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Homeland Security

United States
Coast Guard

COAST GUARD HELICOPTER RESCUE SWIMMER MANUAL

COMDTINST M3710.4C
22 April 2011

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

Commandant
United States Coast Guard

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COMMANDANT INSTRUCTION M3710.4C

Subj: COAST GUARD HELICOPTER RESCUE SWIMMER MANUAL

1. PURPOSE. This Manual promulgates a revision of the Coast Guard Helicopter Rescue Swimmer Manual. It prescribes policy, standards, instructions and capabilities pertinent to all phases of Coast Guard Rescue Swimmer operations and is intended for use by operational commanders, unit commanding officers, and aircrews tasked with rescue swimmer operations, as well as customers of Coast Guard aviation.

2. ACTIONS. All Coast Guard unit commanders, commanding officers, officers-in-charge, deputy/assistant commandants, and chiefs of headquarters staff elements shall ensure compliance with the provisions of this Manual. Internet release is authorized.

3. DIRECTIVES AFFECTED. The Coast Guard Helicopter Rescue Swimmer Manual, COMDTINST M3710.4B is cancelled.

4. MAJOR CHANGES. Major changes to the manual are summarized below, however, due to the significant revision of this manual, a careful review is recommended: rescue swimmer (R/S) training heart rate, R/S training "Survivor" syllabus, R/S flight syllabus, and authorized equipment list removed; Chapter1- added warnings, cautions, and notes; added hoist static discharge cable (HSD); removed ability of R/S to deploy if does not pass initial NREMT test; outlined requirements of R/S in detail, including dual rotary wing units, STAN Team members and survivors; Chapter 2- added warnings, cautions, and notes; Rescue Strop is referred as Rescue Sling; Trail line deployments of R/S updated with detailed descriptions and photos; more detailed direct deployments with physical grip; updated ice deployments; streamlined parachute and disentanglement procedures; swim facility requirements; added requirement for R/S to be evaluated once every four years by ATC STAN member; expanded EMT continuing education options, updated training requirements; appendix's updated.

5. REQUESTS FOR CHANGES. Units and individuals may recommend changes by writing via the chain of command, utilizing CG-22 form to: Commandant (CG-711), U. S. Coast Guard, 2100 2nd St SW Stop 7359, Washington, DC 20593-7359.

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6. ENVIRONMENTAL ASPECT AND IMPACT CONSIDERATIONS. Environmental considerations were examined in the development of this manual and have been determined not to be applicable.

7. FORMS/REPORTS. The forms referenced in this manual are available in USCG Electronic Forms or on the Standard Workstation or on the Internet: http://www.uscg.mil/forms/; CGPortal at https://cgportal.uscg.mil/delivery/Satellite/uscg/References; or Intranet: http://cgweb.comdt.uscg.mil/CGForms.

BRIAN SALERNO /s/
Vice Admiral, U. S. Coast Guard
Deputy Commandant for Operations

RECORD OF CHANGES

CHANGE NUMBER	DATE OF CHANGE	DATE ENTERED	BY WHOM ENTERED

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CHAPTER 1. POLICIES AND REQUIREMENTS.

A. HELICOPTER RESCUE SWIMMER POLICIES.

1. Mission of the Coast Guard Helicopter Rescue Swimmer Program. The primary mission of the helicopter rescue swimmer, hereafter referred to as rescue swimmer (RS), is to provide Rotary Wing (RW) stations with the capability of deploying a properly trained and conditioned person to assist persons in distress in the maritime environment. The stated primary mission should not be construed as a restriction on other operational requirements, when determined appropriate by the operational commander, for deployment of the RS.
2. Helicopter Rescue Swimmer Capabilities. The RS must have the flexibility, strength, endurance, and equipment to function for 30 minutes in heavy seas, and the skills to provide basic pre-hospital life support for the rescued individual(s). RS Emergency Medical Technician (EMT) skills may also be used during other Search and Rescue (SAR) cases in which swimming ability is not required.
3. Concept of Operations.
   a. Conditions on scene will determine the need to use the RS. The crew shall consider the following:
      (1) Sea state
      (2) Water/air temperature
      (3) Predatory marine life
      (4) Other environmental factors
      (5) Ability of the RS to safely complete the mission
   b. The decision to deploy the RS is initiated by the pilot in command, but the RS has the authority to decline deployment if the RS assesses the situation to be beyond their capability.
4. Helicopter Rescue Swimmer Operational Procedures and Equipment. The following manuals are used for RS operational procedures and equipment references:
   a. The helicopter flight manuals contain the pilot and flight mechanic (FM) normal and emergency procedures for RS operations.
   b. This manual contains RS procedures, training and physical standards, and lists the authorized equipment for RS operations.
   c. The Aviation Life Support Systems Manual, COMDTINST M13520.1 (series), provides authorized RS equipment descriptions and maintenance procedures.
5. Helicopter Rescue Swimmer Operational Deployment Restriction. Helicopter rescue swimmers are not permitted to act as cutter swimmers, nor are cutter swimmers permitted to deploy from helicopters.
6. Underwater Rescue Restrictions. Self-Contained Underwater Breathing Apparatus (SCUBA) procedures or equipment shall be neither used nor

maintained by the RS. An RS shall not swim under parachutes or layers of ice. An RS shall not swim into or under a capsized or submerged vessel, aircraft, or vehicle. If deployed next to a capsized object, the RS is permitted to search visually and reach inside while maintaining a grasp on a reference point on the exterior of the object. If the RS determines that a person is trapped under or in the object and cannot be reached from the reference point, the pilot in command must request alternate assistance through the search and rescue mission coordinator or operations center.

7. Procedures or Equipment Evaluation Restriction. Units are not permitted to evaluate new procedures or equipment without the written authorization of Commandant (CG-711).

8. Special Duty Assignment Pay (SDAP).

   a. Operational rescue swimmers are authorized Special Duty Assignment Pay (SDAP), as provided in Special Duty Assignment Pay, COMDTINST 1430.1 (series). To be eligible, an RS must be serving at a helicopter unit tasked to maintain helicopter rescue swimmers and fulfilling all appropriate operational and physical training requirements set forth in this manual.

   b. Any RS, whose operational training requirements are not met, is not permitted to function as a helicopter rescue swimmer and may forfeit SDAP. An RS that has not maintained their physical fitness due to leave, TAD, night check, medical grounding, etc., for 30 days or more must pass the monthly physical training (PT) screen exam prior to performing the duties of an operational RS.

NOTE

Exceptions to this rule may be granted on a case-by-case basis upon authorization from CG-711.

   c. The unit commanding officer must certify in writing to CG-711, either by letter, message, or electronic mail, that the member meets all eligibility requirements. This certification is due annually in January. An example of this message is located in Appendix B.

9. Rescue Swimmer Deployment Message. A unit shall send a message after a dramatic or noteworthy case when practical lessons can be learned or problems with rescue swimmer equipment or procedures arise. The message format and a sample are shown in Appendix A.

B. DEFINITIONS.

1. Warnings, Cautions, and Notes. Warnings, cautions, and notes appear in this order before and/or after the step they are applicable to. The following guidelines apply to warnings, cautions, and notes:

WARNING

AN OPERATING PROCEDURE, TECHNIQUE, OR PRACTICE THAT, IF NOT CORRECTLY FOLLOWED, COULD RESULT IN INJURY OR DEATH. WARNINGS ARE ALWAYS DISPLAYED IN BOLD UPPERCASE LETTERS.

CAUTION

AN OPERATING PROCEDURE, TECHNIQUE, OR PRACTICE THAT, IF NOT CORRECTLY FOLLOWED, COULD RESULT IN DAMAGE TO OR DESTRUCTION OF EQUIPMENT. CAUTIONS ARE ALWAYS DISPLAYED IN UPPERCASE LETTERS.

NOTE

An operating procedure, technique, or condition that requires emphasis. Notes are written in sentence case.

2. Wording. These words, followed by their intended meanings, are used in this manual:

   a. "Shall" has been used only when application of a procedure is mandatory.

   b. "Should" has been used only when application of a procedure is highly recommended.

   c. "May" has been used only when application of a procedure is optional.

   d. "Will" has been used only to indicate futurity and never to indicate any degree of requirement for, or application of, a procedure.

C. HELICOPTER RESCUE SWIMMER EQUIPMENT REQUIREMENTS.

1. Helicopter Rescue Swimmer Equipment for Operational Deployments. The helicopter rescue swimmer should wear appropriate protective clothing during all ground and flight operations. The type and quantity of clothing worn is determined by mission needs. Regardless of the ensemble chosen, the RS should wear an aircrew flight helmet during takeoff and landing and Survival Emergency Air System (SEAS) belt during all overwater flights. The RS shall remove the SEAS belt prior to water deployment. RS clothing is defined as follows:

CAUTION

THE APPROPRIATE FLIGHT OR WATER ENSEMBLE WITH AIRCREW FLIGHT HELMET, VISOR DOWN, SHALL BE WORN BY THE RS WHEN BEING HOISTED TO A VESSEL OR LAND.

NOTE

Due to extreme icing conditions, rescue swimmers being deployed to solid ice are authorized to wear the aircrew flight helmet with visor down or an approved RS protective helmet with goggles IAW the Helicopter Rescue Swimmer Authorized Equipment Process Guide, CGTO PG-85-00-330.

a. Flight Ensemble.

(1) Normal aircrew protective clothing includes the following:

(a) Flight suit or dry suit

(b) Flight gloves

(c) Flight boots

(d) Aircrew survival vest/RS harness (with SEAS bottle while flying over water)

(e) Aircrew flight helmet

(2) The flight ensemble should be worn on all flights in which a water deployment is not likely to occur within the first 30 minutes.

NOTE

For a full description of RS deployment ensembles, refer to Appendix C .

b. Water Deployment Ensemble.

(1) Water ensembles include the following:

(a) Wet suit or dry suit

(b) RS harness

(c) Fins and booties/rock boots/water boots

(d) Mask and snorkel

NOTE

For a full description of RS deployment ensembles, refer to Appendix C.

NOTE

Water deployment ensemble chosen will be at the discretion of the RS based on air and water temperature variables. A dry suit is required to be worn if water temperature is 55 °F or below.

(2) The RS shall wear a wet/dry suit hood or surf-cap with Safety of Life at Sea (SOLAS) grade retroreflective tape in conjunction with the dry suit whenever the water temperature is 55 °F or below, and during all night operations regardless of water/air temperature.

(3) The RS protective helmet with SOLAS grade retroreflective tape shall be worn during operations conducted in surf, cave, rock, white water areas, or areas of debris. The RS protective helmet may be worn in conjunction with the wet/dry suit hood, surf-cap, or by itself if water temperature is above 55 °F.

(4) Wet suit ensembles are not specifically designed for flame resistance and can cause heat stress to the RS, thus the flight ensemble shall be worn on all flights in which a water deployment is not likely to occur within the first 30 minutes. Aircraft Commanders must consider the risks of performance degradation and lack of flame protection versus practicality when permitting the RS to wear a water ensemble for longer than 30 minutes.

c. Vertical Surface/Land Deployment Ensemble. Vertical surface/land deployment ensembles include the following:

(1) Flight suit or dry suit

(2) Flight gloves or protective gloves

(3) Flight boots/cliff boots

(4) RS harness

(5) Aircrew flight helmet (with visor down and/or approved goggles/face mask)

(6) Yellow arm bands when not in dry suit (vertical surface)

NOTE

For added protection, additional vertical surface safety equipment, as outlined in CGTO PG-85-00-330, may be worn in conjunction with the vertical surface/land deployment ensemble.

NOTE

For a full description of RS deployment ensembles, refer to Appendix C.

2. Hoist Static Discharge (HSD) Cable Procedures.

a. The HSD cable is a 10-foot wire cable with a 245-lb breaking strength that is attached to the locking hoist hook prior to delivery and/or recovery of the RS. Using the clip provided, the HSD is attached directly to the equipment attachment ring (small eye) on the locking hoist hook and extends below the RS. The HSD helps discharge static electricity by grounding the aircraft through the hoist cable prior to the RS coming into contact with the surface.

b. During helicopter hoist evolutions, static electricity discharge is a common phenomenon between the surface (water, ground, or vessel) and the hoisting device. The potential for and the degree of static electricity discharge is a result of an electric potential difference (electric field), measured in kilovolts per meter (kv/m), which can exist between the surface and a helicopter above it.

c. There are environmental conditions that can cause the development of substantial electrical fields. These conditions include: widespread, low, thick ceilings, electrical storms forming nearby, and calm sea states. Where these electrical fields meet the surface of the water or ground is referred to as the boundary layer. Over open water, this boundary layer tends to be more conducive to static discharge release than over land. In fair weather or higher sea states, these electric fields are significantly less due to nonexistent charges or continual disturbance of the water surface in the boundary layer.

d. There is no exact methodology of predicting when substantial electrical fields exist, only more probable conditions as described above. The HSD shall be used for personnel deployments (rescue swimmer, vertical delivery of boarding team members, etc.) unless determined that conditions exist that could potentially cause the HSD to become a hazard to the deployed member (e.g., heavy sea state, snag hazards, expediate emergency recovery, significant vessel rigging, wrapping hazard during direct deployment, etc.).

D. HELICOPTER RESCUE SWIMMER TRAINING REQUIREMENTS.

1. Helicopter Rescue Swimmer Training Requirements Overview. The Coast Guard Air Operations Manual, COMDTINST M3710.1 (series), contains the pilot, FM, and RS initial and recurrent flight training requirements for RS operations. The physical fitness, swimming, and EMT training requirements for an RS are contained in Chapter 3.

2. EMT Certification.

   a. The RS should maintain National Registry EMT certification in accordance with (IAW) the National Registry EMT guidelines. Documentation verifying the individual has passed the initial National Registry EMT certification exam is required prior to the RS deploying as an operational RS.

   b. Air Station Commanding Officers are responsible for obtaining National Registry recertification training for their rescue swimmers. An RS whose EMT National Registry certification has expired is not permitted to deploy as an operational RS. Units desiring to maintain higher EMT levels of training should obtain authorization from CG-711.

3. EMT Certification Failure Procedures. If an RS fails the initial National Registry EMT certification exam or fails to meet the National Registry requirements for EMT recertification, they are not permitted to deploy as an operational RS. The individual must reapply to take the certification test within 30 days of notification of failure of the first test. If the RS fails the second

test they must again reapply to take the certification test within 30 days of notification of failure. If the individual fails the third test, they must again attend the initial National Registry EMT certification training and successfully pass the National Registry certification test before they can deploy as an operational RS.

4. Helicopter Rescue Swimmer Training Requirements.

   a. To be designated a helicopter rescue swimmer an individual shall:

      (1) Complete a military helicopter rescue swimmer school

      (2) Complete the Basic Aircrew (BA) Syllabus for type of aircraft to include required BA flights

      (3) Complete both the RS Ground and Flight portion of the syllabus

      (4) Complete the Initial Rescue Swimmer Standard PT Test (This will be completed by each new graduate of the Aviation Survival Technician School upon reporting to their first duty station at which the member will be required to complete the RS Syllabus.)

NOTE

Exceptions to this rule may be granted on a case-by-case basis upon authorization from the Rescue Swimmer Program Manager.

