble might develop, a patrol vessel arriving on station should
 - a. ask several of the boaters in the area
 - b. consult the latest issue of the Local Notice to Mariners
 - c. make a preliminary sweep of the area
 - d. request the information by radio from a Coast Guard station
- 3-12. When a patrol vessel is assigned an assistance mission, vessels in adjacent sectors should
 - a. move to the line between the two sectors
 - b. remain near the centers of their sectors
 - c. wait until instructed to reposition by the Patrol Commander
 - d. take no action
3-13. The speed of a vessel on a safety patrol should be kept down while patrolling to

- a make the patrol last longer
- b. make the ride more comfortable for the crew
- c. enable the crew to keep a sharp lookout
- d. keep from covering the patrol sector before time to secure

3-14. During deteriorating weather it is important that the coxswain ______.

- a. remain in the assigned sector until the scheduled time to secure
- b. continue the patrol as long as possible without endangering the facility
- c. move to protected water and anchor
- d. return to the slip immediately
- 3-15.An Auxiliary patrol vessel reporting sea conditions to a broadcast station for retranmission must arrange with the station ______.
 - a. that no Auxiliary endorsement of any sponsor's product or services is implied
 - b. to obtain a sponsor to help defray fuel costs
 - c. to monitor VHF-FM Channel 16 for the report
 - d. for the Auxiliarist's forecast to be included in the report
- 3-16.An Auxiliary vessel providing sea condition reports to the public ______ include weather forecasting.
 - a. may
 - b. may not
- 3-17. When the coxswain of an Auxiliary vessel is considering whether to assist a disabled vessel, the Coast Guard policy regarding _______ should not be overlooked.
 - a. the use of the Auxiliary to assist the Coast Guard
 - b. boat crew qualifications
 - c. reimbursing Auxiliarists for patrol expenses
 - d. commercial assistance
- 3-18. When the condition or location of any navigational aid is found to be at variance with the data on the chart, in the Light List or in the Local Notice to Mariners the variance should be reported immediately to ______.
 - a NOAA
 - b. the District Staff Officer for Chart Updating
 - c. the nearest Coast Guard unit
 - d. local marine authorities

- 3-19. When a safety patrol vessel encounters a navigational hazard but is unable to report it to the Coast Guard, it is appropriate to send a ______ radio message to broadcast the particulars regarding the hazard.
 - a. MAYDAY
 - b. PAN
 - c. SILENCE
 - d. SECURITY

3-20. The proper action when the time arrives to terminate a patrol is to ______.

- a. request permission to secure from the controlling Coast Guard station
- b. terminate the patrol at the scheduled time
- c. advise the controlling Coast Guard station that you are securing
- d. obtain the approval of the Staff Officer for Operations before securing

3-21.It is beneficial for all patrol vessels to rendezvous at the end of a patrol

_____•

- a. to schedule the next patrol
- b. to discuss the patrol and recommend improvements
- c. to compare the number of assists
- d. for refreshments and a snack
- 3-22. During a regatta or marine parade, the safety of the participant vessels is the responsibility of the _____.
 - a. Coast Guard
 - b. Coast Guard and the Coast Guard Auxiliary
 - c. local marine agency
 - d. sponsoring organization

3-23. Most regattas and marine parades are staged over ______ course.

- a. a straight line
- b. an oval
- c. a closed
- d. a triangular

3-24. A patrol craft assigned to a patrol sector will ______ unless otherwise directed by the Patrol Commander.

- a. stay in one position
- b. stay within the confines of the general patrol area
- c. move only within that sector
- d. remain with the Patrol Commander

3-25. Patrol vessels may be assigned as either _____ vessels or _____ vessels.

- a. stationary moving
- b. participating spectator
- c. marker screen
- d. official unofficial
- 3-26. A patrol vessel assigned to indicate the limits of a restricted area is a ______ vessel.
 - a. stationary
 - b. screening
 - c. fixed
 - d. marker

3-27. Vessels employed to indicate turning points for regatta participants are provided by

- a. the Coast Guard
- b. the regatta sponsor

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- c. the Coast Guard Auxiliary
- d. a local government agency
- 3-28. An Auxiliary vessel may be used as either a/an _____ or _____

3-29. Auxiliary vessels serving as part of a moving screen maneuver between the ______.

- a. leading vessel trailing vessels
- b. patrol vessels participant vessels
- c. participant vessels spectator vessels
- d. spectator vessels patrol vessels

- 3-30. During a patrol for a marine event, it may be necessary to use a sequence of floats or a log boom if ______ when a section of the course must be closed.
 - a. the event has already started
 - b. spectator vessels are in the way
 - c. the patrol vessels are on a break
 - d. there are not sufficient patrol vessels

3-31. When a log boom is used to restrict access to an area, it is the responsibility of to warn spectators of the obstructions.

- a. the patrol vessels
- b. the sponsor
- c. the participants
- d. the local government marine agency
- 3-32. Patrol vessels must be alert for weather changes which might cause anchored spectator vessels to ______.
 - a. be uncomfortable
 - b. swing into each other
 - c. swing into restricted zones
 - d. weigh anchor and depart the area

3-33. A powerboat regatta is generally held on a/an _____ course.

- a. long straight
- b. rectangular or oval
- c. S-shaped
- d. open

3-34. One of the prime responsibilities of patrol vessels during powerboat regatta is to keep wakes from spectator and patrol craft

- a. to less than one foot in height
- b. to a height no greater than the wakes of the participant vessels
- c. to absolute zero
- d. to a minimum

- 3-35. A powerboat race contestant may be ______ if attempts to assist conflict with race regulations.
 - a. penalized six seconds
 - b. disqualified
 - c. incorrectly declared the winner
 - d. barred from all future races
- 3-36. An Auxiliary patrol vessel should not provide assistance to a contestant in a powerboat race unless requested to do so by ______.
 - a. the race committee with approval of the PATCOM
 - b. the pit crew of the disabled vessel
 - c. spectators in the area
 - d. a patrol vessel in an adjacent sector

3-37. Extensions to the straight sections of a powerboat race course are known as

- a. starting overruns
- b. escape valves
- c. pit stop areas
- d. straight-away extensions

3-38. Because of the high noise level of some powerboat races, special communication equipment such as ______ or _____ may be necessary.

- a. loud hailers headphones
- b. hand signals loud hailers
- c. traffic control signs headphones
- d. traffic control signs signal lights

3-39. Sailboat races are usually run on a(an) course.

- a. straight
- b. S-shaped
- c. triangular
- d. open

3-40. The three different types of sailing legs in a sailboat regatta are the _____, the _____, and the ______.

3-41. The most effective formation for patrol vessels during a sailboat race is the

- a. stationary screen
- b. marker vessel formation
- c. moving screen
- d. sweeping echelon
- 3-42. The best location for patrol vessels during a sailboat race is ______ of participants.
 - a. upwind and ahead
 - b. downwind and ahead
 - c. upwind and astern
 - d. downwind and astern

3-43. The best source for determining the preferred procedure for righting a capsized sailboat is

- a. the Patrol Commander
- b. the race committee
- c. the skipper of the sailboat
- d. the coxswain for the patrol vessel

3-44. Rowing regattas are held on a _____ course.

- a. straight
- b. S-shaped
- c. triangular
- d. round

3-45. Crew members of vessels participating in rowing regattas seldom wear

- 3-46. During a rowing regatta, the patrol vessels should ensure that spectator craft are in fixed positions well before the start of a race so that ______.
 - a. they will not get in the path of participants
 - b. they will not collide with each other
 - c. the wake-driven wave action will have subsided
 - d. they may watch the race without distractions

- 3-47. Loud hailing equipment should not be used during the patrol of a rowing regatta because the sound ______.
 - a. will interfere with the rowing cadence
 - b. cannot be heard over the noise of the participants
 - c. will interfere with the spectators
 - d. will interfere with the radio communication of other patrol vessels

3-48. The best location for the patrol commander of a marine parade patrol is

- a. with the event sponsor
- b. at the Coast Guard control center
- c. aboard a moving facility
- d. aboard an Auxiliary patrol aircraft
- 3-49. An Application for Approval of a Marine Event must be prepared by the sponsor and submitted to the Coast Guard or local boating administration at least _______ prior to the event.
 - a. 48 hours
 - b. one week
 - c. 30 days
 - d. two months

3-50. When a Coast Guard patrol commander is embarked aboard an Auxiliary vessel, the _______ is not displayed but the _______ is displayed.

- a. National ensign Coast Guard ensign
- b. Auxiliary officer's pennant Coast Guard senior officer's flag
- c. Auxiliary ensign Flotilla's pennant
- d. Patrol Boat ensign Coast Guard ensign
- 3-51. When several Auxiliary vessels are on a patrol under a Coast Guard Patrol commander, coordination of the Auxiliary facilities will be accomplished by a designated
 - a. Auxiliary Patrol Commander (AUXPATCOM)
 - b. Auxiliary Staff Officer (DSO)
 - c. Auxiliary Facilities Commander (AUXCOM)
 - d. Auxiliary coxswain

3-52. Large areas to be patrolled can be divided into _____.