      (5) Complete certification as a Coast Guard NREMT-B

   b. RS designation in any type helicopter shall remain current for 15 months after the swimmers last standardization check regardless of the helicopter type assigned at the rescue swimmer's present unit.

   c. Rescue swimmers stationed at a dual rotor wing unit are only required to be qualified in one airframe. An RS may deploy from the other airframe in which a qualification is not held during instances of mission necessity (training flights, SAR demonstrations, etc.). The member may continue to deploy from either airframe until transfer to a single aircraft unit. In instances of urgent operational necessity, rescue swimmers from a single and/or dual rotor wing unit may deploy from either airframe after receiving a thorough passenger brief.

   d. Members attached to the Rescue Swimmer Stan Team shall maintain a qualification in either the H-60 or H-65 airframe as stated in the preceding paragraphs. The RS Stan Team member must complete a full ATC Rescue Swimmer Transition Syllabus before conducting standardization checks at a unit that does not maintain his or her primary airframe.

5. H-65 and H-60 Differences Summarization Table. Table 1-1 lists summarized differences between the Coast Guard H-65 and H-60 helicopters that should be noted.

Table 1-1.

Airframe	Differences
H-65	a. The handhold at the main cabin door is located on the boom stanchion b. Has the hoist assembly attached to a movable boom **WARNING** **DO NOT USE THE PILOT SEAT AS A HANDHOLD DURING EXIT OR ENTRY WHILE ON THE HOIST CABLE.** c. Limited cabin space requires careful survivor and basket management d. While sitting in the doorway, the RS should note the numerous sharp edges on the cabin door track, as well as a sharpedge near the in-flight refueling cover
H-60	a. When seated in the door for a free fall deployment, ensure that you allow adequate clearance between landing gear and auxiliary fuel tank (if installed) b. Has a fixed hoist assembly c. Handholds are located at each side of main cabin door d. Rotor wash is disabling to survivors who do not have adequate protection (i.e., mask and snorkel) e. Limited cabin space requires careful survivor and basket management

6. Helicopter Rescue Swimmer Training Survivor Qualification. Prior to flight, the candidate must complete the Helicopter Rescue Swimmer Training Survivor Syllabus with a qualified RS and receive a thorough passenger brief in helicopter type. This syllabus is only valid for 12 months from date of completion.

CAUTION

ONLY GRADUATES OF A FORMAL MILITARY HELICOPTER RESCUE SWIMMER TRAINING PROGRAM ARE PERMITTED TO PERFORM FREE FALL DEPLOYMENTS. EXCEPTIONS TO THIS RULE MAY BE GRANTED ON A CASE-BY-CASE BASIS UPON AUTHORIZATION FROM CG-711.

NOTE

Only active duty military personnel are authorized to act as survivors on RS training flights.

7. Helicopter Rescue Swimmer Qualification Syllabi. The following RS syllabi can be found on the CG Portal website, http://cgportal.uscg.mil:

   a. Helicopter Rescue Swimmer Ground Syllabus

   b. Helicopter Rescue Swimmer Flight Syllabus

   c. Helicopter Rescue Swimmer Instructor Syllabus

   d. Helicopter Rescue Swimmer Transition Syllabus

   e. Helicopter Rescue Swimmer Vertical Surface Syllabus

   f. Helicopter Rescue Swimmer Training Survivor Syllabus

CHAPTER 2. HELICOPTER RESCUE SWIMMER PROCEDURES.

A. HELICOPTER RESCUE SWIMMER PROCEDURES.

1. Helicopter Rescue Swimmer Procedures Introduction. This chapter establishes standard operating procedures for Coast Guard helicopter rescue swimmers. These procedures shall be used when the pilot in command has elected to use the RS and the RS has assessed that the task is within their capabilities.

WARNING
CAUTION MUST BE EXERCISED WHEN RESPONDING TO FIRES INVOLVING AIRCRAFT OR VESSELS MADE OF COMPOSITES. INHALATION OF COMPOSITE FIBERS MAY BE HARMFUL TO PERSONNEL. THE RS SHOULD CONSIDER USE OF A RESPIRATOR WHEN APPROPRIATE.

2. Helicopter Rescue Swimmer Equipment Inspection. Prior to every RS training flight, the RS shall inspect and adjust all items in their equipment bag. At the beginning of each duty day, the RS shall inspect their own equipment and the unit's supplemental RS SAR and EMT equipment.

3. Helicopter Rescue Swimmer Hand Signals. Communication between the aircrew is vital to the success of a rescue mission. RS hand signals were developed to provide a direct line of communication between the RS and helicopter when deployed. The helicopter RS hand signals are shown in Appendix D.

B. HELICOPTER RESCUE SWIMMER DEPLOYMENTS AND RECOVERY PROCEDURES.

1. Free Fall Deployment Procedures. Refer to Table 2-1.

WARNING
A FREE FALL DEPLOYMENT IS USED ONLY IN DAYLIGHT. WHEN CONDUCTING A FREE FALL DEPLOYMENT, A MINIMUM WATER DEPTH OF 12 FEET IS REQUIRED.

Table 2-1.

Step	Action
1.	When directed to come forward, the RS assumes a sitting position in the doorway with the gunner's belt attached around the chest and mask positioned on the forehead.
2.	RS releases the gunner's belt after FM taps the RS once on the chest.
3.	RS gives THUMBS UP signal to FM once the RS has checked their equipment and is ready for deployment.

Table 2-1. Continued

Step	Action
4.	After FM taps RS three times on the shoulder, the RS checks the altitude and ensures area is clear of debris and then deploys from helicopter.
	CAUTION TO PREVENT INJURY, THE RS SHOULD MAINTAIN A PARTIALLY SEATED POSITION WITH KNEES SLIGHTLY BENT, ALLOWING THE HEELS TO IMPACT THE WATER FIRST, FOLLOWED BY THE BUTTOCKS.
5.	Immediately upon clearing helicopter, the RS assumes a partially seated position with knees slightly bent, fins pointing up, and places one hand on face mask and the other arm across the chest.
6.	After water entry, RS approaches the surface with mask clear.
7.	Upon surfacing, the RS signals I AM ALRIGHT.
8.	After giving signals the RS swims toward survivor.

2. Rescue Sling Deployment Procedures. Refer to Table 2-2.

WARNING

THE LOCKING HOIST HOOK SHALL BE IN THE UNLOCKED POSITION DURING THE BARE HOOK RECOVERY OF THE RS. THE LOCKING HOIST HOOK SHALL BE IN THE LOCKED POSITION DURING ALL VERTICAL SURFACE DEPLOYMENTS. THE LOCKING HOIST HOOK SHOULD BE IN THE UNLOCKED POSITION DURING ALL OTHER DEPLOYMENTS AND RECOVERIES.

CAUTION

BASED ON ENVIRONMENTAL ATMOSPHERIC CONDITIONS, USE OF THE HSD CABLE SHOULD BE CONSIDERED PRIOR TO DEPLOYMENT.

NOTE

A rescue sling deployment may be used at night or any time conditions dictate, such as debris or broken ice in water, questionable water depth, or high sea state.

Table 2-2.

Step	Action
1.	When directed to come forward, the RS assumes a sitting position in the doorway with the gunner's belt attached around the chest, mask positioned on forehead, and the rescue sling positioned under the arms of the RS. The locking hoist hook shall be connected directly to the lifting V-rings of the rescue sling, prior to entry into cabin door.
	NOTE Prior to being deployed at night or during low visibility conditions, the RS and the locking hoist hook shall be illuminated by chemical lights.
2.	RS releases the gunner's belt and places mask on face after FM taps the RS once on the chest.
3.	RS gives THUMBS UP signal to FM once the RS has checked their equipment and is ready for deployment.
4.	RS keeps arms crossed over sling while being lowered to the water. The sling safety strap is not used during this deployment.
5.	While being lowered via the rescue sling, the RS should try to maintain visual contact with the survivor. Turning of the locking hoist hook may prevent constant visual contact.
6.	After being lowered to a safe position, the RS slips out of the sling and signals I AM ALRIGHT.
7.	After giving signal, the RS swims toward survivor.

3. Harness Deployment Procedures. Refer to Table 2-3.

WARNING

THE LOCKING HOIST HOOK SHALL BE IN THE UNLOCKED POSITION DURING THE BARE HOOK RECOVERY OF THE RS. THE LOCKING HOIST HOOK SHALL BE IN THE LOCKED POSITION DURING ALL VERTICAL SURFACE DEPLOYMENTS. THE LOCKING HOIST HOOK SHOULD BE IN THE UNLOCKED POSITION DURING ALL OTHER DEPLOYMENTS AND RECOVERIES.

CAUTION

BASED ON ENVIRONMENTAL ATMOSPHERIC CONDITIONS, USE OF THE HSD CABLE SHOULD BE CONSIDERED PRIOR TO DEPLOYMENT.

NOTE

A harness deployment may be used at night or any time conditions dictate, such as debris or broken ice in water, questionable water depth, or minor to heavy sea state.

Table 2-3.

Step	Action
1.	When directed to come forward, the RS assumes a sitting position in the doorway with the gunner's belt attached around the chest and mask positioned on forehead. The locking hoist hook shall be connected directly to the lifting V-ring on the RS harness prior to entry into cabin door.
	NOTE Prior to being deployed at night or during low visibility conditions, the RS and the locking hoist hook shall be illuminated by chemical lights.
2.	RS releases the gunner's belt and places mask on face after FM taps the RS once on the chest.
3.	RS gives THUMBS UP signal to FM once the RS has checked their equipment and is ready for deployment.
4.	To accomplish the load check, the FM will hoist RS clear of deck to allow the RS to check harness for comfort. RS will adjust harness as appropriate and give the FM the THUMBS UP signal when ready to continue hoist.
5.	While being lowered via the harness, the RS should try to maintain visual contact with the survivor. Turning of the locking hoist hook may prevent constant visual contact.
6.	After being lowered to a safe position, the RS disconnects from locking hoist hook and signals I AM ALRIGHT.
7.	After giving signal, the RS swims toward survivor.

4. Helicopter Rescue Swimmer Trail Line Deployment Procedures.

WARNING

THE LOCKING HOIST HOOK SHALL BE IN THE UNLOCKED POSITION DURING THE BARE HOOK RECOVERY OF THE RS. THE LOCKING HOIST HOOK SHALL BE IN THE LOCKED POSITION DURING ALL VERTICAL SURFACE DEPLOYMENTS. THE LOCKING HOIST HOOK SHOULD BE IN THE UNLOCKED POSITION DURING ALL OTHER DEPLOYMENTS AND RECOVERIES.

WARNING

THIS DEPLOYMENT SHALL NOT BE ATTEMPTED WITHOUT THE USE OF THE TRAIL LINE QUICK-RELEASE.

WARNING

DISPOSITION OF THE TRAIL LINE FOLLOWING THE DEPLOYMENT SHOULD BE PREBRIEFED. IF USING THE TRAIL LINE TO RECOVER THE RS, IT SHALL BE DISCONNECTED FROM THE RS PRIOR TO THE RS DISCONNECTING FROM THE LOCKING HOIST HOOK. FAILURE TO DO SO COULD RESULT IN THE RS BEING PULLED OUT OF THE CABIN.

CAUTION

BASED ON ENVIRONMENTAL ATMOSPHERIC CONDITIONS, USE OF THE HSD CABLE SHOULD BE CONSIDERED PRIOR TO DEPLOYMENT.

NOTE

Prior to being deployed at night or during low visibility conditions, the RS and the locking hoist hook shall be illuminated by chemical lights.

a. The trail line deployment of the rescue swimmer was developed as a means of stabilizing the rescue swimmer while being deployed to a vessel, unstable platform, or land. This deployment procedure is not to be used for water deployments and/or recoveries. This procedure may be used with the harness deployment only, in conjunction with the trail line quick-release. The use of the aircrew protective helmet by the swimmer is mandatory. During use of the trail line deployment, the fixed eye of the quick-release is connected to the swimmer's self-locking hook on the RS harness.

WARNING

FAILURE TO MAINTAIN PROPER POSITION MAY RESULT IN AN INADVERTENT DEPLOYMENT OF THE RS TO THE WATER PRIOR TO THE RS REACHING THE HOISTING REFERENCE AND/OR PENDULUM SWING IF THE QUICK-RELEASE IS UTILIZED.

b. Proper aircraft position is critical for ensuring a safe trail line deployment of the RS. Unlike a conventional trail line delivery of a rescue device when the trail line is used to guide the device into or through potential hazards while the aircraft maintains a standoff position, a trail line deployment of the RS will require the aircraft to lower the swimmer to a safe height while moving the aircraft in as necessary to provide the RS with the most vertical position for deployment. The trail line should only be used as a method of stabilizing the RS during descent to the target, not as a method of guiding or pulling the RS through potential hazards. Pilots must minimize lateral separation from the hoisting reference while maintaining proper altitude to ensure the most vertical position for deployment is maintained.

c. Based on sea state, size of vessel, and platform instability, the use of the trail line deployment may not be the best method for affecting the rescue. Vessel pitching, rolling, or other environmental factors may increase the chances of the RS being entangled and precluded the use of this deployment.

5. H-65 Trail Line Deployment of Helicopter Rescue Swimmer Procedures. Refer to Table 2-4.

Table 2-4.

Step	Action	Example
	NOTE To prevent loss, the quick-release should be connected to the RS self-locking hook prior to entry into cabin door.	
1.	When directed to come forward, the RS assumes a sitting position in the doorway with the gunner's belt attached around the chest. Prior to entry into cabin door, the locking hoist hook shall be connected directly to the lifting V-ring on the RS harness. The fixed eye of the quick-release is then attached to the self-locking hook on the RS harness.	
2.	The RS releases the gunner's belt after the FM taps the RS once on the chest.	

Table 2-4. Continued

Step	Action	Example
3.	RS gives THUMBS UP signal to FM once the RS has checked their equipment and is ready for deployment.	
4.	To accomplish the load check, the FM will hoist the RS clear of the deck to allow the RS to check harness for comfort. RS will adjust harness as appropriate and give the FM the THUMBS UP signal when ready to continue hoist.	

Table 2-4. Continued

Step	Action	Example
5.	FM will boom RS completely out and begin the delivery of the trail line to the vessel, unstable platform, or land.	
	NOTE The FM may hand the weak link to the RS prior to delivering the trail line.	
6.	Once the trail line is paid out, the weak link end of the trail line is connected to the gated eye of the trail line quick-release. This action may be performed by the RS or FM.	

Table 2-4. Continued

Step	Action	Example
7.	The hoist is then conducted with the RS having the ability to disconnect at any time during the evolution.	

6. H-60 Trail Line Deployment of Helicopter Rescue Swimmer Procedures. Refer to Table 2-5.

Table 2-5.

Step	Action	Example
	NOTE To prevent loss, the quick-release should be connected to the RS self-locking hook prior to entry into cabin door.	
1.	When directed to come forward, the RS assumes a sitting position in the doorway with the gunner's belt attached around the chest. Prior to entry into cabin door, the locking hoist hook shall be connected directly to the lifting V-ring on the RS harness. The fixed eye of the quick-release is then attached to the self-locking hook on the RS harness.	
2.	The RS releases the gunner's belt after the FM taps the RS once on the chest.	

Table 2-5. Continued

Step	Action	Example
3.	RS gives THUMBS UP signal to FM once the RS has checked their equipment and is ready for deployment.	
4.	With the RS seated in the cabin door, the FM will begin the delivery of the trail line to the vessel, unstable platform, or land.	
	NOTE The FM may hand the weak link to the RS prior to delivering the trail line.	