- a. sections
- b. regions
- c. tracts
- d. sectors
- 3-53. A grid for use in area patrol operations is formed by two sets of ______ with one set to the second set.
 - a. parallel straight lines at right angles
 - b. parallel curved lines at oblique angles
 - c. parabolic lines perpendicular
 - d. tangent lines parallel
- 3-54. When enroute to assigned locations after a pre-patrol briefing, patrol vessels should examine the course for _____.
 - a. correct placement of markers by the sponsor
 - b. participant vessels practicing on the course
 - c. objects or debris
 - d. good areas for spectators to view the event
- 3-55. When a patrol vessel observes a casualty during a regatta patrol, ______ should be advised of all details.
 - a. the sponsor
 - b. the Patrol Commander
 - c. the race committee
 - d. all patrol vessels

3-56. When a patrol vessel is providing assistance during an emergency, ______.

- a. protecting property is more important than saving lives
- b. saving lives is more important than protecting property
- c. lives and property are equally important
- d. the Coast Guard will indicate whether to save people or protect property
- 3-57. When it is evident that assistance is needed in another sector, a patrol vessel should move to provide such assistance
 - a. immediately without delay
 - b. when requested to do so by the patrol vessel in that sector
 - c. only when ordered to do so by the sponsor
 - d. only when ordered to do so by the Patrol Commander

- 3-58. Some examples of the types of navigational aid casualties that should be reported by radio are:
 - a. ______ b. ______ c. _____ d. _____ f. _____
- 3-59. Chart updating patrols ______ restricted to areas covered by NOAA-NOS charts.
 - a. are
 - b. are not

3-60. Disaster patrols are usually performed independently by the Auxiliary.

- a. True
- b. False

3-61. Copies of a flotilla disaster patrol plan should be provided to ______ and the

- 3-62. During the preparation of a flotilla disaster patrol plan, some of the agencies that should be consulted are :
 - a.

 b.

 c.

 d.

 e.

 f.

- 3-63. Auxiliarists should be trained in the characteristics and dangers of ______ in their locality.
 - a. operating with Civil Defense agencies
 - b. severe weather
 - c. working as part of a Coast Guard Coast Guard Auxiliary disaster patrol team

- 3-64. Careful consideration should be given to Auxiliarists joining Civil Defense organizations because _____.
 - a. Auxiliarists have little to offer Civil Defense organizations
 - b. the Coast Guard does not work with Civil Defense organizations
 - c. all Auxiliary facilities and personnel may be needed by the Coast Guard
 - d. civil defense is a low-priority activity for the Auxiliary
- 3-65. The primary technique that an Auxiliarist must employ when conveying messages to potential disaster victims is _____.
 - a. intimidation
 - b. diplomacy
 - c. threats
 - d. bribery

3-66. The Captain of the Port ______ always the senior SAR officer.

- a. is
- b. is not

3-67. Activities associated with the port security and pollution programs are :

a.	
b.	
c.	
d.	

3-68. Regattas generally are _____.

- a. started at unspecified times
- b. of little interest to the boating public
- c. organized water activities
- d. performed by Auxiliary vessels

CHAPTER FOUR - SAFETY AND SURVIVAL EQUIPMENT

A. Introduction.

Recreational boating can be a relatively safe sport in spite of the inherent perils of wind and water. Knowledge and preparation can prevent many of the fatalities and injuries that might otherwise occur. For instance, it is sad but true that many people operate their vessels without an adequate number of life-saving devices or with their personal flotation devices carefully, but uselessly, stored in an unreachable space. The responsibility for safety on a patrol vessel rests with the vessel coxswain who must see that all required safety related equipment is on board, accessible, in working condition and that its use and operation is understood by all crew members. When in doubt, the vessel coxswain should err on the side of safety. Unforeseen equipment failures and weather conditions will occur, but the results will not be as significant when simple precautions have been taken.

B. Personal Flotation Devices (PFD's)

- 1. Types of PFD's. The term "personal flotation devices (PFD's)" was developed to cover all of the various types of flotation devices except "exposure suits", now in an approved status by the Coast Guard. It includes life preservers, vests, cushions, rings and other throwable items. The type designation of a PFD defines the expected flotation performance of that particular device in calm water and when the wearer is not wearing any other flotation material (such as a wet suit). There are currently five types of approved flotation devices.
 - a. The Off Shore Life Jacket (Type I), Figure 4-1, has the greatest buoyancy, and is designed to turn most unconscious persons in the water from a face down position to a

vertical or slightly backward position and to maintain that person in that position. The chance of survival is thereby greatly increased. The Off Shore Life Jacket is especially suitable for use in areas where there is a probability of delayed rescue, such as on large bodies of water where it is not likely that a significant number of boats will be in close proximity. It is



OFFSHORE LIFE JACKE I Figure 4-1

also the most effective in rough water as it provides the greatest flotation protection to its wearer. This is the only wearable device that is required to be reversible. It comes in two sizes, adult (90 pounds and over) and child (less than 90 pounds). The color of a Type I PFD must be Indian orange, scarlet mussell red or international orange. b. Near Shore Buoyant Vest (Type II), Figure 4-2. A Near Shore Buoyant Vest is an approved wearable device designed to turn its wearer to a vertical or slightly backward position in the water. It may be any color, and is manufactured in three sizes: Adult (more than 90 pounds), child medium (50 to 90 pounds), and child small, (which is

available in two sizes, less than 50 pounds and less than 30 pounds). The turning characteristic of the Near Shore Buoyant Vest is not as pronounced as the Off Shore Life Jacket because there is less flotation material and, therefore under similar conditions, will not be as effective in turning a person to a face-up position. The Near Shore Buoyant Vest is usually more comfortable to wear than the Off Shore Life Jacket and is usually preferred where there is a high probability of quick rescue, as when other persons are engaged in water activities nearby.



NEAR SHORE BUOYANT VEST Figure 4-2

c. Flotation Aid (Type III), Figure 4-3. Flotation Aids are wearable devices so designed that conscious wearers can place themselves in vertical or slightly backward





FLOTATION AIDS Figure 4-3

positions. These devices are manufactured in many different sizes and colors. While the Flotation Aid has the same amount of buoyancy material as the Near Shore Buoyant Vest, the flotation material is distributed differently, thereby reducing or eliminating the turning ability. It does, however, allow greater wearing comfort and is particularly useful when water skiing, sailing, hunting from a boat or engaging in other water sports. The most obvious difference between the Near Shore Buoyant Vest and the Flotation Aid is that the Flotation Aid has no flotation collar. Most approved float coats are Flotation Aids.

d. Throwable Device (Type IV), Figure 4-4. A Throwable Device is a Coast Guard approved device designed to be thrown to a person in the water and grasped by the user until rescued. It is not designed to be worn, but some can be secured to the body through the use of handles or lines. The most common throwable devices are buoyant cushions and ring buoys. Buoyant cushions may be manufactured in any color. Ring buoys may only be white or orange in color.



THROWABLE DEVICES Figure 4-4

- e. Special Use Devices and Hybrid Devices (Type V). A Type V PFD is a PFD that has been approved for limited use. The label of the PFD will specify for which activity the device is Coast Guard approved. As an example, a type V device designed to be used for commercial white-water rafting will only be acceptable during commercial rafting and may not be used for any other activities unless specified on the label. Examples of type V PFDs are: the Coast Guard approved work vest with unicellular foam pads and sailboard PFDs with harnesses. Some Type V PFDs are also approved as replacements for a Flotation Aid, such as "exposure coveralls" and "hybrid PFDs", but they can only be accepted as Flotation Aids to satisfy minimum PFD requirements when they are being worn.
- 2. The Coast Guard approved Special Use Devices and Hybrid Device when worn as PFDs provide minimum flotation protection and will not hold an injured or unconscious person's head face up. Their use may be appropriate where greater freedom of movement is desired, and the risk of falling into the water from a great height is minimal.
- 3. Despite the mildew inhibitor treatment required for PFDs, stowing them in moist, damp lockers will hasten mildewing and deterioration of the fabric. If a PFD is soiled and requires cleaning, it should be washed in fresh, warm water with a mild detergent, then rinsed in clean fresh water. Heat, moisture, and direct sunlight cause the plastic, rubber

and textile components of PFDs to deteriorate. Consequently, they should be stored in a cool, dry place out of direct sunlight. A "dry" area is an area where condensation does not come into contact with the PFDs. All PFDs should be kept away from oil, paint, and greasy substances. More important than their stowage condition is ready availability. In this connection, it should be noted that the Coast Guard does not consider PFDs kept in their original plastic wrappers to be readily available. Persons under stress may be unable to get them out promptly. Also, in this condition, they are prime targets for trapped moisture, mildew and rot.