Table 2-5. Continued

Step	Action	Example
5.	Once the trail line is paid out, the weak link end of the trail line is connected to the gated eye of the trail line quick-release. This action may be performed by the RS or FM.	
6.	To accomplish the load check, the FM will hoist the RS clear of the deck to allow the RS to check the harness for comfort. RS will adjust harness as appropriate and give the FM the THUMBS UP signal when ready to continue hoist.	

Table 2-5. Continued

Step	Action	Example
7.	The hoist is then conducted with the RS having the ability to disconnect at any time during the evolution.	

7. Direct Deployment Water Recovery Procedures. Refer to Table 2-6.

WARNING

THE LOCKING HOIST HOOK SHALL BE IN THE UNLOCKED POSITION DURING THE BARE HOOK RECOVERY OF THE RS. THE LOCKING HOIST HOOK SHALL BE IN THE LOCKED POSITION DURING ALL VERTICAL SURFACE DEPLOYMENTS. THE LOCKING HOIST HOOK SHOULD BE IN THE UNLOCKED POSITION DURING ALL OTHER DEPLOYMENTS AND RECOVERIES.

WARNING

IF THE EVALUATION OF THE SURVIVOR'S PHYSICAL CONDITION BY THE RS DICTATES THAT THE QUICK STROP SHOULD NOT OR CANNOT BE USED TO RECOVER THE SURVIVOR, THE RS MAY HAVE TO DISCONNECT FROM THE LOCKING HOIST HOOK, ENABLING THE PROPER RESCUE DEVICE TO BE DELIVERED. DISCONNECTING FROM THE LOCKING HOIST HOOK SHOULD ONLY BE COMPLETED IF CONDITIONS WARRANT.

WARNING

IN THE EVENT THE SURVIVOR GRABS THE RS, PREVENTING THE APPLICATION OF THE QUICK STROP, THE RS SHALL UTILIZE THE PHYSICAL GRIP RECOVERY, IMMEDIATELY GRIPPING THE SURVIVOR UNDER THE ARMS AND LOCKING THEIR HANDS. THE RS WILL THEN WRAP THEIR LEGS AROUND ONE OR BOTH OF THE SURVIVOR'S LEGS. THE FM SHALL IMMEDIATELY RECOGNIZE THIS SITUATION AS AN EMERGENCY AND HOIST THE RS AND SURVIVOR TO A SAFE AREA OR INTO THE HELICOPTER, AS APPROPRIATE. ALL TRAINING HOIST EVOLUTIONS UTILIZING THE PHYSICAL GRIP RECOVERY (OVER WATER ONLY) SHALL BE PREBRIEFED AND LIMITED TO A HOISTING ALTITUDE OF 10 FEET. THE RS AND SURVIVOR SHALL THEN BE LOWERED TO THE WATER.

WARNING

WHENEVER HOISTING USING THE QUICK STROP, A POSSIBILITY EXISTS FOR THE SURVIVOR TO LOSE CONSCIOUSNESS DURING THE ACTUAL HOISTING PHASE, THUS THE CROTCH STRAP SHOULD BE APPLIED DURING EACH HOIST. THE POSSIBILITY FOR THE SURVIVOR TO LOSE CONSCIOUSNESS IS GREATER IF THE QUICK STROP IS APPLIED WITH THE SURVIVOR FACING AWAY FROM THE RS. FOR THIS REASON, ANY TRAINING HOIST OF A LIVE SURVIVOR IN THE FACING AWAY POSITION SHALL BE LIMITED TO 10 FEET. THE SURVIVOR SHALL THEN BE LOWERED TO THE WATER WHERE THEY SHALL BE REPOSITIONED TO FACE THE RS, AND HOISTING CAN CONTINUE. FAILURE TO CONNECT THE CROTCH STRAP ON AN UNCONSCIOUS OR INCAPACITATED SURVIVOR MAY RESULT IN SURVIVOR SLIPPING OUT OF THE QUICK STROP. TO MAINTAIN PROPER POSITIONING OF THE QUICK STROP, THE CROTCH STRAP SHOULD NOT BE TIGHTENED UNTIL A LOAD IS TAKEN ON THE HOIST CABLE.

CAUTION

BASED ON ENVIRONMENTAL ATMOSPHERIC CONDITIONS, USE OF THE HSD CABLE SHOULD BE CONSIDERED PRIOR TO DEPLOYMENT.

Table 2-6.

Step	Action
1.	When directed to come forward, the RS assumes a sitting position in the doorway with the gunner's belt attached around the chest, mask positioned on forehead, and the locking hoist hook connected directly to the lifting V-ring on the RS harness. Both V-rings of the quick strop shall be attached to the RS's self-locking hook with the detachable side of the quick strop (identified by the red webbing and silver reflective tape) on the outboard side. The RS positions the quick strop on either shoulder with the friction keeper close to the RS's self-locking hook.
	NOTE Prior to connecting the quick strop to the RS's self-locking hook, ensure webbing is routed through friction keeper.
	NOTE Prior to being deployed at night or during low visibility conditions, the RS and the locking hoist hook shall be illuminated by chemical lights.
2.	RS releases the gunner's belt and places mask on face after FM taps the RS once on the chest.
3.	RS gives THUMBS UP signal to FM once the RS has checked their equipment and is ready for deployment.
4.	To accomplish the load check, the FM will hoist the RS clear of the deck to allow the RS to check harness for comfort. RS will adjust harness as appropriate and give the FM the THUMBS UP signal when ready to continue hoist.
	NOTE While being lowered, the RS should try to maintain visual contact with the survivor. Turning of the locking hoist hook may prevent constant visual contact.
5.	Using the appropriate hand signals, the RS should be lowered to a position approximately 5 feet above the highest wave. The helicopter is then conned to a position that allows the RS to be lowered into the water and placed within 2-3 feet of the survivor.
6.	Based on the position, size, and/or physical condition of the survivor, the RS should use one of the following methods for applying the quick strop:

Table 2-6. Continued

Step	Action
	a. Using the same arm that the quick strop is on, the RS grasps the wrist of the survivor (right hand to left wrist or left-hand to right wrist when facing survivor). RS slides the quick strop down their arm and up the survivor's arm, maneuvering the quick strop over the survivor's head and other arm. RS then snugs the quick strop under the survivor's armpits, slides the friction keeper as tight as possible, and holds it in place with one hand.
	b. The RS disconnects one side of the quick strop (identified by the red webbing and silver reflective tape), feeds it around the survivor, feeds it back through the friction keeper, and reconnects to RS's self-locking hook. RS then snugs the quick strop under the survivor's armpits, slides friction keeper as tight as possible, and holds in place with one hand. c. The RS slides the quick strop down their arm and up the survivor's legs, maneuvering the quick strop under the survivor's armpits. RS snugs friction keeper as tight as possible and holds in place with one hand. d. The RS slides the quick strop down their arm and over the survivor's head, maneuvering the quick strop under the survivor's armpits. RS snugs friction keeper as tight as possible and holds in place with one hand.
7.	Signal helicopter READY FOR PICKUP.
	WARNING **IT IS IMPERATIVE THAT THE RS KEEP ONE HAND ON THE FRICTION KEEPER AND AS TIGHT AS POSSIBLE TO THE SURVIVOR, WITH LEGS AROUND SURVIVOR'S ARMS UNTIL BOTH RS AND SURVIVOR ARE SECURE ON THE DECK OF THE HELICOPTER.** **WARNING** **BEFORE DISCONNECTING THE SURVIVOR AND THEMSELF FROM THE LOCKING HOIST HOOK, THE RS SHALL ENSURE THE SURVIVOR IS WELL INSIDE THE HELICOPTER, IN A SITTING OR SUPINE POSITION ON THE DECK, WITH THE CABIN DOOR SHUT OR BLOCKED BY THE FM.**
8.	During the hoist, the RS shall prevent the survivor's head from contacting the bottom of the helicopter. The survivor is brought into the cabin first.

8. Double Lift Recovery Procedures. Refer to Table 2-7.

WARNING

THE LOCKING HOIST HOOK SHALL BE IN THE UNLOCKED POSITION DURING THE BARE HOOK RECOVERY OF THE RS. THE LOCKING HOIST HOOK SHALL BE IN THE LOCKED POSITION DURING ALL VERTICAL SURFACE DEPLOYMENTS. THE LOCKING HOIST HOOK SHOULD BE IN THE UNLOCKED POSITION DURING ALL OTHER DEPLOYMENTS AND RECOVERIES.

WARNING

IF THE EVALUATION OF THE SURVIVOR'S PHYSICAL CONDITION BY THE RS DICTATES THAT THE RESCUE SLING AND QUICK STROP SHOULD NOT OR CANNOT BE USED TO RECOVER THE SURVIVOR, THE RS MAY HAVE TO DISCONNECT FROM THE LOCKING HOIST HOOK, ENABLING THE PROPER RESCUE DEVICE TO BE DELIVERED. DISCONNECTING FROM THE LOCKING HOIST HOOK SHOULD ONLY BE COMPLETED IF CONDITIONS WARRANT.

WARNING

WHEN USING THIS PROCEDURE IN HEAVY SEAS, THE AIRCREW MUST TAKE EXTREME CARE WITH THE VARYING AMOUNTS OF CABLE THAT MAY BE PAID OUT; USE OF THE CATENARY METHOD IS RECOMMENDED. TOO LITTLE CABLE MAY CAUSE THE RS TO BE JERKED OUT OF THE WATER AS THEY ENTER THE TROUGH OF THE WAVE. TOO MUCH CABLE MAY CAUSE THE RS OR SURVIVOR TO BECOME ENTANGLED IN THE CABLE PRIOR TO PICKUP. WHEN USED IN HIGH WINDS, THE AIRCREW MUST MONITOR WIND GUSTS TO COMPENSATE FOR SUDDEN MOVEMENTS OF THE HELICOPTER.

CAUTION

BASED ON ENVIRONMENTAL ATMOSPHERIC CONDITIONS, USE OF THE HSD CABLE SHOULD BE CONSIDERED PRIOR TO DEPLOYMENT.

NOTE

Taking into consideration on scene conditions, the double lift recovery should be employed when dealing with hypothermic and/or large frame survivors. The rescue sling is used in conjunction with the quick strop to hoist the survivor in a semi-supine position. Based on the position, size, and/or physical condition of the survivor, the double lift may require up to 20 minutes to complete.

NOTE

A survivor that has been in warm or cold water for a long period of time should be considered hypothermic.

Table 2-7.

Step	Action
1.	When directed to come forward, the RS assumes a sitting position in the doorway with the gunner's belt attached around the chest, and the locking hoist hook connected directly to the lifting V-ring on the RS harness. The lifting V-rings of the rescue sling shall be attached to the RS's self-locking hook (first), followed by the lifting V-rings of the quick strop (second), with the detachable side of the quick strop (identified by the red webbing and silver reflective tape) on the outboard side. The position of the rescue sling and quick strop when deployed is at the discretion of the RS.
	NOTE Prior to connecting the quick strop to the RS's self-locking hook, ensure webbing is routed through friction keeper. **NOTE** Prior to being deployed at night or during low visibility conditions, the RS and the locking hoist hook shall be illuminated by chemical lights.
2.	RS releases the gunner's belt and places mask on face after FM taps the RS once on the chest.
3.	RS gives THUMBS UP signal to FM once the RS has checked their equipment and is ready for deployment.
4.	To accomplish the load check, the FM will hoist the RS clear of the deck to allow the RS to check harness for comfort. RS will adjust harness as appropriate and give the FM the THUMBS UP signal when ready to continue hoist.

Table 2-7. Continued

Step	Action
	NOTE While being lowered, the RS should try to maintain visual contact with the survivor. Turning of the locking hoist hook may prevent constant visual contact.
5.	Using the appropriate hand signals, the RS should be lowered to a position approximately 5 feet above the highest wave. The helicopter is then conned to a position that allows the RS to be lowered into the water and placed within 2-3 feet of the survivor.
	NOTE The RS shall assess the situation and apply the rescue sling and quick strop as required. The rescue sling should be applied first to provide a means of flotation for the survivor. However, based on the position, size, and/or physical condition of the survivor, the quick strop may be applied first as long as the survivor's airway is not compromised.
6.	Once in the water, place the rescue sling under the survivor's arm and around the torso. Route the safety strap under the survivor's arms, around the chest, and connect. Once connected, position safety strap high on the chest and tighten.
	WARNING **DO NOT OVERTIGHTEN THE SAFETY STRAP AS IT MAY RESTRICT THE SURVIVOR'S ABILITY TO BREATH.**
7.	Position the quick strop under the survivor's knees and secure friction keeper.
8.	Signal the helicopter READY TO BE HOISTED.
9.	Upon clearing the water, the RS should straddle the survivor's legs.
	WARNING **IT IS IMPERATIVE THAT THE RS KEEP THEIR HAND ON THE FRICTION KEEPER AND AS TIGHT AS POSSIBLE TO THE SURVIVOR, WITH LEGS AROUND SURVIVOR'S ARMS UNTIL BOTH RS AND SURVIVOR ARE SECURE ON THE DECK OF THE HELICOPTER.**

Table 2-7. Continued

Step	Action
	WARNING **BEFORE DISCONNECTING THE SURVIVOR AND THEMSELF FROM THE LOCKING HOIST HOOK, THE RS SHALL ENSURE THE SURVIVOR IS WELL INSIDE THE HELICOPTER, IN A SITTING OR SUPINE POSITION ON THE DECK, WITH THE CABIN DOOR SHUT OR BLOCKED BY THE FM.**
10.	During the hoist, the RS shall prevent the survivor's head from contacting the bottom of the helicopter. The survivor is brought into the cabin first.

9. Vertical Surface Recovery Procedures. Refer to Table 2-8.

WARNING

THE LOCKING HOIST HOOK SHALL BE IN THE UNLOCKED POSITION DURING THE BARE HOOK RECOVERY OF THE RS. THE LOCKING HOIST HOOK SHALL BE IN THE LOCKED POSITION DURING ALL VERTICAL SURFACE DEPLOYMENTS. THE LOCKING HOIST HOOK SHOULD BE IN THE UNLOCKED POSITION DURING ALL OTHER DEPLOYMENTS AND RECOVERIES.

WARNING

DURING A VERTICAL SURFACE DEPLOYMENT, THE RS SHALL NOT DISCONNECT THE LOCKING HOIST HOOK FROM THEIR HARNESS.

WARNING

IN THE EVENT THE SURVIVOR GRABS THE RS, PREVENTING THE APPLICATION OF THE QUICK STROP, THE RS SHALL UTILIZE THE PHYSICAL GRIP, IMMEDIATELY GRIPPING THE SURVIVOR UNDER THE ARMS AND LOCKING THEIR HANDS. THE RS WILL THEN WRAP THEIR LEGS AROUND ONE OR BOTH OF THE SURVIVOR'S LEGS. THE FM SHALL IMMEDIATELY RECOGNIZE THIS SITUATION AS AN EMERGENCY, CONN THE HELICOPTER AWAY FROM THE VERTICAL SURFACE, AND CONTINUE THE HOIST TO A SAFE AREA OR TO THE HELICOPTER AS APPROPRIATE.