- 4. Retro-reflective material for improved visibility in low light conditions is required on all PFDs used by the Coast Guard. Its use by members of the Coast Guard Auxiliary is strongly encouraged and is required on PFDs used by Auxiliarists on ordered patrols. It is a very simple but effective addition to your own safety effort. Instructions for applying reflective material are usually provided on the package.
- 5. The Standard Navy Preserver, figure 4-5 Although, this device is not Coast Guard approved it is a common PFD used by the naval services. This preserver is one of the best devices for keeping a person afloat; however, its major drawback is the complexity of the numerous straps Special training is needed to and fastenings. assure that the PFD can be donned correctly and rapidly. It is for this reason that the Standard Navy Preserver is not Coast Guard approved for civilian use. Any Auxiliarist who plans to go aboard a Coast Guard vessel as a "crew member" or passenger should request instructions in the use of this preserver.

C. Thermal Protection Suits.

1. Accidentally falling into cold water has two potentially lethal consequences; drowning and hypothermia. We discussed previously the protection against drowning provided by PFDs.





STANDARD NAVY PRESERVER Figure 4-5

- 2. The Coast Guard's antiexposure, survival and wet suits may be purchased by the Coast Guard district or local units and loaned to the Auxiliary. The following descriptions will help Auxiliarists understand what is expected from the various devices and will assist those who may want to purchase their own thermal protection suit or coat.
 - a. A buoyant thermal protection suit may be described as wet or dry, depending upon whether or not water is intended to be inside the suit. There are four basic design concepts:
 - (1) Survival (exposure) suit
 - (2) Tight fitting wet suit (may not be used as an on-deck work garment)
 - (3) Dry Suit (must be used with a PFD)
 - (4) Antiexposure coverall (deck suit)
 - b. Survival suits (immersion or exposure suits), shown in Figure 4-6, are constructed with a fabric cover and closed-cell foam lining and have about 35 pounds of buoyancy. That will cause the wearer to float horizontally, either face up or down. Additional floatation such as the inflatable ring or buoy are provided with the suit and will help elevate the wearer's head when floating face up. Generally, the suits are "one size fits all" for persons weighing between 110 and 330 pounds, but other sizes are available. The thermal characteristics of the suit will keep a survivor warm whether wet or dry and provides a wearer the best protection from hypothermia when in the water. The survival suit is extermely bulky and very difficult to work in, therfore its use is limited to operating in cold water when abandoning ship.



SURVIVAL SUIT (WITHOUT AUXILIARY FLOAT RING) Figure 4-6

c. A tight fitting wet suit, (the scuba diver's common wet suit), shown in Figure 4-7, has been designed to protect the wearer from exposure to moderate degrees of cold water. It is constructed of neoprene foam, a durable and elastic material with excellent flotation characteristics. The wet suit provides better protection from hypothermia than the antiexposure coverall when in the water, and affords excellent mobility.

However, it is not intended for use as a work suit and may not be worn for on-deck duties. To facilitate donning the suit, it should have a nylon lining. The buoyancy characteristics will cause a person in the water to float horzontally, either face up or face down. In order to reduce fatigue, when wearing a wet suit in the water, do not attempt to place yourself into a vertical position by forcing your legs down. When turned face-down by rough water, the wearer must manually rotate to be face up.



FOAMED NEOPRENE WET SUIT (TYPICAL) Figure 4-7

- (1) It is important that a diver's wet suit be properly fitted. The suit should fit skin tight as the method of hypothermia protection with this suit is similar to that of the antiexposure coveralls, i.e., a loose fitting suit allows excessive amounts of water between the suit and the skin.
- (2) For increased comfort and protection both in and out of the water, insulated underwear may be worn under the diver's wet suit.
- (3) Accessory equipment (hood, gloves and wet-suit booties) are also available for use with the wet suit. Although they add comfort and protection, wearing the gloves and/or hood may create some mobility problems and reduce performance or delay reaction time. In the case of gloves, manual dexterity is greatly reduced. The hood greatly decreases the ability of the wearer to hear. These items should be carried with the suit for use when in the water.

- d. Dry suits, (Figure 4-8), with proper undergarments, provide superior protection for crew members in adverse weather conditions and cold water immersion. This type of suit, with the undergarments, affords more hypothermia protection than antiexposure coveralls while permitting easy mobility in the water. However, dry suits are not inherently buoyant, so crew members must wear PFDs over them. The suits are made of trilaminate or urethan-coated fabric. They feature attached lug-soled or deck boots, latex or neoprene neck and wrist seals and reinforced knees and seat. Extreme care must be exercised when donning the suit as any tearing of the suit or seals will severely degrade its immersion protection. Rings, watches and the like should be removed before donning the suit and the neck and wrist seals should be lubricated with "food grade" silicon compound or unscented talcum powder to facilitate water-tight seals at these locations.
- e. Antiexposure coveralls or "deck suits" (Figure 4-9) are the standard garment for coldweather operations with closed-cockpit boats where crew members may be subject to intermittent spray. They afford full freedom of movement, are durable and provide limited out-of-the water protection from the elements as well as limited protection from the hypothermia when used in the water but considerably less thermal protection than the dry suit. The flotation characteristics of the coveralls are similar to those of the Flotation Aid (Type III PFD) in that they have a minimum of 17 1/2 pounds of buoyancy. Some are approved Special Use Devices (Type V PFDs). The approved coveralls feature an orally inflated pillow which improves the flotation attitude (angle) when the wearer is exhausted. The suit should be used with wet-suit or ski gloves. Antiexposure coveralls are easy to don in that they are donned in the same fashion as standard coveralls and may be worn over other clothing.



DRY SUIT (TYPICAL) Figure 4-8



ANTIEXPOSURE COVERALL Figure 4-9

f. PFDs are not required with any of the above suits, except the dry suit, because of their buoyant characteristics but, as with PFDs, attaching personnel marker lights is recommended.

D. SAR Personal Survival Equipment

As noted in paragraph 1.E.1, a PFD worn by an Auxiliarist on ordered patrols must have a whistle, reflective tape, a PML, a mirror and flares or smoke VESSEL DISTRESS SIGNALS attached to it.

1. The whistle. The whistle may be of any type that produces a highpitched varying tone such as the ball type carried by policemen and basketball referees (Figure 4-10). The effective range is about 1000 yards. It should be checked periodically for damage or defects.



2. Reflective tape. Many PFDs may now be purchased with reflective tape as part of the PFD when manufactured. Kits may be obtained to fasten reflective tape to PFDs that do not have the tape. Instructions for applying the tape will generally be included in the kit.

WHISTLE Figure 4-10

- 3. Personal Marker Light. A chemical PML, flashlight or strobe light maybe used to satisfy this requirement.
 - a. The chemical PML (Figure 4-11) uses a chemical reaction to provide light. This device, when activated, produces light which assist in locating the wearer at night or in other low light conditions. Marine supply houses carry Coast Guard approved lights. They are specifically designed to be attached to a PFD without damaging or interfering with the PFD. Chemical PMLs have a useful shelf life of about 3 years. Therefore, they

should be checked for the expiration date which is indicated on the device and should be replaced prior to the expiration date The time period that a chemical light will provide effective illumination varies depending upon its age and the temperature. A recently purchased lightstick used in 70-80 degree F. temperature (ideal conditions) can probably provide 8-12 hours of light. As the device ages, its effective period may



CHEMICAL PERSONNEL MARKER LIGHT Figure 4-11

be shortened considerably. In colder temperatures, the light will last longer but will have less brilliance than when warm.

b. Waterproof flashlights are available through marine supply channels. One typical flashlight which uses a size D single cell alkaline battery is Coast Guard approved and attaches to the PFD with an intergral heavy duty steel clip (much like a large safety pin). The expiration date and condition of the battery should be checked periodically

(at least yearly) and replaced before the expiration date or when the battery shows signs of deterioration.

- c. A variety of strobe lights are also available through marine supply channels. Typically, these lights attach to the PFD with Velcro. Coast Guard approved units are available using alkaline batteries which can operate the strobe up to 24 hours or a five-year shelf life lithium battery which will operate the strobe up to 12 hours can be selected. Included in this category of light is the distress marker light. This type of light includes a lightweight, compact, battery-operated portable unit with all circuitry enclosed within the case. It is sold as a rescue/anti-collision light. It is designed to be carried in the crew member's pocket or may be attached with a line or belt. The light is certified as in compliance with 46 CFR 161.013, (Coast Guard approved). The light will operate for 9 to 15 hours in continuous use, and flashes about once per second. The light can usually be seen up to 5 miles; however, the range of visibility will be dependent upon the height of the observer's eye. For an observer on a small craft, such as a typical Auxiliary facility, the range will most likely be much less than the advertised five miles.
- 4. Mirror. The Emergency Signaling Mirror (Figure 4-12) is a special pocket-sized mirror with a sighting hole which is used by the military for emergency signaling, but any common mirror may be used in the same fashion. The mirror is used to attract the attention of passing aircraft or boats by reflecting the sun's light in their direction. Such reflected light can be seen for miles It cannot be used when there is no sun, and its effectiveness is reduced in rough seas.
 - a. To use the mirror, hold it in one hand while adjusting it to reflect the sun's light onto your other outstretch hand (Figure 4-13), turn slowly in the direction of the object you desire to signal. The reflected light should now be visible in the object's position. Drop your outstretched hand and continue to flash the mirror in the direction of the object, occasionally bringing your free hand up to check that the reflected light is properly directed. Most signal mirrors have instructions on the mirror. The instructions should be read before any need arises to use the mirror.
- 5. Flares. Coast Guard approved flares or smoke VDSs are required for operation beyond three miles from land (but good units to have for all patrols). The visual distress signals should include both the day and night signals, such



EMERGENCY SIGNALING MIRROR Figure 4-12



SIGHTING THE MIRROR Figure 4-13

as those required on all Auxiliary facilities and listed in the following table:

U.S.C.G.	
Approval Number	Device Description
160.021	Hand held red flare distress signals, day and night.
160.022	Floating orange smoke distress signals, day only.
160.024	Pistol-projected parachute red flare distress signals, day and night.
160.036	Hand-held rocket-propelled red flare distress signals, day and night
160.037	Hand-held orange smoke distress signals, day only.
160.057	Floating orange smoke distress signals, day only.
160.066	Distress signal for boats, red aerial pyrotechnic flare, day and night

- a. Pyrotechnic Devices. The pyrotechnic devices selected should be small enough to be carried comfortably and should be protected from the elements. Pyrotechnic devices should not be used until the survivor sees or hears a rescue vessel or aircraft.
- 6. Additional emergency equipment recommended but not required for PFDs.
 - a. Class B EPIRB. Most Class B EPIRBS are too large for personal use. However at least one unit is available which is 1 5/8" W x 6" H x 1 5/8" D, will operate at least 48 hours on a 12-year shelf life lithium battery and will float. This unit can be attached to a PFD. It transmits on 121.5 and 243 Mhz. (Military units are available which transmit only on 243 Mhz which can not be received on civilian aircraft receivers).
 - b. Transceiver. Only a hand-held, internal-battery-operated marine-band transceiver is suitable for use with a PFD. Radios weighing less than one pound are available. Some units are waterproof while waterproof pouches are available for non-waterproof radios. (Based on current FCC regulations, an FCC station license is no longer required when an EPIRB, VHF-FM transiever or a radar is aboard a recreational vessel operating in U.S. waters. Recreational vessels are required to have a station license only if operating in non-U.S. waters or if they have a marine AM-SSB radio aboard.)
 - c. Electronic locator beacon. As an alternative to the availability of a Class B EPIRB.
 - d. Knife. A survival knife, to be readily available, should be carried at all times aboard a vessel. The knife should be attached to the wearer with a string to prevent it from being lost if dropped. The survival knife is the basic tool used to free yourself from any entangling lines or for cutting away materials blocking your escape path should you be trapped inside a capsized or sinking boat. Much thought must be given to the selection of a knife: your life may depend upon your choice. Folding knives, although convenient to carry, may be impossible to open with wet suit gloves or with reduced manual dexterity caused by exposure to a cold environment. Folding knives may also lack the blade strength required for some possible needs. A knife designed for water

use, such as a diver's knife (Figure 4-14). is the best choice for a survival knife. It should be double edged and corrosion resistant. It should be kept sharp.

e. Dye marker. Green fluorescent dye markers are available through commercial dealers. A dye marker is particularly effective for enhancing detection by a searching aircraft, particularly in relatively smooth water. The dye does not dissipate rapidly and is easy to see from an aircraft from a number of miles distance.



DIVER'S KNIFE Figure 4-14

- 7. These personal survival items are in addition to survival equipment that is available on the patrol vessel or included in the kit for a raft.
- 8. While not specifically required or recommended by the Auxiliary Operations Policy Manual, sunguard lotion is important to limit sunburn. A suitable head cover is also beneficial for this purpose as well as to reduce heat loss. In salt water, fresh water for drinking is important if the probability of early rescue is not high. A plastic jug with some air space can be used for drinking water. The jug will float and it can be attached to a floating person with a light line.
- **E. Helmet.** Wearing helmets on boats under hazardous conditions, such as during heavy weather and helicopter operations, is mandatory for Coast Guard crews and is strongly recommended for Auxiliarists. A motorcycle-type helmet with little or no corrodible hardware has been found to be the best.

F. Inflatable Life rafts.

1. Life rafts are manufactured by a number of companies in various sizes and designs. To include detailed information on each type of raft would take volumes, therefore only general comments and information common to most types are included in this text.

- 2. Most Coast Guard approved life rafts today have automatic systems for inflation and contain emergency supplies such as water, flares, a patch kit and rations. Also instructions for the use and maintenance of the raft are normally included.
- 3. If emergency supplies are not included as part of the life raft kit, items such as those mentioned above plus high-energy food, drinking water, first-aid supplies, and fishing line and hooks should be placed in a watertight container and kept in a location close to the life raft.
- 4. When deploying the life raft it should be placed in the water to allow ample room for expansion. Inflate the raft according to manufacturer's instructions. The raft should be tethered to the boat PRIOR to inflation. The tether can be cut if the boat sinks.
- 5. When boarding the raft, if practical, pull the raft alongside and board directly from the distressed vessel. Keeping clothing as dry as possible is important for survival. Boarding from the water may be difficult. The weight of a person entering from the side of the raft may cause it to capsize. If entering from the water, enter at the end of an oblong or rectangular-shaped raft to minimize this possibly.
- 6. After personnel are aboard the rafts:
 - a. Try to remain in the vicinity of the boat or debris. Deploying a drogue (if available) may assist in this effort. Remaining in the initial distress location will aid the rescue craft in locating the life raft's position. Attempt to salvage any floating debris which may be of use while in the raft. If any water has entered the raft, remove it by bailing or soaking it up. Keeping dry is a major factor in cold water survival. If more than one person is aboard the raft, huddling together will help maintain body heat in cold climates but don't risk capsizing by doing so.
 - b. If more than one raft is used, keep the rafts tied together.
 - c. Lookouts should be posted to maintain a watch for passing aircraft or vessels.
 - d. Don't waste flares by firing them blindly when there is no likelihood of their being seen by rescue craft
 - e. If rescue is not immediately effected, a primary concern of survivors should be the augmentation of existing food and water. Rationing food and water is a necessity.
 - f. Maintaining a brave, happy and resourceful frame of mind is vital to survival.
 - g. Figure 4-15 shows a typical "ocean going" life raft. Smaller, less expensive, less "complete" rafts are popular with the boating public and serve a very useful purpose in less hazardous situations.



Figure 4-15

G. Optional Reading Assignment

- 1. Boating Skills and Seamanship, U. S. Coast Guard Auxiliary, Eleventh Edition.
 - a. Chapter 2.
- 2. U. S. Coast Guard Auxiliary Vessel Examiners Manual, COMDTINST M16796.2 (series).
 - a. Chapter 3, paragraph E.
 - b. Chapter 6, paragraph F.

H. Study Questions

4-1. The responsibility for safety on a patrol vessel rests with the ______.

- a. coxswain
- b. Director of Auxiliary
- c. Flotilla Commander
- d. vessel owner
- 4-2. The Auxiliarist in charge must ensure that all required equipment and ______ are on board.
 - a. food and refreshments
 - b. training material
 - c. safety related equipment

4-3. The type designation of a PFD defines the expected flotation performance in

- a. moderate seas
- b. heavy seas
- c. calm water
- d. any water

4-4. Currently, there are _______ types of approved personal flotation devices.

- a. three
- b. five
- c. six
- d. seven

4-5. The Off Shore Life Jacket Type I PFD has the _____ buoyancy of all PFDs and is designed to position and maintain an unconscious person in a _____ position.