WARNING

WHENEVER HOISTING USING THE QUICK STROP, A POSSIBILITY EXISTS FOR THE SURVIVOR TO LOSE CONSCIOUSNESS DURING THE HOISTING PHASE. THE POSSIBILITY FOR THE SURVIVOR TO LOSE CONSCIOUSNESS IS GREATER IF THE QUICK STROP IS APPLIED WITH THE SURVIVOR FACING AWAY FROM THE RS. WHEN THE POTENTIAL EXISTS FOR THE SURVIVOR TO LOSE CONSCIOUSNESS, THE USE OF THE CROTCH STRAP SHALL BE CONSIDERED. FAILURE TO CONNECT THE CROTCH STRAP ON AN UNCONSCIOUS OR INCAPACITATED SURVIVOR MAY RESULT IN SURVIVOR SLIPPING OUT OF THE QUICK STROP. TO MAINTAIN PROPER POSITIONING OF THE QUICK STROP, THE CROTCH STRAP SHOULD NOT BE TIGHTENED UNTIL A LOAD IS TAKEN ON THE HOIST CABLE.

WARNING

THE USE OF THE AIRCREW PROTECTIVE HELMET BY THE SWIMMER IS MANDATORY.

CAUTION

BASED ON ENVIRONMENTAL ATMOSPHERIC CONDITIONS, USE OF THE HSD CABLE SHOULD BE CONSIDERED PRIOR TO DEPLOYMENT.

Table 2-8.

Step	Action
1.	When directed to come forward, the RS assumes a sitting position in the doorway with the gunner's belt attached around the chest and the locking hoist hook connected directly to the lifting V-ring on the RS harness. Both V-rings on the quick strop shall be attached to the RS's self-locking hook with the detachable side of the quick strop (identified by the red webbing and silver reflective tape) on the outboard side. The RS positions the quick strop on either shoulder with the friction keeper slide close to the locking hoist hook.
	NOTE Prior to connecting quick strop to the RS's self-locking hook, ensure webbing is routed through friction keeper. **NOTE** Prior to being deployed at night or during low visibility conditions, the RS and the locking hoist hook shall be illuminated by chemical lights.

Table 2-8. Continued

Step	Action
2.	While on the Internal Communications System (ICS), prior to checking swimmer, the RS, pilot, and FM shall discuss the vertical surface insertion point and walking route.
	NOTE The RS should include specific landmarks on the prebriefed route, as it may be difficult to maintain visual contact with the survivor once in positive contact with the vertical surface. This route should avoid exposing the survivor to falling debris, rotor wash, or any other hazards. Avoid overhangs that may contact and damage the hoist cable.
3.	RS disconnects the ICS and releases the gunner's belt after the FM taps the RS once on the chest during check swimmer.
4.	RS gives THUMBS UP signal to FM once the RS has checked their equipment and is ready for deployment.
5.	To accomplish the load check, the FM will hoist the RS clear of the deck to allow the RS to check harness for comfort. RS will adjust harness as appropriate and give the FM the THUMBS UP signal when ready to continue hoist.
	NOTE While being lowered, the RS should try to maintain visual contact with the survivor. Turning of the locking hoist hook may prevent constant visual contact.
6.	Using the appropriate hand signals, the RS should be lowered to the prebriefed insertion point.
7.	Once positive contact has been made with the surface, the RS should sit back in the RS harness and assume a rappelling position with the feet firmly on the surface. The RS's waist should be bent at 90 degrees, legs extended, with the knees slightly bent. The RS should allow the hoist cable to support their weight and not climb.
	WARNING **PRIOR TO TRAVERSING THE VERTICAL SURFACE, RS SHALL ENSURE HOIST CABLE IS IN LINE WITH CABIN DOOR (PLUMB) TO PREVENT UNCONTROLLED SWINGING OF RS AND SURVIVOR. FAILURE TO DO SO COULD RESULT IN INJURY TO THE RS AND SURVIVOR IF POSITIVE CONTACT IS LOST.**
8.	While maintaining a plumb position under helicopter, the RS traverses the vertical surface, giving the appropriate hand signals (one at a time) to conn the helicopter along the prebriefed approach route to the survivor.

Table 2-8. Continued

Step	Action
9.	Based on the position, size, and/or physical condition of the survivor, use one of the following methods for applying the quick strop: a. Using the same arm that the quick strop is on, the RS grasps the wrist of the survivor (right-hand to left wrist or left-hand to right wrist when facing survivor). RS slides the quick strop down their arm and up the survivor's arm, maneuvering the quick strop over the survivor's head and other arm. RS then snugs the quick strop under the survivor's armpits, slides the friction keeper as tight as possible, and holds it in place with one hand. b. The RS disconnects one side of the quick strop (identified by the red webbing and silver reflective tape), feeds it around the survivor, then feeds it back through the friction keeper, and reconnects to the RS's self-locking hook. RS then snugs the quick strop under the survivor's armpits, slides friction keeper as tight as possible, and holds in place with one hand.
	WARNING **PRIOR TO SIGNALING HELICOPTER, RS SHALL ENSURE HOIST CABLE IS IN LINE WITH CABIN DOOR (PLUMB) TO PREVENT UNCONTROLLED SWINGING OF RS AND SURVIVOR. FAILURE TO DO SO COULD RESULT IN INJURY TO THE RS AND SURVIVOR WHILE BREAKING POSITIVE CONTACT.**
10.	RS signals READY TO BE HOISTED followed by pointing away from the vertical surface to indicate, ready to lose positive contact.
	WARNING **IT IS IMPERATIVE THAT THE RS KEEP ONE HAND ON THE FRICTION KEEPER AND AS TIGHT AS POSSIBLE TO THE SURVIVOR, WITH LEGS AROUND SURVIVOR'S ARMS UNTIL BOTH RS AND SURVIVOR ARE SECURE ON THE DECK OF THE HELICOPTER.**
	WARNING **BEFORE DISCONNECTING THE SURVIVOR AND THEM-SELF FROM THE LOCKING HOIST HOOK, THE RS SHALL ENSURE THE SURVIVOR IS WELL INSIDE THE HELICOP-TER, IN A SITTING OR SUPINE POSITION ON THE DECK, WITH THE CABIN DOOR SHUT OR BLOCKED BY THE FM.**

Table 2-8. Continued

Step	Action
11.	During the hoist the RS shall prevent the survivor's head from contacting the bottom of the helicopter. The survivor is brought into the cabin first.

10. Physical Grip Recovery Procedures. The Physical Grip Survivor Recovery was developed as a last resort to recover survivors when other rescue devices and/or recovery methods prove ineffective or when a quick extraction from an unsafe area is needed. This procedure can be considered for the rescue of extreme small frame survivors, rescues in swift water, etc., where the application of current rescue devices cannot be used or time does not allow for immediate use of specific equipment. This recovery method is for extreme situations only and should be thoroughly prebriefed. Refer to Table 2-9.

WARNING

IF THE SURVIVOR GRABS THE SWIMMER, PREVENTING THE APPLICATION OF THE RESCUE DEVICE, THE SWIMMER SHALL COMPLETE A PHYSICAL GRIP RECOVERY BY PLACING BOTH ARMS AROUND AND UNDERNEATH THE ARMPITS OF THE SURVIVOR AND INTERLOCK THEIR HANDS. THE RS WILL THEN WRAP THEIR LEGS AROUND ONE OR BOTH OF THE SURVIVOR'S LEGS. THE FLIGHT MECHANIC SHALL IMMEDIATELY RECOGNIZE THIS SITUATION AS AN EMERGENCY AND TAKE THE LOAD AND HOIST THE RESCUE SWIMMER AND SURVIVOR TO A SAFE AREA OR INTO THE HELICOPTER AS APPROPRIATE. IF HOISTED DIRECTLY INTO THE HELICOPTER, THE SURVIVOR IS BROUGHT IN FIRST, FOLLOWED BY THE RESCUE SWIMMER.

CAUTION

BASED ON ENVIRONMENTAL ATMOSPHERIC CONDITIONS, USE OF THE HSD CABLE SHOULD BE CONSIDERED PRIOR TO DEPLOYMENT.

Table 2-9.

Step	Action
1.	When directed to come forward, the RS assumes a sitting position in the doorway with the gunner's belt attached around the chest, mask positioned on forehead (water deployment only), and the locking hoist hook connected directly to the lifting V-ring on the RS harness.

Table 2-9. Continued

Step	Action
	NOTE The RS should deploy with the quick strop attached to the self-locking hook to allow for application once the survivor is removed from the immediate danger (e.g., a survivor in a heavy surf line close to rocks).
	NOTE Prior to being deployed at night or during low visibility conditions, the RS and the locking hoist hook shall be illuminated by chemical lights.
2.	RS releases the gunner's belt and places mask on face (water deployment only) after FM taps the RS once on the chest.
3.	RS gives THUMBS UP signal to FM once the RS has checked their equipment and is ready for deployment.
4.	To accomplish the load check, the FM will hoist the RS clear of the deck to allow the RS to check harness for comfort. RS will adjust harness as appropriate and give the FM the THUMBS UP signal when ready to continue hoist.
	NOTE While being lowered via the RS harness, the RS should try to maintain visual contact with the survivor. Turning of the locking hoist hook may prevent constant visual contact.
5.	Using the appropriate hand signals, the RS should be lowered to a position approximately 5 feet above the highest wave (water deployment only). The helicopter is then conned to a position that allows the RS to be lowered as close as possible to the survivor.
6.	When positioned at survivor, the RS shall complete a physical grip recovery by placing both of their arms under the survivor's arms, around the torso, and interlocking their hands. The RS will then wrap their legs around one or both of the survivor's legs.
7.	After observing that the RS has gained control of the survivor, the FM shall take the load and hoist the RS and survivor. The RS and the survivor should be hoisted clear of the danger and placed in a safe area to allow for application of the quick strop. Survivor is brought into the helicopter first, followed by the RS.

11. Helicopter Ice Disembark Deployment Procedures. Refer to Table 2-10.

WARNING

THE LOCKING HOIST HOOK SHALL BE IN THE UNLOCKED POSITION DURING THE BARE HOOK RECOVERY OF THE RS. THE LOCKING HOIST HOOK SHALL BE IN THE LOCKED POSITION DURING ALL VERTICAL SURFACE DEPLOYMENTS. THE LOCKING HOIST HOOK SHOULD BE IN THE UNLOCKED POSITION DURING ALL OTHER DEPLOYMENTS AND RECOVERIES.

WARNING

IF THE RS FALLS THROUGH THE ICE WHILE STILL CONNECTED TO THE LOCKING HOIST HOOK, THEY SHOULD ATTEMPT TO PULL THEMSELF FREE BY CLIMBING OUT, USING THE APPROPRIATE EQUIPMENT, ICE AWLS, CLEATS, ETC., PRIOR TO SIGNALING FOR AN EMERGENCY PICKUP.

WARNING

SMOOTH ICE PROVIDES AN ALMOST FRICTIONLESS SURFACE. DO NOT EXPOSE SURVIVOR TO ROTOR WASH PRIOR TO RS CONTACT, AS THIS MAY CAUSE SURVIVOR TO SLIDE RADICALLY ON ICE, POSSIBLY CAUSING INJURY.

WARNING

THE RS SHALL WEAR THE AIRCREW FLIGHT HELMET, VISOR DOWN, OR AN APPROVED RS PROTECTIVE HELMET WITH GOGGLES/SKI GOGGLES AS OUTLINED IN CGTO PG-85-00-330.

NOTE

Disembarking is used only when the helicopter has touched down on the ice surface. The helicopter shall maintain wheels lightly on ice during the evolution.

Table 2-10.

Step	Action
1.	When directed to come forward, the RS assumes a sitting position in the doorway with the gunner's belt attached around the chest. The locking hoist hook shall be connected directly to the lifting V-ring on the RS harness prior to entry into cabin door.

Table 2-10. Continued

Step	Action
	NOTE Prior to being deployed at night or during low visibility conditions, the RS and the locking hoist hook shall be illuminated by chemical lights.
2.	RS releases the gunner's belt after FM taps the RS once on the chest.
3.	RS gives THUMBS UP signal to FM once the RS has checked their equipment and is ready for deployment.
4.	After the FM taps RS three times on the shoulder, the RS exits the helicopter, steps onto the ice, and proceeds to the survivor. The RS and FM will tend the hoist cable as needed.
	NOTE The RS may be required to disconnect from the locking hoist hook to move freely from survivor to survivor. This will only be used after a thorough prebrief and check of the stability of the surrounding ice.
5.	RS will retrieve the survivor(s) back to the helicopter as required.

12. Direct Deployment Ice Recovery Procedures. Refer to Table 2-11.

WARNING

THE LOCKING HOIST HOOK SHALL BE IN THE UNLOCKED POSITION DURING THE BARE HOOK RECOVERY OF THE RS. THE LOCKING HOIST HOOK SHALL BE IN THE LOCKED POSITION DURING ALL VERTICAL SURFACE DEPLOYMENTS. THE LOCKING HOIST HOOK SHOULD BE IN THE UNLOCKED POSITION DURING ALL OTHER DEPLOYMENTS AND RECOVERIES.

WARNING

IN THE EVENT THE SURVIVOR GRABS THE RS, PREVENTING THE APPLICATION OF THE QUICK STROP, THE RS SHALL UTILIZE THE PHYSICAL GRIP RECOVERY, IMMEDIATELY GRIPPING THE SURVIVOR UNDER THE ARMS AND LOCKING THEIR HANDS. THE RS WILL THEN WRAP THEIR LEGS AROUND ONE OR BOTH OF THE SURVIVOR'S LEGS. THE FM SHALL IMMEDIATELY RECOGNIZE THIS SITUATION AS AN EMERGENCY AND HOIST THE RS AND SURVIVOR INTO THE HELICOPTER, AS APPROPRIATE. NO TRAINING HOIST EVOLUTIONS UTILIZING THE PHYSICAL GRIP RECOVERY SHALL BE CONDUCTED OVER ICE.

WARNING

WHENEVER HOISTING USING THE QUICK STROP, A POSSIBILITY EXISTS FOR THE SURVIVOR TO LOSE CONSCIOUSNESS DURING THE HOISTING PHASE, THUS THE CROTCH STRAP SHOULD BE APPLIED DURING EACH HOIST. THE POSSIBILITY FOR THE SURVIVOR TO LOSE CONSCIOUSNESS IS GREATER IF THE QUICK STROP IS APPLIED WITH THE SURVIVOR FACING AWAY FROM THE RS. FAILURE TO CONNECT THE CROTCH STRAP ON AN UNCONSCIOUS OR INCAPACITATED SURVIVOR MAY RESULT IN SURVIVOR SLIPPING OUT OF THE QUICK STROP. NO TRAINING HOIST EVOLUTIONS SHOULD BE COMPLETED OVER ICE WITH THE SURVIVOR IN THE FACING AWAY POSITION. TO MAINTAIN PROPER POSITIONING OF THE QUICK STROP, THE CROTCH STRAP SHOULD NOT BE TIGHTENED UNTIL A LOAD IS TAKEN ON THE HOIST CABLE.

CAUTION

BASED ON ENVIRONMENTAL ATMOSPHERIC CONDITIONS, USE OF THE HSD CABLE SHOULD BE CONSIDERED PRIOR TO DEPLOYMENT.

Table 2-11.