- a. greatest face down
- b. least vertical or slightly backward
- c. least horizontal
- d. greatest vertical or slightly backward

4-6. The Off Shore Life Jacket is especially suitable when there is a probability of

a. immediate rescue

.

b. delayed rescue

- 4-7. The Coast Guard approved PFD that is the most effective in rough water is the ______ because it provides the greatest ______ to its wearer.
 - a. Off Shore Life Jacket (Type I) flotation protection
 - b. Near Shore Buoyant Vest (Type II) comfort
 - c. Throwable Device (Type IV) legal protection
 - d. Special Use Device (Type V) thermal protection
- 4-8. The only wearable PFD that must be reversible is the
 - a.. Off Shore Life Jacket (Type I)
 - b. Near Shore Buoyant Vest (Type II)
 - c. Flotation Aid (Type III)
 - d. Throwable Device (Type IV)
- 4-9. The Off Shore Life Jacket comes in two sizes, adult for persons weighing _____ pounds and over and the child for persons weighing less than _____ pounds.
 - a. 30 30
 b. 60 60
 c. 90 90
 d. 110 110

4-10. One of the authorized colors for an Off Shore Life Jacket is

- a. yellow
- b. blue
- c. green
- d. Indian orange
- 4-11. A Near Shore Buoyant Vest is designed to turn its wearer to a _____ position in the water.
 - a. horizontal
 - b. vertical or slightly backward
 - c. face down

4-12. The color of a Near Shore Buoyant Vest _____.

- a. must be Indian orange
- b. may be any color
- c. must be red
- d. must be green

4-13. The Near Shore Buoyant Vest is manufactured in ______ sizes.

- a. two
- b. three
- c. five
- d. six
- 4-14. The smallest Near Shore Buoyant Vest is for use by a child weighing less than ______ pounds.
 - a. twenty
 - b. thirty
 - c. forty
 - d. fifty

4-15. The turning characteristics of a Near Shore Buoyant Vest is ______ that of a Off Shore Life Jacket.

- a. greater than
- b. equal to
- c. less than
- 4-16. The Near Shore Buoyant Vest is usually preferred where there is a probability of a rescue.
 - a. delayed
 - b. quick
 - c. universal
- 4-17. A Type III PFD is known as a _____.
 - a. special use device
 - b. buoyant vest
 - c. throwable device
 - d. flotation aid
- 4-18. A Flotation Aid ______ position and maintain an unconscious person in a vertical or slightly backward position in the water.
 - a. will
 - b. will not

4-19. The buoyancy of the Flotation Aid is ______ that for the Near Shore Buoyant Vest.

- a. the same as
- b. less than
- c. more than

4-20. The main advantage of a Flotation Aid is its _____.

- a. buoyancy
- b. righting tendency
- c. comfort
- d. color

4-21. A Type IV PFD is designed a person in the water.

4-22. The most common Throwable Devices are the ______ and the ______.

- a. buoyant cushion ring buoy
- b. vest jacket
- c. inflatable PFD foam rubber PFD
- d. three strap PFD four strap PFD

4-23. Of the Type IV PFDs, the buoyant cushion _____ but the ring buoy

- a. must be orange may be any color
- b. must be red must be yellow or green
- c. may be any color must be white or orange
- d. must be white must be green or red
- 4-24. The type of PFD that is approved by the Coast Guard for limited use is the ______ PFD.
 - a. Type III
 - b. Type IV
 - c. Type V
 - d. Type VI
- 4-25. The mildew inhibitor treatment required for all PFDs ______ fully protect the PFD from deterioration in a damp locker aboard a vessel.
 - a. will
 - b. will not

4-26. A soiled fabric PFD should be washed in fresh, _____ water with a _____ detergent and then rinsed in clean, fresh water. a. warm - mild b. cold - strong c. hot - mild d. warm - strong 4-27. PFDs be stored where they are subject to direct sunlight. a. may b. should not 4-28. PFDs should be kept away from _____ and greasy substances. a. water, detergent b. air, sunlight c. oil, paint 4-29. PFDs stored in their original plastic wrappers . a. will be difficult to locate b. are not readily available c. will not mildew d. will deteriorate rapidly 4-30. To make them more visible in the dark, ______ is/are required on all PFDs used by the Coast Guard. a. fluorescent paint b. Class B EPIRBs c. dve markers d. retro-reflective material

- 4-31. Standard Navy life preservers _____ Coast Guard approved for use aboard civilian vessels.
 - a. are
 - b. are not

4-32. The Navy Life preserver is one of the best preservers for _____.

- a. warmth
- b. comfort
- c. keeping a person afloat
- d. ease of donning

4-33. Most chemical PMLs have a useful shelf life of about _____.

- a. six months
- b. one year
- c. three years
- d. five years

4-34. A fresh chemical lightstick at a temperature of 70 - 80 degrees F. will provide light for to ______ hours.

- a. one three
- b. eight twelve
- c. ten fifteen
- d. twenty four thirty six

4-35. At colder temperatures, a chemical lightstick will have a ______ life and will have brilliancy.

- a. shorter less
- b. longer less
- c. shorter more
- d. longer more

•

4-36. The two potentially lethal consequences of falling into cold water are _____ and

- a. heart attack heat exhaustion
- b. frost bite suffocation
- c. drowning hypothermia
- d. hyperventilation mammalian diving reflex

4-37. The four basic design concepts for buoyant thermal protection garments are:

a. ______ b. _____ c. _____ d. _____ 4-38. Anti-exposure coveralls are designed to provide _____ movement.

- a. full freedom of
- b. reduced

4-39. Tight fitting foam suits (common scuba divers' wet suits) protect the wearers from exposure in _____.

- a. moderately cold water
- b. warm water only
- c. very cold water
- d. subfreezing water

4-40. Tight fitting wet suits have buoyancy characteristics that will cause a wearer to float in the water.

- a. vertically
- b. slightly forward
- c. slightly backward
- d. horizontally

4-41.A dry suit need not be used with a PFD because it has sufficient built-in buoyancy.

- a. True
- b. False

4-42. Anit-exposure coveralls have the same flotation characteristics as a(n)

- a. Off-shore PFD
- b. dry suit
- c. Flotation Aid
- d. Type V PFD

4-43. One primary reason to have a survival knife on your person is to ______ during an escape from a sinking vessel.

- a. protect yourself from other persons
- b. cut your way through a restraining bulkhead
- c. free yourself from entangling lines
- d. cut yourself free from your PFD

4-44. A disadvantage of a folding knife as a survival knife is that _____.

- a. it is more difficult to keep sharp
- b. it is usually too heavy
- c. it may be impossible to open it when your hands are cold
- d. it constitutes a concealed weapon

4-45. The effective range of a police-type whistle is about _____.

- a. 1000 yards
- b. 1500 yards
- c. 2000 yards
- d. 3000 yards

4-46. If a special signaling mirror with a sighting hole is not available, _____ may be used for the same purpose.

- a. there is no suitable substitute that
- b. any shiny object
- c. a piece of glass
- d. any common mirror

4-47. Describe how the signaling mirror with a sighting hole is used.

a._____

4-48. visual distress signals should be included in or on a PFD when worn on a patrol vessel that is operating more than 3 miles from shore.

- a. Passive and active
- b. Flares or smoke
- c. Approved and non-approved
- d. Inland or international
- 4-49. A strobe personal marker light can normally be seen up to ______ miles depending upon the height of the observer's eye and the meteorlogical visibility conditions.
 - a. thirty
 - b. five
 - c. twenty
 - d. ten

- 4-50. A good helmet for use on boats under hazardous conditions is a motorcycle-type helmet with _____.
 - a. little or no corrodible hardware
 - b. bright metal insignias to attract attention
 - c. the chin strap removed
 - d. a Coast Guard approval number

4-51. A small raft is most likely to capsize if a person in the water attempts to enter it

a. when other persons are already aboard

- b. from the end
- c. from the side

4-52. The best place to enter an oblong or rectangular-shaped raft (when in the water) is

- a. from the side
- b. near one end
- c. at an end
- d. at a corner

4-53. Any water in a raft should be removed by bailing or _____.

- a. tipping the raft
- b. using a siphon
- c. soaking it up
- d. using hydrostatic pressure
- 4-54. When survivors are in life rafts prior to being located, ______ to watch for aircraft or vessels.
 - a. persons not able to do other tasks should be assigned
 - b. lookouts should be posted
 - c. everyone should be required at all times
 - d. the person in charge should assume the responsibility

4-55. If survivors in life rafts cannot expect to be rescued immediately,

- a. some salt water should be added to the available fresh water
- b. food should not be consumed until each person becomes weak
- c. available food and water should be consumed normally
- d. food and water should be rationed

4-56. If more than one person is aboard a raft, a good way to maintain body heat is to

- a. refrain from touching each other
- b. rotate available warm clothing
- c. huddle together

d. face outboard on the raft

4-57. If survivors are aboard more than one raft, the rafts should ______.

- a. be sailed in different directions to seek help
- b. be tied together
- c. be allowed to drift normally
- d. be kept in the vicinity of where the vessel foundered or the aircraft sank

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CHAPTER FIVE - HEALTH HAZARDS TO THE CREW

A. Introduction.

- 1. Auxiliary patrols are performed in a potentially hostile environment. Therefore, Auxiliarists must be aware of the hazards and discomforts of the small boat environment and the preventive actions that will eliminate or minimize them, either for crew members or the public, pending the availability of qualified medical or emergency treatment personnel.
- 2. The information provided in this chapter is not intended to qualify Auxiliarists on patrol to render first aid to ill or injured persons. It is provided primarily so that Auxiliarists will recognize the dangers and take proper preventive action. First aid treatment is not a primary activity for Auxiliary patrols. However, Auxiliarists on patrol while under Coast Guard orders are authorized to render first aid within the limits of their training. For example, an Auxiliarist who is trained and currently certified in CPR by the Red Cross or other authorized training organizations may perform CPR. Auxiliarists not so trained and certified should not. Auxiliarists who are interested in learning how to render first aid or perform CPR should enroll in classes on these subjects that are presented by the American Red Cross or similar qualified medical agencies.

B. Potential Hazards and Discomforts.

- 1. Physiological well-being plays an important role in the safe and successful accomplishment of the missions we accept from the Coast Guard. This chapter discusses ways to more effectively cope with the hazards and discomforts of the marine small boat environment while ensuring that the crew remains at the highest level of efficiency.
- 2. Seasickness.
 - a. Motion of the vessel can produce seasickness. This is particularly true on headings that induce a wallowing or rolling motion. Assigning a person who seems to be getting seasick to some fresh-air task is frequently beneficial. Reading or other tasks which require close attention, such as sewing or chart work, seem to aggravate sea sickness. Tomato juice, soda crackers and saltine crackers bring relief to some people.
 - b. Current anti-motion medications have been successful in providing relief. The best of these are listed below: (The first two of these medications require a prescription, but both are quite effective. They require use prior to exposure.)
 - (1) A combination of 25mg ephedrine and 25mg promethazine, both orally administered.
 - (2) Trans-dermal scopolamine, a dime-sized adhesive patch worn behind the ear.
 - (3) Accu-pressure wrist bands, which require no prescription, are effective for some persons.

- c. In some areas, the standard USCG seasickness medication, promethazine hydrochloride and ephedrine sulfate in combination, may be obtained by an Auxiliarist from the medical officer or health services technician at a CG unit. The medication should be taken 2 hours before sailing to be effective. This medication must NOT be taken if any alcohol has been consumed during the previous TWELVE hours.
- d. Some anti-motion medications may produce excessive drowsiness and should not be used if the alertness of the crew member is vital to the mission. Some medicines are not suitable for persons with high blood pressure or those taking certain other medication. A physician should be consulted. No coxswain should ever use any medication that might reduce alertness. On the other hand, a sea-sick coxswain may be as ineffective as a drowsy coxswain. Therefore, anyone prone to seasickness should consult his physician about medications which work but do not cause drowsiness.

3. Fatigue.

- a. It's important to ward off the effects of fatigue before they get too great a start. Long periods at the helm when cold, wet and tired, or hot, sweaty and dehydrated may lead to faulty decisions and a "don't care" attitude. Such discomforts may lead to mistakes, botched SAR cases or even a threat to the personal safety of individuals or the entire crew.
- b. Any member of the Auxiliary who participates actively in the operations cornerstone may be assisting and rescueing people, sometimes in the worst of conditions. At times, it will seem as though the limits of physical and mental endurance have been reached. Mental and physical fatigue are among the greatest dangers in extended rough weather operations.
- c. First, exhaustion reduces observation and concentration dramatically. Hours of trying to look through windshields blurred by sea spray can strain your eyes. The effort of just trying to hold on and keep your balance can be exhausting. In times like these, because of reduced efficiency and judgment caused by fatigue, you may be tempted to take chances--like towing too fast or crossing a bar under dangerous conditions. Such tendencies must be avoided. The safety of your fellow crew members and survivors must always be given the first consideration.
- d. Second, fatigue may impair your ability to see and hear accurately. It is absolutely necessary for crew members to keep an eye on each other's condition continuously in the event excessive fatigue begins to take its toll. The ability to respond in normal conversation should be noted. The coxswain, in particular, must be constantly aware of any stress signs in the crew. Their safety and welfare are the coxswain's first responsibility.
- e. Regardless of the climate, Auxiliarists must dress for the weather. Keeping warm in cold weather helps to prevent fatigue. Adequate clothing should be on board in case it is needed.
- f. Thermal-type cushion sole sea boots and wool socks will take care of the toes. Watch caps are excellent protection for the head, a critical area for loss of body heat. Parkas with hoods and turtle neck sweaters are also good since they leave only the nose and cheeks exposed. Protection of fingers is a problem in cold weather operation. Gloves are obvious but a spare set should be carried because they're bound to get wet. Consider gloves that have the finger tips cut off if regular gloves are too cumbersome. If heavy spray is anticipated, put rain gear on before you are wet. Float coats are another alternative. They meet PFD requirements and help keep the wearers warm and rested. Rain gear may also be used for additional warmth even if there is no rain.
- g. To help rejuvenate fatigued crew members, a hot meal or at least a cup of hot soup from a thermos bottle or jug is effective. This will really keep up the crew's morale and alertness when they need them most.
- h. There should be no hesitation to ask for relief when fatigue begins to impair the efficiency of the crew. The Coast Guard has no desire to add you and your vessel to their SAR case load from mistakes caused by fatigue or because a false sense of duty induces a coxswain to push his crew beyond reasonable limits.
- 4. Carbon Monoxide.
 - a. Every year, people are needlessly killed or rendered unconscious by carbon monoxide. Carbon monoxide, CO, is invisible and odorless. As you can't see it or smell it, you must know what type of conditions can produce it.
 - b. The following conditions pertain to CO poisoning:
 - (1) Operating fuel-burning devices such as gasoline or diesel engines, propane or alcohol stoves, acetylene torches or kerosene heaters without ventilation can cause CO poisoning.
 - (2) The potential victim is more quickly affected if located in an enclosed area such as a cruiser cockpit enclosed by canvas side and back curtains. Breathable air will most likely be found near the deck. If trapped in a smoke-filled area, crouch or crawl on the deck to reach an exit.
 - (3) The vessel doesn't need to be stationary for fumes to accumulate. For example, a following wind can circulate exhaust gases throughout the cockpit of a slow-moving boat. The construction of some cockpits or cabins can cause the eddies from wind currents to draw fumes back aboard.
 - (4) Sleeping in a closed cabin with certain types of catalytic and/or flame producing heaters has resulted in carbon monoxide fatalities. Working in the engine compartment alone at the dock with the engines operating is also potentially lethal.

- (5) Fatalities have occurred when a defective exhaust system of an operating engine backed fumes into a cabin or sleeping area.
- (6) Other fatalities have occurred when exhaust fumes backed up a cabin wash basin drain and entered the sleeping area. Keeping the drain plug in place will help avoid this danger.
- c. At times it is very difficult to detect or avoid such fumes. Therefore, you must watch for symptoms. The symptoms of carbon monoxide poisoning include one or more of the following:
 - (1) Throbbing in the temples.
 - (2) Dizziness.
 - (3) Ringing in the ears.
 - (4) Watering and itching eyes.
 - (5) Headache.
 - (6) Cherry pink skin color.
- d. Unfortunately, if you wait to feel or observe these symptoms, it is possible that you never will really understand them. One of the first senses CO poisoning attacks is your judgment or discrimination. In this case, the best defense against poisoning is a good offense. Ensure that adequate circulation of fresh air exists wherever CO may be present.
- e. Breathing the by-products of a fire is another source of dangerous fumes. A recently extinguished fire is still dangerous. Fires not only produce CO but when plastics, upholstery, cushions, trim, electronics, insulation, etc., burn in combination and their gases mix, highly lethal combinations such as cyanide can be produced.
- f. Dangerous fumes also may occur when unvented space heaters are used.
- 5. Noise.
 - a. Excessive noise any continual noise at the same pitch or any prolonged grating-type noise tends to distract, lull or aggravate to the point where it adversely affects temperament, hence performance. On prolonged missions or patrols, coxswains should routinely make minor changes or adjustments in engine speed and re-adjust the squelch and volume on radios to the point where radios can be heard but are not oppressive. Only those frequencies necessary to the performance of the mission should be monitored.
 - b. Loud noise can damage a person's hearing and can cause fatigue. Ear muffs or other suitable means of cutting down on noise should be used whenever noise levels will not permit conversation with a raised voice at a distance of three feet. If operations permit, engines with loud exhausts should be shut down periodically for respite from continous noise.