Step	Action
1.	When directed to come forward, the RS assumes a sitting position in the doorway with the gunner's belt attached around the chest and the locking hoist hook connected directly to the lifting V-ring on the RS harness. Both V-rings of the quick strop shall be attached to the RS's self-locking hook with the detachable side of the quick strop (identified by the red webbing and silver reflective tape) on the outboard side. The RS positions the quick strop on either shoulder with the friction keeper slide close to the locking hoist hook.
	NOTE Prior to connecting quick strop to the RS's self-locking hook, ensure webbing is routed through friction keeper. **NOTE** Prior to being deployed at night or during low visibility conditions, the RS and the locking hoist hook shall be illuminated by chemical lights.
2.	RS releases the gunner's belt after FM taps the RS once on the chest.
3.	RS gives THUMBS UP signal to FM once the RS has checked their equipment and is ready for deployment.
4.	To accomplish the load check, the FM will hoist the RS clear of the deck to allow the RS to check harness for comfort. RS will adjust harness as appropriate and give the FM the THUMBS UP signal when ready to continue hoist.
	NOTE While being lowered, the RS should try to maintain visual contact with the survivor. Turning of the locking hoist hook may prevent constant visual contact.
5.	Using the appropriate hand signals, the RS should be lowered to approximately 5 feet above the water or ice. The helicopter is then conned to a position that allows the RS to be placed within 2-3 feet of the survivor.

Table 2-11. Continued

Step	Action
6.	Based on the position, size, and/or physical condition of the survivor, use one of the following methods for applying the quick strop: a. Using the same arm that the quick strop is on, the RS grasps the wrist of the survivor (right-hand to left wrist or left-hand to right wrist when facing survivor). RS slides the quick strop down their arm and up the survivor's arm, maneuvering the quick strop over the survivor's head and other arm. RS then snugs the quick strop under the survivor's armpits, slides the friction keeper as tight as possible, and holds it in place with one hand. b. The RS disconnects one side of the quick strop (identified by the red webbing and silver reflective tape), feeds it around the survivor, then feeds it back through the friction keeper, and reconnects to their self-locking hook. RS then snugs the quickstrop under the survivor's armpits, slides friction keeper as tight as possible, and holds in place with one hand. c. The RS slides the quick strop down their arm and up survivor's legs, maneuvering the quick strop under the survivor's armpits. RS snugs friction keeper as tight as possible and holds in place with one hand. d. The RS slides the quick strop down their arm and over the survivor's head, maneuvering the quick strop under the survivor's armpits. RS snugs friction keeper as tight as possible and holds in place with one hand.
7.	Signal helicopter READY FOR PICKUP.
8.	Once helicopter is vertical over RS, RS shall ensure quick strop is positioned correctly and signal the helicopter READY TO BE HOISTED.
	WARNING **IT IS IMPERATIVE THAT THE RS KEEP ONE HAND ON THE FRICTION KEEPER AND AS TIGHT AS POSSIBLE TO THE SURVIVOR, WITH LEGS AROUND SURVIVOR'S ARMS UNTIL BOTH RS AND SURVIVOR ARE SECURE ON THE DECK OF THE HELICOPTER.**

Table 2-11. Continued

Step	Action
	WARNING **BEFORE DISCONNECTING THE SURVIVOR AND THEMSELF FROM THE LOCKING HOIST HOOK, THE RS SHALL ENSURE THE SURVIVOR IS WELL INSIDE THE HELICOPTER, IN A SITTING OR SUPINE POSITION ON THE DECK, WITH THE CABIN DOOR SHUT OR BLOCKED BY THE FM.**
9.	During the hoist, the RS shall prevent the survivor's head from contacting the bottom of the helicopter. The survivor is brought into the cabin first.
	NOTE Once the RS and survivor are clear of the water or ice, the pilot should consider lowering the hover altitude to maintain the RS and survivor no more than 10 feet above the surface, conditions permitting.

13. Hover Over Solid Ice Deployment Procedures. Refer to Table 2-12.

WARNING

THE LOCKING HOIST HOOK SHALL BE IN THE UNLOCKED POSITION DURING THE BARE HOOK RECOVERY OF THE RS. THE LOCKING HOIST HOOK SHALL BE IN THE LOCKED POSITION DURING ALL VERTICAL SURFACE DEPLOYMENTS. THE LOCKING HOIST HOOK SHOULD BE IN THE UNLOCKED POSITION DURING ALL OTHER DEPLOYMENTS AND RECOVERIES.

WARNING

IF THE EVALUATION OF THE SURVIVOR'S PHYSICAL CONDITION BY THE RS DICTATES THAT THE QUICK STROP SHOULD NOT OR CANNOT BE USED TO RECOVER THE SURVIVOR, THE RS MAY HAVE TO DISCONNECT FROM THE LOCKING HOIST HOOK, ENABLING THE PROPER RESCUE DEVICE TO BE DELIVERED. DISCONNECTING FROM THE LOCKING HOIST HOOK SHOULD ONLY BE COMPLETED IF CONDITIONS WARRANT.

WARNING

SMOOTH ICE PROVIDES AN ALMOST FRICTIONLESS SURFACE. DO NOT EXPOSE SURVIVOR TO ROTOR WASH PRIOR TO RS CONTACT, AS THIS MAY CAUSE SURVIVOR TO SLIDE RADICALLY ON ICE, POSSIBLY CAUSING INJURY.

Table 2-12.

Step	Action
1.	When directed to come forward, the RS assumes a sitting position in the doorway with the gunner's belt attached around the chest and the locking hoist hook connected directly to the lifting V-ring on the RS harness. Both V-rings of the quick strop shall be attached to the RS's self-locking hook with the detachable side of the quick strop (identified by the red webbing and silver reflective tape) on the outboard side. The RS positions the quick strop on either shoulder with the friction keeper close to the RS self-locking hook.
	NOTE Prior to connecting quick strop to the RS's self-locking hook, ensure webbing is routed through friction keeper.
2.	RS releases the gunner's belt after FM taps the RS once on the chest.
3.	RS gives THUMBS UP signal to FM once the RS has checked their equipment and is ready for deployment.
4.	To accomplish the load check, the FM will hoist the RS clear of the deck to allow the RS to check harness for comfort. RS will adjust harness as appropriate and give the FM the THUMBS UP signal when ready to continue hoist.
5.	While being lowered, the RS should try to maintain visual contact with the survivor. Turning of the locking hoist hook may prevent constant visual contact.
6.	Once on the ice, the RS signals I AM ALRIGHT.
7.	RS walks towards survivor while FM tends the hoist cable. If the rotor wash is affecting the RS, the RS should kneel or lay face down on the ice while the FM conns the helicopter back and left.
8.	Once at survivor, the RS should evaluate the survivor's physical condition and determine if the quick strop should be utilized.
	NOTE If the survivor's condition dictates that the quick strop should not be used and the area is safe and stable, the RS shall disconnect from the locking hoist hook and signal for the proper rescue device.
9.	RS shall maintain control of the survivor and signal READY FOR PICKUP.

Table 2-12. Continued

Step	Action
10.	Once helicopter is vertical over RS, RS secures the survivor with quick strop, and signals READY TO BE HOISTED. Based on the position, size, and/or physical condition of the survivor, use one of the following methods for applying the quick strop: a. Using the same arm that the quick strop is on, the RS grasps the wrist of the survivor, right-hand to left wrist or left-hand to right wrist when facing survivor. RS slides the quick strop down their arm and up the survivor's arm, maneuvering the quick strop over the survivor's head and other arm. RS then snugs the quick strop under the survivor's armpits, slides friction keeper as tight as possible, and holds in place with one hand. b. The RS disconnects one side of the quick strop (identified by the red webbing and silver reflective tape), feeds it around the survivor, feeds it back through the friction keeper, and reconnects to RS's self-locking hook. RS then snugs the quick strop under the survivor's armpits, slides friction keeper as tight as possible, and holds in place with one hand. c. The RS slides the quick strop down their arm and up the survivor's legs, maneuvering the quick strop under the survivor's armpits. RS snugs friction keeper as tight as possible and holds in place with one hand. d. The RS slides the quick strop down their arm and over the survivor's head, maneuvering the quick strop under the survivor's armpits. RS snugs friction keeper as tight as possible and holds in place with one hand.
	WARNING **IT IS IMPERATIVE THAT THE RS KEEP ONE HAND ON THE FRICTION KEEPER AND AS TIGHT AS POSSIBLE TO THE SURVIVOR, WITH LEGS AROUND SURVIVOR'S ARMS UNTIL BOTH RS AND SURVIVOR ARE SECURE ON THE DECK OF THE HELICOPTER.** **WARNING** **BEFORE DISCONNECTING THE SURVIVOR AND THEM-SELF FROM THE LOCKING HOIST HOOK, THE RS SHALL ENSURE THE SURVIVOR IS WELL INSIDE THE HELICOPTER, IN A SITTING OR SUPINE POSITION ON THE DECK, WITH THE CABIN DOOR SHUT OR BLOCKED BY THE FM.**

14. Rescue Basket Recovery Procedures. Refer to Table 2-13.

CAUTION

WHEN REMOVING THE RESCUE BASKET FROM THE LOCKING HOIST HOOK, PLACE A HAND UNDER BOTH BAILS TO PREVENT THEM FROM FALLING ON THE SURVIVOR IN THE RESCUE BASKET.

NOTE

The rescue basket is the preferred method of recovery for survivors without spinal injuries.

Table 2-13.

Step	Action
1.	The RS and helicopter crew shall prebrief this type maneuver before the RS exits the helicopter or the RS may signal the helicopter to DEPLOY RESCUE BASKET.
2.	Approach the survivor from the rear, establishing In Close In Control (ICIC).
3.	Evaluate the survivor's condition and signal the helicopter READY FOR PICKUP. Keep the survivor's airway clear, and keep the survivor's back into the prevailing seas/wind. Upon reaching the rotor wash, position the survivor's back towards helicopter.
	WARNING **TO PREVENT SHOCK, ALLOW BASKET TO CONTACT WATER PRIOR TO BEING TOUCHED.**
4.	The helicopter should deliver the basket within 5 to 10 feet of the RS.
5.	Using the appropriate carry or tow, the RS shall swim the survivor to the basket.
	WARNING **WHEN PLACING SURVIVOR IN RESCUE BASKET, ENSURE BASKET IS POSITIONED BETWEEN HELICOPTER AND RS. FAILURE TO DO SO COULD RESULT IN INJURY TO THE RS.** **CAUTION** WHEN PLACING THE SURVIVOR IN THE BASKET WHILE IN HEAVY SEAS, TIMING OF THE SEA STATE IS CRITICAL TO PREVENT INJURY OF SURVIVOR.
6.	Place the survivor inside the basket in the sitting position, ensuring arms and legs of survivor are completely inside the basket with their head out of the water.

Table 2-13. Continued

Step	Action
7.	Signal the helicopter READY TO BE HOISTED.
8.	The RS shall maintain control of the basket until the basket is plumb underneath the helicopter.
9.	RS maintains visual contact with basket and aircraft as basket is being recovered to aircraft.

15. Folding Rescue Litter Recovery Procedures. Refer to Table 2-14.

CAUTION

THE MEDEVAC BOARD THAT MAY BE USED IN THE RESCUE LITTER HAS NO FLOTATION CAPABILITY AND IS NOT ATTACHED TO THE LITTER. THEREFORE, TO PREVENT THE LOSS OF THE MEDEVAC BOARD, DO NOT USE IT WHEN STRAPPING A PERSON INTO THE LITTER WHILE IN THE WATER.

Table 2-14.

Step	Action
1.	The RS and helicopter crew shall prebrief this type maneuver before the RS exits the helicopter or the RS may signal the helicopter to DEPLOY RESCUE LITTER.
2.	Approach the survivor from the rear, establishing In Close In Control (ICIC).
3.	Evaluate the survivor's condition and signal the helicopter to DEPLOY RESCUE LITTER. Keep the survivor's airway clear and survivor's back into the prevailing seas/wind. Upon reaching rotor wash, position survivor's back towards helicopter.
WARNING **TO PREVENT SHOCK, ALLOW LITTER TO CONTACT WATER PRIOR TO BEING TOUCHED.**	
4.	The helicopter should deliver the litter within 5 to 10 feet of the RS.
5.	When the litter is in the water, the RS shall disconnect the litter from the locking hoist hook and give the FM the THUMBS UP signal to indicate that you have disconnected. Place the hoisting cables to the outside of the litter.

Table 2-14. Continued

Step	Action
	NOTE The litter hoisting sling cables must be kept from interfering with the patient restraint straps, as they could become fouled under the survivor.
6.	The helicopter shall move back and left once the litter is disconnected.
7.	Keeping the survivor's airway clear and survivor's back into the prevailing seas/wind, the RS shall guide the survivor into the litter using the appropriate carry or tow.
	WARNING **SURVIVORS WEARING A BUOYANT ANTI-EXPOSURE SUIT WILL AFFECT THE FLOTATION CHARACTERISTICS OF THE LITTER.**
8.	Once the survivor is positioned in the litter, the RS shall connect the gray restraint strap under the survivor's arms and over chest.
9.	Continue connecting the remainder of the colored restraint straps as appropriate. The sequence of connection is at the discretion of the RS; however, the chest pad (black strap) shall be connected, restraining the survivor's arms under the strap. Upon completion, the RS should ensure that all restraint straps are connected and tightened as required.
	NOTE The RS may encounter some difficulty if the survivor has flotation; however, survivor flotation shall only be removed as a last resort to effect the rescue.
10.	Signal the helicopter READY FOR PICKUP.
	WARNING **TO PREVENT SHOCK, ALLOW THE LOCKING HOIST HOOK TO CONTACT WATER PRIOR TO BEING TOUCHED.** **WARNING** **THE LOCKING HOIST HOOK SHALL BE IN THE LOCKED POSITION FOR ALL LITTER RECOVERIES.**
	NOTE Prior to signaling READY FOR PICKUP the RS shall ensure all restraint straps are connected and tight, the litter hoisting cables are free and clear, and the folding couplers are tightened.

Table 2-14. Continued

Step	Action
11.	The helicopter will move in over the RS and survivor and lower the locking hoist hook. Upon reaching rotor wash, rotate litter so that the survivor's back is positioned towards helicopter. The RS shall simultaneously attach both sides of the litter hoisting sling cables to the locking hoist hook.
12.	The RS shall simultaneously attach both sides of the litter hoisting sling cables to the locking hoist hook and place the locking hoist hook in the locked position.
13.	The RS shall maintain control of the litter until the litter is plumb underneath the helicopter.
14.	RS maintains visual contact with litter and aircraft as litter is being recovered to aircraft.

16. Rescue Sling/Harness Recovery of Helicopter Rescue Swimmer Procedures. Refer to Table 2-15.

WARNING
THE RS SHALL ENSURE THEY ARE WELL INSIDE THE HELICOPTER BEFORE DISCONNECTING FROM THE LOCKING HOIST HOOK OR SLING.

Table 2-15.

Step	Action
1.	The RS and helicopter crew shall prebrief this type maneuver before the RS exits the helicopter or the RS may signal the helicopter to DEPLOY RESCUE SLING.
	WARNING **TO PREVENT SHOCK, ALLOW THE LOCKING HOIST HOOK TO CONTACT WATER PRIOR TO BEING TOUCHED.** **NOTE** The rescue sling may be omitted only if its use may hinder the delivery of the locking hoist hook (e.g., the sling swinging in rotor wash during delivery of locking hoist hook to confined areas).
2.	When the RS signals READY FOR PICKUP the helicopter shall lower the locking hoist hook with the rescue sling attached at one end to provide visibility and flotation.