6. Drugs and Alcohol.

- a. People in every walk of life have been known to have a drug or alcohol problem. Alcohol may cause the user to have a slower reaction time, lack coordination, have slurred speech or to be overconfident. Drugs, such as sedatives, barbiturates, and tranquilizers (used for the treatment of high blood pressure, epilepsy, and insomnia) can cause confusion, lack of coordination, drowsiness, or slurred speech. In the Auxiliary, we cannot tolerate a crew member who knowingly proceeds on a SAR mission "spaced out" or drunk.
- b. We can also be adversely affected or incapacitated by our prescription drugs. Certain medications may be as incapacitating as alcohol. When taken with alcohol, the depressant action may be accentuated. At least one major airline prohibits a flight crew member from performing flight crew duties for a period of twelve hours after the last dose of antihistaminic cold drugs or Dramamine. The coxswain must watch for the effects of medication.
- c. Incidentally, some survivors when hauled aboard may appear to be on drugs or drunk. Persons moderately hypothermic manifest the same symptoms, or they could be drunk and hypothermic. The first aid to use in any case is that for a hypothermic victim. This is no time to take chances. Such first aid will never hurt a drunk! It may save a hypothermia victim's life.
- 7. Frostbite,
 - a. Frostbite is an injury produced by cold in which the affected tissues are frozen. In northern latitudes, wind chill factors can bring the onset of frostbite at thermometer temperatures that don't seem excessively cold. Alcohol increases a person's susceptibility to frostbite. When conditions are such that frostbite could be encountered, crew members should watch for patchy gray or yellow-white spots on the skin. Initially, the skin may be flushed and painful, but soon the early pain disappears and all sensation is lost. With deep frostbite, the tissues become quite hard. The victim is often unaware he is affected. The nose, ears, hands and feet are the areas most commonly involved. Treatment for frostbite includes removal of constricting clothing, followed by stimulants such as coffee or tea (no alcohol or tobacco). Alcohol dilates the blood vessels of the skin and may temporarily warm the skin, but eventually results in an increased loss of body heat. Smoking, in contrast, tends to constrict the blood vessels in the skin and may be sufficient to initiate frostbite.
 - b. Crew members suffering from frostbite on the extremities are of little or no assistance aboard an Auxiliary facility. Their ability to perform physical tasks is severely impaired and the discomfort and pain are likely to affect the thinking and judgmental processes adversely. As with fatigue, the coxswain should be alert for symptoms and should report instances of frostbite to the Coast Guard and request a relief or authority to terminate the patrol.

8. Hypothermia.

- a. As Auxiliarists, we have been exposed to extensive information on hypothermia. We all recognize that if we are immersed in water cold enough and long enough, we will die. The shock of the initial splash in very cold water may be enough to kill some people. Chronic hypothermia may develop from the effects of spray, fatigue and wind chill.
- b. Some persons may appear to be on drugs or intoxicated. Slurred speech is also an indication of hypothermia. Trembling and shivering may be expected but are not always present. In fact, when shivering stops, hypothermia has advanced beyond the initial stages. In all cases, emphasis should be placed upon keeping the person warm and getting the victim to the hospital promptly even if the victim appears to be fully recovered.

9. Near-Drowning.

- a. Victims who inhale water or who are found floating face-down in the water are suffering from near-drowning. They should not be considered dead since many of those people may be resuscitated if they are given CPR promptly.
- b. Medical researchers have only recently discovered the phenomena of the "mammalian diving reflex". A person, particularly a child, immersed in cold water, even under ice, may still be alive due to a tiny trickle of oxygen being delivered to the brain. There is nearly complete constriction of peripheral blood vessels. Respiration and circulation almost stop. People have been successfully revived without serious after effects after being underwater as long as an hour or more. Even though all six signs of death may be present in the hypothermia victim, treatment should continue until the victim has been rewarmed and then pronounced dead by a physician.

10. Sunburn.

- a. Bright, sunny search conditions are highly preferred over cold, rainy conditions. But too much of a good thing can be harmful. One problem with continuous exposure to the sun is sunburn: redness, swelling and blistering of the skin. Other effects of over-exposure to the sun are fever, gastrointestinal symptoms, malaise and pigment changes. The skin may suffer from premature aging. Excessive exposure increases the chance of skin cancer.
- b. Crew members at exposed steering stations must realize that the sun is working on them all the time. Stay in the shade when you can. Sometimes, just getting out of direct sunlight is not enough since sun may be just as harmful when reflected by sand and water. Use a sun screen lotion with a high sun block number. Wear protective clothing.
- c. Most sunburns don't fully appear until after the victim has been out of the sun for several hours. Treatment consists of application of cool, wet towels and a good skin emollient to the affected area. Several good sprays give fast but short-lived relief.

11. Dehydration,

- a. An adequate fluid intake is essential for top efficiency while on patrol and to prevent heatrelated illness. Fluids are lost from the body in several ways. The most obvious loss is excretion of urine. Volume ranges from one to two liters per day. Less obvious losses of body fluids occur through a combination of perspiration from the skin and respiration through the lungs. These amount to about one liter a day in temperate climates. As a result, an average, healthy adult requires two or three liters of water a day to replace these losses. In extremely warm weather, the quantities are significantly increased with losses being as much as two to four liters a day through the lungs alone.
- b. Salt (sodium chloride) and other chemicals, including potassium and bicarbonates are vital parts of the body fluid and are known as electrolytes. Just as important as water, a balance of electrolytes between intake and loss must be maintained. The use of salt tablets, unless prescribed by a physician, is discouraged. Medical studies have indicated that an adequate electrolyte level is easily maintained through adherence to normal dietary practices and that the use of salt tablets does not improve well-being regardless of the amount of perspiration or salt/electrolyte loss. In some cases it may actually be harmful.
- c. These water and electrolyte requirements are for a normal, healthy adult. When they are not satisfied, the body experiences dehydration. At first, there is thirst and general discomfort followed by an inclination toward slower movements and a loss of appetite. As more water is lost, the individual becomes sleepy, experiences a rise in temperature, and by the time the body has lost five percent (5%) of body weight in fluids, becomes nauseated. By the time six to ten percent (6-10%) of the body weight is lost, symptoms increase in the following order:
 - (1) Dizziness
 - (2) Headache
 - (3) Difficulty in breathing
 - (4) Tingling in the arms and legs
 - (5) Dry mouth
 - (6) Body turning bluish
 - (7) Speech indistinct
 - (8) Inability to walk
- d If dizziness, headache, stumbling or other signs of weakness, undue fatigue, stomach upset, or changes of sweating from profuse to almost none occur, the crew member should immediately be removed from further exposure and promptly given rest, first aid, and medical attention. First-aid measures include stopping physical activity, moving the subject to a cool, shady location, loosening clothing and removing equipment.
- e. Drinking suitable fluids is the best way and easiest method for replacing fluid loss, thereby precluding any need to treat for dehydration. Almost all fluids are suitable including

water, fruit juices, soft drinks, similar beverages and soups. Since water by itself is not an electrolyte, fruit juices, soups and soft drinks which are electrolytes should be made available. Plenty of fluids should be swallowed throughout the day, especially in warm, dry climates. However, liquids should not be force-fed until it is certain that the affected person is truly dehydrated. Hyperhydration can further harm a heat stroke patient (see heat stroke below).

- 12. Heat Rash.
 - a. Heat rash (miliaria ruba) is prevalent among populations living in hot climates or working in hot spaces ashore or aboard ships. It interferes with sleep, thereby decreasing efficiency. It also causes increased cumulative fatigue, thus predisposing the individual to more serious heat disorders. Heat rash impairs sweating and decreases evaporative cooling of the skin. Heat rash hastens the onset of heat stroke.
 - b. Auxiliary coxswains must be aware of the negative effects of heat rash and must be alert for the symptoms when operating in a warm environment. If heat rash occurs, positive action must be taken to prevent the onset of more serious disorders.
- 13. Heat Cramps.
 - a. These painful contractions are caused by a salt depletion in the victim. The legs will be drawn up and excessive sweating will occur. The victim may grimace and cry out in pain. Cramped muscles should not be treated with heat packs. They will only worsen the condition.
 - b. Heat cramps may occur as an isolated syndrome with normal body temperature or in conjunction with heat exhaustion. Heat cramps may be localized or generalized with involvement of recently stressed muscles, particularly in those of the extremities and abdomen. Muscular soreness normally felt after heat cramps must be differentiated from that occurring from muscle injury. In contrast with muscle soreness resulting from heat cramps which come one or two days later, muscle injury symptoms are dark amber urine 24 to 48 hours after the muscle injury, persistent tenderness localized over a muscle group whether the muscle is used or at rest, and muscle soreness of much greater severity than that with heat cramps. Death of muscle tissue may occur in these cases.
- 14. Heat Exhaustion.
 - a. Heat exhaustion is more complex than heat cramps. Heat exhaustion is characterized by a loss of too much water through perspiration. When suffering from heat exhaustion, the victim collapses and is sweating. The victim has pale skin, a pounding heart, nausea, a headache and is restless. Move the victim to a cool place and treat for shock. Keep the victim lying down and give large amounts of water. You may offer stimulants such a coffee or tea.