Table 2-15. Continued

Step	Action
3.	The RS shall either connect the locking hoist hook directly to the lifting V-ring on the RS harness or position sling around their back and under arms, connecting free end of rescue sling to locking hoist hook.
4.	Signal the helicopter READY TO BE HOISTED.
5.	If the rescue sling is used, the RS should cross their arms over the sling upon leaving the water. With the assistance of the FM, the RS shall enter the cabin backwards.

17. Military Aviator Double Pickup (MADPU) Procedures. Refer to Table 2-16.

WARNING
IN THE EVENT OF A SUSPECTED SPINAL INJURY, THE MADPU SHOULD NOT BE USED.

Table 2-16.

Step	Action
1.	The RS and helicopter crew shall prebrief this type maneuver before the RS exits the helicopter or the RS may signal the helicopter to DEPLOY RESCUE SLING.
2.	Approach the survivor from the rear, establishing In Close In Control (ICIC) and evaluate survivor's condition.
3.	Evaluate the survivor's condition and complete parachute disentanglement procedures as required. If evaluation of survivor reveals no suspected spinal injuries, the RS will connect their self-locking hook to the survivor's lifting device.
	WARNING **TO PREVENT SHOCK, ALLOW LOCKING HOIST HOOK TO CONTACT WATER PRIOR TO BEING TOUCHED.** **NOTE** During training with two rescue swimmers, the RS will connect the self-locking hook to the survivor rescue swimmer's lifting V-ring.
4.	When the RS signals READY FOR PICKUP the helicopter shall lower the locking hoist hook with the rescue sling attached at one end to provide visibility and flotation.
5.	Connect the locking hoist hook directly to the lifting V-ring on the RS harness.

Table 2-16. Continued

Step	Action
6.	Signal the helicopter READY TO BE HOISTED.
7.	Upon clearing the water, the legs of the RS are placed around the survivor's arms until both RS and survivor are secure on the deck of the helicopter.
	WARNING **BEFORE DISCONNECTING THE SURVIVOR AND THEMSELF FROM THE LOCKING HOIST HOOK, THE RS SHALL ENSURE THE SURVIVOR IS WELL INSIDE THE HELICOPTER, IN A SITTING OR SUPINE POSITION ON THE DECK, WITH THE CABIN DOOR SHUT OR BLOCKED BY THE FM.**
8.	During the hoist, the RS shall prevent the survivor's head from contacting the bottom of the helicopter. The survivor is brought into the cabin first.

18. Sling Augmented Double Pickup (SADPU) Procedures. Refer to Table 2-17.

NOTE
FM shall lower the rescue sling to RS with one end attached to the locking hoist hook and safety straps stowed.

Table 2-17.

Step	Action
1.	The RS and helicopter crew shall pre-brief this type maneuver before the RS exits the helicopter or the RS may signal the helicopter to DEPLOY RESCUE SLING.
2.	Approach the survivor from the rear, establishing ICIC.
	WARNING **TO PREVENT SHOCK, ALLOW LOCKING HOIST HOOK TO CONTACT WATER PRIOR TO BEING TOUCHED.**
3.	Evaluate the survivor's condition and signal READY FOR PICKUP. The helicopter shall lower the locking hoist hook with the rescue sling attached at one end.
4.	The RS will place the sling in front of the survivor and pass the free end of the sling under one arm, around the back, and under the other arm.
5.	Connect the free end of the rescue sling to the locking hoist hook.

Table 2-17. Continued

Step	Action
6.	The RS shall connect the locking hoist hook directly to the lifting V-ring on the RS harness.
7.	Route the safety strap under the survivor's arms and around the chest and connect. Once connected, position the safety strap high on the chest and tighten.
	WARNING **DO NOT OVERTIGHTEN THE SAFETY STRAP AS IT MAY RESTRICT THE SURVIVOR'S ABILITY TO BREATH.**
8.	Signal the helicopter READY TO BE HOISTED.
9.	Upon clearing the water, the legs of the RS are placed around the survivor's arms until both RS and survivor are secure on the deck of the helicopter.
	WARNING **BEFORE DISCONNECTING THE SURVIVOR AND THEMSELF FROM THE LOCKING HOIST HOOK, THE RS SHALL ENSURE THE SURVIVOR IS WELL INSIDE THE HELICOPTER, IN A SITTING OR SUPINE POSITION ON THE DECK, WITH THE CABIN DOOR SHUT OR BLOCKED BY THE FM.**
10.	During the hoist, the RS shall prevent the survivor's head from contacting the bottom of the helicopter. The survivor is brought into the cabin first.

C. SURVIVOR APPROACHES, CARRIES, AND RELEASES.

1. Front Surface Approach Procedures. Refer to Table 2-18.

NOTE

Prior to executing the front surface approach, the RS should attempt to establish communications with the survivor.

The front surface approach should be used for unresponsive survivors positioned face down and towards RS.

Table 2-18.

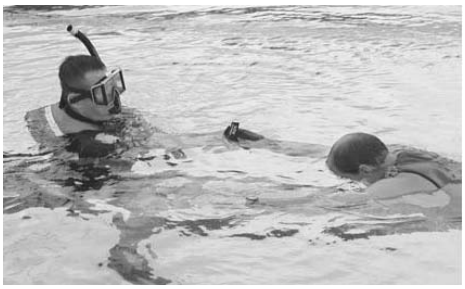
Step	Action	Example
1.	Approach the survivor with head out of the water and eyes on the survivor.	
2.	Upon reaching a safe distance, execute a quick reverse and attempt to establish communications with the survivor. If communications are established and the survivor is physically able, have the survivor turn, positioning their back toward the RS. Approach the survivor from the rear, establishing ICIC, and place in an appropriate tow or carry.	
3.	If communications cannot be established, the RS crosses their arm over the survivor's arm and firmly grasps the back of the survivor's wrist, right-hand to right wrist, or left-hand to left wrist.	
4.	The RS then leans back and pulls the survivor's arm across and in front of their body, rotating the survivor onto their back.	

Table 2-18. Continued

Step	Action	Example
5.	When the survivor's back is fully turned, the RS places the survivor in a cross-chest, collar tow, or equipment carry. (Refer to Paragraph 2.C.4. and Paragraph 2.C.5. for a description of the cross-chest, collar tow, and equipment carry).	

2. Rear Surface Approach Procedures. Refer to Table 2-19.

NOTE

Prior to executing the rear surface approach, the RS should attempt to establish communications with survivor.

The rear surface approach should be used for unresponsive survivors positioned face down and away from RS.

Table 2-19.

Step	Action	Example
1.	Approach the survivor with head out of the water and eyes on the survivor.	
2.	Upon reaching a safe distance, execute a quick reverse, and attempt to establish communications with the survivor. If communications are established and the survivor is physically able, have the survivor turn, positioning their back toward RS. Approach the survivor from the rear, establishing ICIC, and place in an appropriate tow or carry.	

Table 2-19. Continued

Step	Action	Example
3.	If communications cannot be established, the RS swims towards and over survivor's back while simultaneously placing hands under the survivor's armpits.	
4.	While maintaining ICIC, the RS and survivor rotate 180° as a unit.	
5.	Place survivor in a cross-chest, collar tow, or equipment carry. (Refer to Paragraph 2.C.4. and Paragraph 2.C.5. for a description of the cross-chest, collar tow, and equipment carry).	

3. Underwater Approach Procedures. Refer to Table 2-20.

WARNING

DO NOT USE AN UNDERWATER APPROACH WHEN A RAFT, LINES, DEBRIS, OR A PARACHUTE IS ATTACHED TO OR IN THE IMMEDIATE VICINITY OF THE SURVIVOR.

NOTE

Prior to executing the underwater approach, the RS should attempt to establish communications with the survivor.

The underwater approach should only be used as a last resort to gain control of panicking or out of control survivor.

Table 2-20.

Step	Action	Example
1.	Approach the survivor with head out of the water and eyes on the survivor.	
2.	Upon reaching a safe distance, execute a quick reverse, and attempt to establish communications with the survivor. If communications are established and the survivor is physically able, have the survivor turn, positioning their back toward RS. Approach the survivor from the rear, establishing ICIC, and place in an appropriate tow or carry.	
3.	If survivor is not cooperative, the RS shall take control of the situation by executing a surface dive and swim under survivor.	
	NOTE The RS must be aware of the added buoyancy of the wet/dry suit to avoid premature surfacing.	
4.	While under the survivor, the swimmer rotates 180° to position the survivor's back toward the front of the RS and surface.	

Table 2-20. Continued

Step	Action	Example
5.	While surfacing, place the survivor in a controlled cross-chest carry. (Refer to Paragraph 2.C.4. for a description of the controlled cross-chest carry.)	

4. Cross-Chest Carry Procedures. Refer to Table 2-21.

WARNING
DO NOT GRASP THE SURVIVOR IN A MANNER WHICH MAY RESULT IN RESTRICTED BREATHING OR CIRCULATION.

Table 2-21.

Step	Action	Example
1.	From a position behind the survivor's shoulder, the RS reaches across the chest and places their hand under the armpit of the survivor.	

Table 2-21. Continued

Step	Action	Example
2.	The survivor's shoulder is then tucked securely into the armpit of the RS with the arm firmly clamped against the survivor's chest.	
3.	The RS turns to the side with the hip directly against the small of the survivor's back and strokes vigorously with the free arm and legs.	
	NOTE The RS should avoid bicycling and use a flutter kick when performing a cross-chest carry. **NOTE** This procedure may be difficult to perform on large frame survivors and military aircrew members due to their flotation and survival equipment. The collar tow or equipment carry is appropriate in this situation.	
4.	Should the survivor be aggressive, the RS shall lock their free hand under the survivor's armpit in a controlled cross-chest carry.	

5. Collar Tow or Equipment Tow Procedures. Refer to Table 2-22.

WARNING
DO NOT GRASP THE SURVIVOR IN A MANNER WHICH MAY RESULT IN RESTRICTED BREATHING OR CIRCULATION.

The collar or equipment tow should be used when the cross-chest carry is not feasible.

Table 2-22.

Step	Action	Example
1.	Grasp the survivor's shirt collar, flotation device, or flight equipment from behind and between the shoulder blades.	
2.	The RS assumes the sidestroke position and strokes vigorously with the free arm and legs.	
	NOTE The RS should avoid bicycling and use a flutter kick when performing a collar or equipment tow.	

6. Front Head Hold Release Procedures. Refer to Table 2-23.

CAUTION

IF THE SURVIVOR WRAPS THEIR LEGS AROUND THE RS, THE RS SHALL LOCATE THE SURVIVOR'S KNEES. USING THE THUMBS, APPLY PRESSURE TO THE INSIDE PRESSURE POINTS OF THE KNEE WHILE PUSHING DOWNWARD.

The front head hold release should be used to gain control of a survivor who is panicking and has grabbed the RS from the front.

Table 2-23.

Step	Action	Example
1.	As soon as the survivor's arms are felt encircling the head, the RS takes a quick breath of air, tucks their chin down and to the side, and submerges with the survivor.	

Table 2-23. Continued

Step	Action	Example
2.	If survivor's head is on the right of RS's head, the RS brings their right arm up and over the encircling arm, and places their right-hand securely against survivor's right cheek, with the thumb hooked under the jaw pressure point. The left-hand is brought up beneath the survivor's other arm, seizing it in a grip, with the thumb just above the elbow at the pressure point.	
	NOTE Should the survivor's head be on the left side of the RS, the procedure is reversed.	
3.	In one continuous motion, the survivor's head is pressed out and around with the survivor's right arm over the RS's head and sweeping it across to the far side. This is a continuous movement until the survivor's back is to the RS.	
4.	The right-hand is shifted from the survivor's face and placed under the arm and around the survivor's chest to maintain ICIC.	

Table 2-23. Continued

Step	Action	Example
5.	The hand holding the elbow is then released and placed over the survivor's shoulder to lock in a controlled cross-chest carry.	
	NOTE Should the survivor's head be on the left side of the RS, the procedure is reversed.	

7. Rear Head Hold Release Procedures. The rear head hold release should be used to gain control of a survivor who is panicking and has grabbed the RS from the rear. Refer to Table 2-24.

Table 2-24.

Step	Action	Example
1.	As soon as the survivor's arms are felt encircling the head, the RS takes a quick breath of air, tucks their chin down and to the side, and submerges with the survivor.	
2.	The RS places both hands on survivor's top arm and pulls down toward the RS's hips.	

Table 2-24. Continued

Step	Action	Example
3.	RS rotates the hand closest to survivor's wrist and grips firmly. RS slides the other hand up to the elbow pressure point.	
4.	With the survivor's wrist in the center of the RS's chest, rotate the survivor's arm over the RS's head and place survivor's wrist in the small of their back. The hand holding the elbow is released and placed over the survivor's shoulder. The hand holding the wrist is released last and placed under the arm and around the survivor's chest to lock in a controlled cross-chest carry.	   

8. Front Head Hold Escape Procedures. The front head hold escape should be used by the RS as a last resort to free themselves from a panicking survivor. Refer to Table 2-25.

Table 2-25.

Step	Action	Example
1.	As soon as the survivor's arms are felt encircling the head, the RS takes a quick breath of air, tucks their chin down and to the side, and submerges with the survivor.	
2.	Without pause, the RS places both hands on the front of the survivor's hips with the heels of both hands against the body, fingers extended, and thumbs positioned on the hip pressure points. By forcefully pressing the hip pressure points and extending the arms, the RS pushes the survivor's body back and up toward the horizontal position. This leverage will loosen the survivor's grasp.	
3.	By tucking the chin inward and hunching the shoulders, the RS's head is freed. Survivor is then pushed away.	
4.	After pushing survivor away, RS swims well out of reach of survivor, surfaces, and decides which approach to use.	

9. Rear Head Hold Escape Procedures. The rear head hold escape should be used by the RS as a last resort to free themselves from a panicking survivor. Refer to Table 2-26.

Table 2-26.

Step	Action	Example
1.	As soon as the survivor's arms are felt encircling the head, the RS takes a quick breath of air, tucks their chin down and to the side, and submerges with the survivor.	

Table 2-26. Continued

Step	Action	Example
2.	Without pause, the RS places their hands on the underside of each of the survivor's elbows. While keeping their chin tucked in and hunching the shoulders, the RS pushes forcefully upward on the elbow pressure points, thereby freeing the head.	  
3.	After pushing survivor away, RS swims well out of reach of survivor, surfaces, and decides which approach to use.	

D. SURVIVOR RECOVERY PROCEDURES.

1. Single Survivor Procedures. Refer to Table 2-27.

WARNING

IF THE SURVIVOR APPEARS TO BE UNCONSCIOUS OR OTHERWISE INCAPACITATED, THE RS MUST TAKE IMMEDIATE ACTION TO GAIN CONTROL OF THE SURVIVOR AND KEEP THE SURVIVOR'S AIRWAY CLEAR.

NOTE

The rescue basket is the preferred method of recovery for a survivor without spinal injuries.

Table 2-27.

Step	Action
1.	Upon reaching a safe distance from the survivor, execute a quick reverse and establish communications. If communications are established and survivor is physically able, have survivor turn, positioning their back toward RS.
2.	Approach the survivor from the rear, establishing ICIC.
3.	Evaluate the survivor's condition and signal helicopter for appropriate rescue device.
4.	Signal the helicopter READY FOR PICKUP.
5.	Once the survivor is placed in rescue device, signal the helicopter READY TO BE HOISTED.

2. Multiple Survivor Procedures. Refer to Table 2-28.

NOTE

The rescue basket is the preferred method of recovery for a survivor without spinal injuries.

Table 2-28.

Step	Action
1.	Upon arrival on scene, the crew may deploy uninflated raft(s) or inflated life vests/rings from the helicopter to the survivors before the RS enters the water.
NOTE When rescuing multiple survivors, the RS must use their best judgment for prioritizing the rescue.	

Table 2-28. Continued

Step	Action
2.	For multiple survivors in a raft, complete a quick evaluation of the survivors and determine rescue priority. Extract one survivor at a time from the raft, swimming them far enough away so that the rotor wash does not affect the remaining survivors in the raft.
3.	Evaluate survivor's condition and signal helicopter for appropriate rescue device.
4.	Signal the helicopter READY FOR PICKUP.
5.	Once survivor is placed in rescue device signal the helicopter READY TO BE HOISTED.
WARNING **THE AIRCREW AND RS SHALL MAKE EVERY ATTEMPT TO CONFIRM THAT ALL SURVIVORS ARE ACCOUNTED FOR PRIOR TO PUNCTURING AND DISCARDING LIFERAFT(S). IF THERE IS ANY DOUBT CONCERNING THE NUMBER/LOCATION OF SURVIVORS, THE RAFT SHOULD BE LEFT AS IS.**	
NOTE Recording manufacturer/serial number information on liferaft(s)that are left inflated may prevent confusion and/or inadvertent/unnecessary launching of aircraft in the future.	
6.	Continue rescue sequence until all survivors are hoisted. Upon removal of the last survivor, puncture and discard liferaft.

E. PARACHUTE DISENTANGLEMENT PROCEDURES.

1. Parachute Disentanglement Procedures. Refer to Table 2-29.

WARNING
UNDER NO CIRCUMSTANCES SHALL AN RS SUBMERGE UNDER A PARACHUTE CANOPY. BOTH RS AND SURVIVOR COULD BE TRAPPED SHOULD THE CANOPY COLLAPSE AND SINK.

WARNING
THE PARACHUTE SHOULD NEVER BE ALLOWED TO COME BETWEEN THE RS AND THE SURVIVOR, AS THE RS COULD LOSE SIGHT OF THE SURVIVOR OR BECOME ENTANGLED IN THE PARACHUTE OR SUSPENSION LINES.

CAUTION

RESCUE SWIMMERS MUST BE AWARE THAT MILITARY AVIATORS WILL OFTEN BE TETHERED TO THEIR LIFERAFT AND POSSIBLY ENTANGLED IN THE RAFT'S RETAINING LINE DROGUE LINE, AND/OR THE PARACHUTE SHROUD LINES.

NOTE

There are many types of harnesses an RS may encounter. With the exception of different types of fittings, inflation of the flotation device, or removal of the parachute harness, the basic disentanglement procedures are the same. It is the responsibility of the survival shop supervisors to be aware of the specific aviator harness configurations used by DOD personnel in their units Area Of Responsibility (AOR).

NOTE

Some military harness configurations do not have a lifting V-ring or gated D-ring for hoisting.

Table 2-29.

Step	Action
1.	Approach survivor and establish communications to determine the condition of the survivor. From the rear, grasp survivor's harness between the shoulder blades, establishing ICIC, and pull into the wind and away from the parachute canopy.
2.	If applicable, remove oxygen mask.
3.	Clear survivor's head, neck, and chest area of suspension lines.
WARNING **SURVIVOR MAY BE WEARING A FLOTATION DEVICE; THEREFORE, THE RS SHALL DISCONNECT THE CHEST FITTING AND ANY HARDWARE THAT WILL RESTRICT THE INFLATION BLADDER, CAUSING POSSIBLE CHEST CRUSHING INJURIES.**	
4.	Disconnect chest fitting, if applicable, and inflate survivor's flotation device.

Table 2-29. Continued

Step	Action
	WARNING **SUSPENSION LINES SHALL BE CUT ONLY IF NECESSARY. USE CAUTION WHEN USING AN OPEN-BLADED KNIFE WHEN CUTTING SUSPENSION LINES. THE SURVIVOR AND/OR THE RS COULD BE INJURED SEVERELY IN THE PROCESS. USE OF A HOOK KNIFE (POCKET SHROUD CUTTER) IS RECOMMENDED.**
5.	Clear shoulders and arms by disconnecting shoulder fittings, if applicable. Remove shoulder straps and clear suspension lines.
6.	Release oxygen hose from seat-pan and regulator, if applicable.
7.	Disconnect and remove seat-pan from survivor, if applicable. Using the spinal cord of survivor as a reference (Spinal Highway), submerge and proceed hand over hand, while maintaining ICIC.
8.	Disconnect leg fittings, as appropriate, and clear legs of all suspension lines.
9.	Perform a final check from head to toe ensuring harness, parachute, and all suspension lines are clear of survivor.
	WARNING **THE AIRCREW AND RS SHALL MAKE EVERY ATTEMPT TO CONFIRM THAT ALL SURVIVORS ARE ACCOUNTED FOR PRIOR TO PUNCTURING AND DISCARDING LIFERAFT(S). IF THERE IS ANY DOUBT CONCERNING THE NUMBER/LOCATION OF SURVIVORS THE RAFT SHOULD BE LEFT AS IS.** **NOTE** Recording manufacturer/serial number information on liferaft(s)that are left inflated may prevent confusion and/or inadvertent/unnecessary launching of aircraft in the future.
10.	If the survivor has a liferaft, puncture and discard the liferaft.
	WARNING **IN THE EVENT OF A SUSPECTED SPINAL INJURY, THE MADPU SHOULD NOT BE USED.**
11.	Prepare survivor for pickup.
12.	Signal helicopter READY FOR PICKUP.

2. Seawater Activated Parachute Canopy Release. Some military aviators may be equipped with a Seawater Activated Parachute Canopy Release System (SEAWARS). This system is designed to automatically release the aviator's parachute risers and canopy upon immersion in seawater. The RS shall manually release all other equipment as described below. In the event SEAWARS does not function, the RS should be prepared to release the aviator's parachute manually.

3. Ballooned Canopy Disentanglement Procedures. Refer to Table 2-30.

WARNING
UNDER NO CIRCUMSTANCES SHALL AN RS SUBMERGE UNDER A PARACHUTE CANOPY. BOTH RS AND SURVIVOR COULD BE TRAPPED SHOULD THE CANOPY COLLAPSE AND SINK.

Table 2-30.

Step	Action
1.	Approach the canopy and survivor from the upwind side and establish communications to determine the condition of the survivor.
2.	Locate the suspension line closest to the survivor. Pull on the suspension line and flutter kick away from the chute to retrieve the survivor.
3.	Once the survivor is at the edge of the canopy, gain control by grasping survivor's harness between the shoulder blades and remove the remainder of the canopy from the survivor's head while maintaining ICIC. 

Table 2-30. Continued

Step	Action
4.	With survivor out from under the parachute, pull survivor into the wind and away from parachute canopy. 
5.	When clear of parachute canopy, use disentanglement procedures applicable to the type of harness the survivor is wearing.

F. AIRCRAFT RADIO VECTORING PROCEDURES.

1. Aircraft Radio Vectoring Introduction. The effectiveness of radio vectoring operations depends upon the ability of the RS to communicate accurate guidance to the aircraft pilot. Standard voice procedures reduce the chance of misunderstanding.

2. Radio Vectoring Commands. Refer to Table 2-31.

Table 2-31.

Commands	Meaning
COMMENCE RIGHT TURN	Start turn to the right
COMMENCE LEFT TURN	Start turn to the left
STOP TURN	Stop turning (aircraft wings level, maintain heading)

3. Radio Vectoring Advisory Reports. Refer to Table 2-32.

Table 2-32.

Advisories	Meaning
CONTINUE ____ TURN	Continue turning right or left.
I AM AT YOUR ____ O'CLOCK, APPROX. ____MILE(S)	The swimmer's present position and distance relative to the aircraft.
MARK, MARK, MARK	Mark position. Aircraft should be directly overhead of rescue swimmer on last mark.

4. Aircraft Radio Vectoring Procedure Notes.

a. Prior to giving vectoring commands, ensure communications are established with aircraft.

b. Local Coast Guard working frequency is used for all Coast Guard RS radio operations. During actual SAR situations, the RS may use alternate frequencies to call in other assets that may be responding.

c. Ensure that the radio antenna is not touching the water and pointed straight up; not at the aircraft.

d. Before attempting to transmit or receive, ensure that the radio speakers are free of water. In order to clear the water, blow forcefully into the speaker diaphragm, or depress the quake button.

e. When performing a radio vector, always have the aircraft turn toward your position. If the aircraft is moving from right to left of your position, have the aircraft turn left. For an aircraft moving left to right of your position, have the aircraft turn right. When vectoring at night, the aircraft red navigation light will be visible if turning left and the green navigation light will be visible if turning right.

f. Aircraft radio vectoring procedures shall continue until the aircrew re-establishes positive visual contact with the RS.

g. When you radio COMMENCE RIGHT TURN, it may be a few seconds before the aircraft starts turning. This delay is the pilot reacting to the command and the aircraft reacting to the control input. A delay will also occur after the STOP TURN command. The goal of radio vectoring is to vector an aircraft to your position with the aircraft turning the least number of turns possible.

h. The importance of having the RS continuing to talk after establishing radio contact with an aircraft cannot be overstressed. Between vectoring commands and advisories, the RS may begin telling the aircrew their condition and equipment or signals that are available. Inform the pilot of the surface winds relative to the aircraft's position and heading if possible.

i. To aid in aircraft position, it is recommended to have the aircraft turn on the hover or search lights and place them in the 12 o'clock position.

CHAPTER 3. HELICOPTER RESCUE SWIMMER TRAINING REQUIREMENTS.

A. TRAINING REQUIREMENTS INTRODUCTION.

1. Introduction.

   a. This chapter establishes minimum training requirements for Coast Guard helicopter rescue swimmers. These elements of training ensure that the operational RS maintains the skills necessary to function as a helicopter aircrew member and EMT, as well as the flexibility, strength, and endurance to assist persons in heavy seas. They also ensure that the RS (E-6 and below) that is nonoperational, maintains a minimum level of fitness that will permit a quick return to the operational level of fitness.

   b. Aviation Survival Technicians (AST) from pay grade E-7 thru E-9 are not required to participate as an operational RS. Those that choose not to participate are required to notify CG-711. This does not prohibit the AST from flying rhe Basic Aircrew (BA) position providing all requirements are maintained IAW the Coast Guard Air Operations Manual, COMDTINST M3710.1 (series).

2. Shallow Water Blackout.

WARNING
DO NOT HYPERVENTILATE PRIOR TO UNDERWATER SWIMS. HYPERVENTILATION CAN LEAD TO SHALLOW WATER BLACKOUT.

   a. During RS training, short distance underwater swimming is required. A long breath-holding ability is not needed to complete this training.

   b. The following is a simple explanation of a shallow water blackout:

      (1) Hyperventilation (excessively rapid breathing) purges the blood of CO_2, the body's cue to breathe.

      (2) The swimmer runs out of oxygen without ever feeling the need to breathe, passes out, and drowns.

3. Swim Training Facility Requirements.

   a. The 500-yard crawl swim, four 25-yard underwater swims, and the 200-yard buddy tow completed during the physical training screen exam shall be performed in a measured pool (25 yards or more). At no time shall the physical training screen exam be performed in a pond, lake, river, or ocean.

   b. All swim workouts, underwater swims, and buddy tow training should be performed in a measured pool (25 yards or more). To allow flexibility and realistic training, RS may occasionally conduct the swim workout in a pond, lake, river, or ocean.

   c. Lifesaving drills may be performed in a measured pool (25 yards or more) or under open water training conditions.

B. TRAINING REQUIREMENTS.

1. Operational Training Requirements.

   a. Training requirements as listed in this manual provide the RS with adequate time each week and broad guidelines to maintain their physical fitness. An operational RS and nonoperational RS will be tested, in the form of the Monthly Physical Training Screen Exam, (shall be documented on a locally generated form as per example in Appendix F) to ensure they are maintaining the minimum standard of physical fitness. It is the responsibility of the individual RS to ensure that they maintain the appropriate level of physical fitness.

   b. When a swimming pool is temporarily unavailable or an RS is deployed away from their home station without access to a pool, the swim workout is waived. In lieu of this, the RS shall complete the ground physical training workout three times per calendar week.

2. Frequency of Training Elements. The following table provides the frequency of training elements. Refer to Table 3-1.

Table 3-1.

Training	Frequency
Physical Training Screen Exam	One time per calendar month (operational and nonoperational rescue swimmers)
Ground Physical Training Workout	Two times per calendar week (operational and nonoperational rescue swimmers)
Swimming Workout	One time per calendar week (operational and nonoperational rescue swimmers)
Lifesaving Drills	One time per calendar month (operational and nonoperational rescue swimmers)
Litter Drills	Every 180 days from date of last completion (operational rescue swimmers only)
Harness/Parachute Disentanglement	Every 180 days from date of last completion (operational rescue swimmers only)
EMT Recurrent Classroom Training	3 hours per quarter (operational and nonoperational rescue swimers)
EMT Recurrent Practical Training	3 hours per quarter (operational and nonoperational rescue swimers)

Table 3-1. Continued

EMT 24-Hour Refresher Course	Prior to expiration of current certification (operational and nonoperational rescue swimmers)
NOTE If the 24-hour EMT core content is obtained through continuing education, the EMT 24-hour refresher course is not required (refer to Paragraph 3.B.12.).	
Aircraft Vectoring	Every 180 days from date of last completion (operational rescue swimmers only)
Helicopter RS Ops (Deployments) Not Aircraft Specific	Six per quarter… 2DD (one should be a double lift recovery), 2FF, and two sling/harness (operational rescue swimmers only)
Standardization Check	See Air Operations Manual, COMDTINST M3710.1 (series), Chapter 4
NOTE All Rescue Swimmers are required to be evaluated by an ATC Mobile Stan swimmer once every 4 years.	

3. Physical Training Screen Exam for Operational and Nonoperational Helicopter Rescue Swimmers.

WARNING
RESCUE SWIMMERS COMPLETING THE PHYSICAL TRAINING SCREEN EXAM ON A DUTY DAY SHALL NOT EXERCISE TO MUSCLE FAILURE.

a. The physical training screen exam is to be completed one time per calendar month by the operational RS and nonoperational RS. Commands shall provide sufficient time for rescue swimmers to complete the physical training screen exam as required. The physical training screen exam shall include a warm-up, movement preparation, and post exercise stretches.

b. Any RS failing to complete the monthly physical training screen exam due to leave, temporary assigned duty (TAD), night check, medical grounding, etc., is not authorized to stand duty or deploy as an operational RS until the physical training screen exam is completed. If grounding exceeds the 15 month period of the RS's current standardization check, they must complete an RS standardization check to include physical training screen exam with a local Flight Examining Board (FEB) member or an ATC Mobile evaluator prior to performing the duties of an operational RS.