- b. If the patient is suspected of having incurred heat exhaustion and is conscious, sips of cool water should be administered continuously after the casualty has been removed to a cool, shady location. Clothing should be loosened and equipment removed. Electrolytes should not be administered until laboratory analyses of blood and urine specimens clearly indicate that deficiencies exist. This procedure applies to both heat exhaustion and heat stroke patients.
- c. Individuals suffering from heat exhaustion or heat stroke should be handled as litter cases. They should be given maximum assistance during movement if use of a litter is impossible. It is essential that, following first aid, the patient immediately be transported to a location where professional medical care can be provided.
- 15. Heat Stroke.
 - a. Physical activity in the bright sun or exercising in a hot environment, such as an engine compartment, can bring on heat stroke or "sunstroke". Heat stroke is a major medical emergency involving a complete breakdown of the body's sweating and heat regulatory mechanisms. The onset is very rapid. The major symptoms in heat stroke are:
 - (1) The person stops sweating, the skin is red, hot and dry. Characteristic body temperature is above 105 degrees.
 - (2) The victim complains of a headache
 - (3) The pulse is strong and rapid
 - (4) The patient becomes confused, uncoordinated, delirious or unconscious
 - (5) Brain damage occurs as time passes
 - b. Heat stroke constitutes the most serious of all heat disorders and is an immediate threat to life. Regardless of the type of operation or assigned mission, ALL INCIDENTS OF HEAT STROKE MUST BE CONSIDERED AS MEDICAL EMERGENCIES. A high mortality rate is associated with heat strokes. Heat exhaustion may be regarded as the result of overloaded heat balance mechanisms that are still functioning, while for heat stroke, the victim's thermo-regulatory mechanisms are not functioning and the main avenue of heat loss, evaporation of sweat, is blocked.
 - c. Treatment. Remove the victims clothing. Lay the victim down with his head and shoulders slightly elevated. Sponge him with ice or ice water, if available, otherwise with cold water. Fan the person with anything available, a shirt will do. SEEK MEDICAL AID WHILE THESE PROCEDURES ARE BEING CARRIED OUT.
- 16. Susceptibility to Heat Problems
 - a. Personnel who are not accustomed to strenuous physical activity in a cool environment, less strenuous physical activity under conditions of high temperatures or above normal work rates in the presence of high humidity are particularly susceptible to heat injuries. Excess body weight contributes to this susceptibility.

- b. Impermeable clothing greatly increases an individual's susceptibility to heat exhaustion or heat stroke. The clothing acts as a barrier that prevents evaporative cooling. Many synthetic fabrics do not absorb and disperse sweat and thus do not provide optimum heat loss by evaporation.
- c. Febrile (feverish) illnesses increase the chance of rapid heat build-up within the body. The presence of fever prior to heat stress exposure reduces the allowable exposure time.
- d. Cumulative fatigue may develop slowly and must be recognized as a significant factor that increases susceptibility to heat exhaustion or heat stroke.
- e. A history of prior heat illness increases a person's susceptibility to subsequent heat problems. Such illnesses tend to be more severe with each incident.
- 17. Preventive Measures.
 - a. The heavy meal of the day should be in the evening rather than at noon, followed by a rest period or light duty. The exception is when activities involving considerable physical exertion are scheduled following the evening meal. One hour of rest or light duty following all meals is beneficial in reducing symptoms of heat disorders.
 - b. Clothing and equipment should be worn in a manner which permits free circulation of air between the uniform and the body surface. Wearing open shirt collars, shirt cuffs, and trouser bottoms will aid in ventilation. However, this practice may not be permitted where loose fitting or open style clothing presents a safety hazard (e.g., around machinery). In full sunlight or with high radiant heat sources in machinery spaces, keeping the body covered with permeable clothing aids in reducing the radiant heat load upon the body. When heat exposures do not include much radiant heat, removal of outer clothing assists in reducing body temperature. Impermeable clothing must be avoided. If such clothing is needed, precautions must be taken to avoid the rapid build-up of body heat. Heat illnesses may be manifested in minutes if impermeable clothing is worn.
 - c. Water and salt are required only in quantities sufficient to prevent dehydration and electrolyte imbalances resulting from losses through sweat, urine, etc. The belief that individuals can be trained or conditioned to a decreased water intake is incorrect. When sweating profusely, a person will require one pint (0.5 liters) or more of water per hour. The water should be taken in small quantities at frequent intervals (such as 20 to 30 minutes). The optimum temperature of the water is 50 to 70 degrees F.
 - d. The average diet today provides 15-20 grams of salt daily. Therefore, supplementary salt is needed only in extreme situations. In fact, salt tablets should be avoided. Dietary and supplemental salt must be carefully controlled in older individuals as retention of salt in the body increases with age.

C. Existing Conditions.

1. In addition to the conditions listed above, coxswains need to be aware of the existing physical conditions of all crew members and of any illness or physical impairment that may affect the well-being or performance of crew members. Auxiliary coxswains must be continuously alert for any onset of illness, such as insulin shock, a heart condition or the like that a crew member may develop during the patrol.

D. STUDY QUESTIONS

- 5-1. When a crew member starts to show symptoms of seasickness while on patrol, the member should be
 - a. advised to remain in the cabin
 - b. advised to remain in the head
 - c. assigned as the navigator
 - d. assigned a fresh air task
- 5-2. Use of the anti-motion medications ephedrine and promethazine or trans-dermal scopolamine should start
 - a. as soon as the illness is well developed
 - b. as soon as the illness is detected
 - c. two hours prior to exposure
 - d. at least 24 hours before exposure
- 5-3. The standard USCG seasickness medication, promethazine hydrochloride and ephedrine sulfate in combination, may be taken if no alcohol has been consumed in the previous
 - a. 15 hours
 - b. 12 hours
 - c. 8 hours
 - d. 4 hours

5-4. In cold weather, you may help prevent fatigue by _____.

- a. removing clothing so that you feel cold
- b. dressing to keep warm
- c. arranging to have the wind blow in your face
- d. attempting to ignore the symptoms of fatigue

5-5. An action that will help rejuvenate fatigued crew members is to

- b. have them remain silent while continuing their assignments
- c. provide them cups of hot soup
- d. explain that it is important that they remain alert

a. have them exercise vigorously

5-6 When fatigue begins to impair the efficiency of your crew, your best action is

- a. ask the cognizant Coast Guard station for a relief
- b. suspend the patrol until the crew is rested
- c. advise the cognizant Coast Guard station that you are terminating the patrol
- d. reduce the number of crew positions that are manned

5-7. One of the most lethal of fumes encountered during boating is ______.

- a. nitrogen
- b. di-hydrogen oxide
- c. carbon monoxide
- d. carbon dioxide
- 5-8. If background noise is sufficiently high that it prevents conversation at _____, ear muffs or other ear protection should be used.
 - a. 3 feet or less
 - b. 2 feet or more
 - c. 10 feet or less
 - d. 8 feet or less
- 5-9. Which statement is not correct?
 - a. Alcohol may cause the user to have a slower reaction time
 - b. Prescription drugs are not likely to affect performance
 - c. Hypothermia can manifest the same symptoms as intoxication
 - d. Barbiturates and tranquilizers can cause confusion
- 5-10. Symptoms of frostbite are ______ or ______ spots on the skin and initial pain which disappears as all ______ is lost.
- 5-11. Treatment for frostbite includes removal of ______ and then offering a
- 5-12. A person who has been in 50 degree Fahrenheit water for 45 minutes is most likely to suffer from ______-.
 - a. frostbite
 - b. seasickness
 - c. hypothermia
 - d. near-drowning

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5-13. A person who is found floating face-down in the water and who has no pulse should be ______ or the person is ______.

5-14. Treatment for sunburn includes ______.

- a. applying cool, wet towels
- b. covering the area with butter
- c. keeping the victim under a blanket
- d. offering stimulants such as tea or coffee
- 5-15. To replace water losses, a normal, healthy adult requires at least _____ liter(s) of water each day.
 - a. one half
 - b. one or two
 - c. two or three
 - d. five

5-16. First aid for a person suffering from dehydration includes all of the following except

- a. removing to a cool, shady location
- b. ceasing all physical activity
- c. loosening the victims clothing
- d. covering with a blanket

5-17. Cramped muscles ______ be treated with heat packs.

- a. should
- b. should not

5-18. Heat-related illnesses, in increasing order of seriousness, are ______.

- a. heat rash, heat cramps, heat stroke, heat exhaustion
- b. heat rash, heat exhaustion, heat cramps, heat stroke
- c. heat cramps, heat rash, heat exhaustion, heat stroke
- d. heat rash, heat cramps, heat exhaustion, heat stroke

5-19. Preventive measures for heat problems include ______.

- a. having the heavy meal of the day at noon
- b. conditioning yourself to require less water
- c. taking salt tablets regularly
- d. wearing loose clothing

- 5-20. As a preventive measure for heat problems, drinking water should optimally be at a temperature of ______.
 - a. 35 to 40 degrees F.
 - b. 50 to 70 degrees F.
 - c. 35 to 40 degrees C.
 - d. 50 to 70 degrees C.