NOTE

Exceptions to this rule may be granted on a case-by-case basis upon authorization from CG-711.

NOTE

Examples of movement preparation, post stretches, and exercise descriptions are outlined in Appendix E.

(1) The monthly physical training screen exam for operational RS and nonoperational RS shall be administered by the AST shop supervisor, RS Flight Examining Board member, or an RS instructor to ensure operational and nonoperational rescue swimmers are maintaining their physical fitness. Any RS that fails the monthly physical training screen exam for three consecutive months will be placed on performance probation IAW COMDTINST 1000.6

(2) All exercises shall be completed in strict adherence to proper form IAW Appendix E. Minimum repetitions shall be completed comfortably without stopping for rest.

(3) The 500-yard crawl swim shall be completed within 12 minutes with swimsuits only (goggles/mask optional, no snorkel).

(4) RS shall complete four 25-yard underwater swims consecutively with a maximum of 60 seconds rest between swims.

(5) RS shall complete the 200-yard buddy tow.

NOTE

After completion of the monthly physical training screen exam an annotation shall be documented on a locally generated Helicopter Rescue Swimmer Training Record form as per the example in Appendix F.

c. Physical Training Screen Exam Standards. Refer to Table 3-2.

Table 3-2.

Exercise	Minimum Standard
Shoulder Width Push-ups	50 (2-minute time limit)
Sit-ups	60 (2-minute time limit)
Pull-ups	5 (No time limit)
Chin-ups	5 (No time limit)
Crawl Swim	500 yards (12-minute time limit)
Underwater Swim	25 yards, repeat four times with 60 seconds rest between swims
Buddy Tow	200 yards

4. Helicopter Rescue Swimmer Training Elements. The physical training and swimming workouts are designed to maintain the flexibility, strength, and endurance an RS needs to function for 30 minutes while assisting persons in heavy seas. The levels of stress in these workouts allow the operational and nonoperational RS to complete the workout and retain sufficient strength and endurance to stand duty or return to duty and perform a rescue.

5. Physical Training Workouts.

WARNING
RESCUE SWIMMERS COMPLETING THE PHYSICAL TRAINING WORKOUT ON A DUTY DAY SHALL NOT EXERCISE TO MUSCLE FAILURE.

a. The ground physical training workout is to be completed within a 90-minute period, excluding transport time. Commands shall provide sufficient time for operational and nonoperational rescue swimmers to complete the ground physical training workout two times per calendar week. Two ground physical training periods per week should include movement preparation, warm-up, plyometrics, power, strength, endurance training, 30 minutes of energy system development, and post exercise stretches.

NOTE
Examples of movement preparation, post stretches, and exercise descriptions are outlined in Appendix E.

(1) Warm-up. Warm-up should include active dynamic stretching of the muscles being worked.

NOTE
The intention of the warm up is to increase the heart rate and blood flow to the muscles. Performing the warm-up in cold temperatures without cold weather physical training clothing may not allow the muscles to warm up properly.

(2) Movement Preparation. Dynamic stretches are preferred to properly prepare the body to perform exercise. Examples of pre-exercise warm-up routines are outlined in Appendix E.

(3) Muscular Strength and Endurance Training. Perform strength-training exercises. Examples of strength training exercises are: functional movement, resistance training, calisthenics, etc.

(4) Energy System Development. (30 minutes minimum) Maintain proper training heart rate to achieve training effect. Swimming is preferred if facilities and time are available. Examples of nonswim alternatives are running, cycling, stationary cycling machine, cross-country ski machine, stair step machine, etc.

NOTE

To find your ideal Training Heart Rate (THR), refer to http://cgweb.arsc.uscg.mil/attc/AST/index.html.

(5) Post Exercise Stretches. Refer to Appendix E, Paragraph E.A.

6. Swim Workout.

WARNING

RS COMPLETING THE SWIM WORKOUT ON A DUTY DAY SHALL NOT EXERCISE TO MUSCLE FAILURE.

WARNING

DO NOT HYPERVENTILATE PRIOR TO UNDERWATER SWIMS. HYPERVENTILATION CAN LEAD TO SHALLOW WATER BLACKOUT.

a. The swim workout is to be completed within a 90-minute period excluding transport time. Commands shall provide sufficient time for operational and nonoperational RS to complete the swim workout one time per calendar week. One period per week shall include a warm-up, movement preparation, and post exercise stretches.

NOTE

Examples of movement preparation, post stretch, and exercise descriptions are outlined in Appendix E.

(1) RS shall complete the 15-minute crawl swim and 20-minute gear swim consecutively, changing into RS gear, as listed, in 5 minutes or less.

(2) The 15-minute crawl swim shall be completed with swimsuits only (goggles/mask optional, no snorkel).

(3) RS shall complete the four 25-yard underwater swims consecutively with a maximum of 60 seconds rest between swims.

(4) RS shall complete a 300-yard buddy tow. No time limit.

b. **Swim Standards**. Refer to Table 3-3.

Table 3-3.

Exercise	Recommended Distance
Crawl Swim	600 yards minimum
Gear Swim (Mask, Fins, Snorkel)	1000 yards minimum
25 Yard Underwater Swim	Repeat four times
Buddy Tow	300 yards

7. Lifesaving Drills. The following lifesaving drills shall be completed one time a calendar month by operational rescue swimmers and nonoperational rescue swimmers in a measured pool (25 yards or more) or under open water training conditions:

NOTE

Operational deployments can be used to fulfill this requirement. If minimums are not met, the RS may not deploy operationally until they regain currency.

a. Front surface approach

b. Rear surface approach

c. Underwater approach

d. Front head hold release

e. Rear head hold release

f. Front head hold escape

g. Rear head hold escape

NOTE

After completion of the monthly lifesaving drills an annotation shall be documented on a locally generated Helicopter Rescue Swimmer Training Record form as per example in Appendix F.

8. Litter Recovery and Parachute Disentanglement. The litter recovery and parachute disentanglement drills shall be completed by operational rescue swimmers every 180 days from date of last completion.

NOTE

Operational deployments can be used to fulfill this requirement. If minimums are not met, the RS may not deploy operationally until they regain currency.

a. Perform one in-water litter recovery.

b. Perform one parachute disentanglement of an individual in the appropriate aviator harness configuration.

NOTE

After completion of the litter recovery and parachute disentanglement an annotation shall be documented on a locally generated Helicopter Rescue Swimmer Training Record form as per the example in Appendix F.

9. EMT Continuing Education. To further develop the emergency medical skill level and meet the 48 hours of continuing education (CE) required by the National Registry EMT (NREMT), it is highly encouraged that operational and nonoperational rescue swimmers acquire local Emergency Medical Service (EMS) training in addition to the EMT classroom and practical training listed in this chapter. EMS training can be found by contacting the state EMS office

or EMS training center. These local training programs can be found at EMS schools, fire departments, and military installations. Examples of courses that may be offered are:

a. Pre-Hospital Trauma Life Support (PHTLS)

b. Basic Trauma Life Support (BTLS)

c. Pediatric Education for the Professional Provider (PEPP)

d. Wilderness EMS Training

e. Emergency Medical Conference

f. EMS Response to Terrorism

g. Multiple-Casualty Incident Operations

h. CPR Instructor Course (AHA, ASHI, etc.)

NOTE

All EMT training shall be documented on the CG-5550, Emergency Medical Technician Record of Continuing Education.

10. EMT Classroom Training for Operational and Nonoperational Helicopter Rescue Swimmers. Refer to Table 3-4.

Table 3-4.

Month	EMT Classroom Subject Minimum of 3 Hours/Quarter
1st Quarter	Respiratory and Cardiac Emergencies and Automated External Defibrilator (AED) Review
Jan-Mar	Injuries to the Head and Spine
	Obstetrical and Pediatric Emergencies
2nd Quarter	Water Related Emergencies and Near-Drowning
Apr-Jun	Heat Emergencies
	Burns and Soft Tissue Injuries
3rd Quarter	Multiple-Casualty Incidents and EMS Response to Terrorism
Jul-Sep	Musculoskeletal Injuries and Acute Abdominal Emergencies
	Hypothermia and Localized Cold Injuries

Table 3-4. Continued

4th Quarter	Anatomy and Physiology/Blood Pathogens (Level I)
Oct-Dec	Assessment of the Trauma/Medical Patient
	Medical Emergencies

11. EMT Practical Training for Operational and Nonoperational Helicopter Rescue Swimmers. Refer to Table 3-5.

NOTE

All EMT training shall be documented on the CG-5550, Emergency Medical Technician Record of Continuing Education.

Table 3-5.

Month	EMT Practical Subject Minimum of 3 Hours/Quarter
1st Quarter	Management of Cardiac Arrest including use of AED
Jan-Mar	Spinal Immobilization Management
	Obstetrical and Pediatric Management
2nd Quarter	Water Related Emergency Management, Basic Life Support (BLS) and Advanced Life Support (ALS) Airway Management including use of AED
Apr-Jun	Heat Injury Management
	Burns and Soft Tissue Injury Management
3rd Quarter	BLS and ALS Airway Management including use of AED
Jul-Sep	Musculoskeletal and Abdominal Injury Management
	Hypothermia and Localized Cold Injury Management
4th Quarter	BLS and ALS Airway Management including use of AED
Oct-Dec	Patient Examination, Vital Signs, and Sample History
	Medical Emergency Management

12. EMT Re-certification for Operational and Nonoperational Helicopter Rescue Swimmers.

    a. All CG EMTs must complete a total of 72 hours of continuing education to recertify with the NREMT, prior to the expiration of their current NREMT card. All continuing education must have been completed within the current 2-year registration cycle (1 April to 31 March).

    b. The following is a breakdown of the 72 hours of Continuing Education (CE) required for NREMT re-certification:

        (1) 24-Hour Refresher Course. The basic 24-hour refresher course can be completed by one of the following methods:

            (a) Traditional Refresher Course. Attending the traditional 24-hour refresher course through the Coast Guard Emergency Medical Services School (EMSS) at Training Center Petaluma, or any DOT National Standard Basic Refresher course.

            (b) Continuing Education Topical Hours. If a formal refresher course was not completed, the CG EMT must complete the 24-hour core content through continuing education hours, ensuring they have met the mandatory and flexible core content during this re-registration cycle.

    c. In addition to the 24-hour refresher course, the CG EMT must also complete 48 hours of additional continuing EMS related education as outlined by the NREMT. The EMT classroom and practical training outlined in this chapter satisfies the 48-hour requirement. The NREMT website (www.nremt.org) lists topics and courses that can be applied towards additional CE hours. Coast Guard EMSS at Training Center Petaluma can also assist the CG EMT with questions pertaining to continuing education.

13. EMT Registration Process for Operational and Nonoperational Helicopter Rescue Swimmers. The following information describes the NREMT re-certification process.

    NREMT re-certification by the CG EMT may be completed in one of the following ways:

NOTE

CG EMTs may submit completed re-certification packages directly to the NREMT with payment or submit the NREMT package to the HS Force Manager (CG-1121). All packages mailed to the HS Force Manager will be reviewed and then forwarded to the NREMT with payment. Allow enough time (suggest minimum 15 days) for packages to arrive at HQ and be sent to the NREMT prior to the 31 March deadline. If submitting package directly to the NREMT, it is required that the member utilize a traceable or verifiable means of delivery confirmation.

a. Complete the re-certification form received in the mail from the NREMT and mail it to the NREMT or the HS Force Manager (CG-1121) with required signatures and documentation.

b. Go to the NREMT website (www.nremt.org), fill out the online re-certification form, print it, and mail it to the NREMT or the HS Force Manager (CG-1121) with required signatures and documentation.

c. Go to the NREMT website (www.nremt.org), download the appropriate re-certification form, print it out, fill it out, and mail it to the NREMT or the HS Force Manager (CG-1121) with required signatures and documentation.

14. Aircraft Vectoring. Operational rescue swimmers shall conduct a radio vectoring exercise with a rotary wing or fixed wing aircraft every 180 days from date of last completion, day or night, while on land, vessel, or water.

NOTE

Operational deployments requiring aircraft vectoring can be used to fulfill this requirement. If aircraft vectoring minimums are not met, the RS may not deploy operationally until they regain currency.

15. Helicopter Rescue Swimmer Standardization Checks. All operational rescue swimmers are required to complete an annual standardization check as outlined in the Coast Guard Air Operations Manual, COMDTINST M3710.1 (series). In addition to this requirement, all RS collecting Special Duty Assigment Pay (SDAP) shall be evaluated by an ATC Mobile Rescue Swimmer Standardization Team member once every 4 years. Commandant (CG-711) may approve waivers upon command's request in cases where it is clear that circumstances were beyond the member's control.

NOTE

After completion of the standardization check, the Helicopter Rescue Swimmer Standardization Check Sheet shall be completed and placed in the individual's unit-training jacket. The Helicopter Rescue Swimmer Standardization Check Sheet can be found on the CG Portal web page: http://cgcentral.uscg.mil.

16. Helicopter Rescue Swimmer Deployment Requirements.

a. Operational rescue swimmers shall complete six non-aircraft specific deployments per quarter. Deployments shall include two free falls, two sling/harness, and two direct deployments (one should be a double lift recovery), to water, ice, vessel, or vertical surface and recover. RS shall employ crotch strap during direct deployment recovery using a rescue mannequin or qualified training survivor.

b. Units are authorized to count RS sling/harness deployments to any suitable land area towards minimums upon the unit Commanding Officer's determination that conditions beyond the unit's control preclude a water or vertical surface deployment during the period. These events will count for minimums for rescue swimmers, pilots, and flight mechanics. While weather is a primary consideration, other factors such as absence of a safety boat or safety aircraft due to extreme operational tasking may also preclude water deployments for training. As this determination must be made at the end of the period in question, it is imperative that each RS make use of every opportunity during the quarterly period to conduct their deployments.

c. Any operational RS not completing the required quarterly deployments shall be grounded and forfeit SDAP for the effected quarter.

NOTE

Exceptions to this rule may be granted on a case-by-case basis upon authorization from CG-711.

d. Once grounded, to be eligible for RS duty standing status, an RS must have a current RS standardization check and complete a physical training screen exam with a local FEB member or an ATC Mobile evaluator prior to performing the duties of an operational RS.

17. Helicopter Rescue Swimmer Training Record. All Rescue Swimmer training shall be documented, with a date of completion, on a locally generated Helicopter Rescue Swimmer Training Record form as per the example inAppendix F. This record shall be maintained for a minimum of 18 months.

APPENDIX A. Standard Rescue Swimmer Deployment Message Format

A. USCG HELICOPTER RESCUE SWIMMER DEPLOYMENT MESSAGE – STANDARD FORMAT.

FM COGARD AIRSTA
TO COMDT COGARD WASHINGTON DC//CG-711//
COMCOGARD FORCECOM ALAMEDA CA//FC-51//
COGARD ATC MOBILE AL
BT
UNCLAS FOUO//N01330//
SUBJ: RESCUE SWIMMER SAR DEPLOYMENT

A. COAST GUARD HELICOPTER RESCUE SWIMMER MANUAL, COMDTINST M3710.4C

1. DATE AND LOCAL TIME OF DEPLOYMENT (DD MMM YY, 1225Q).

2. LOCATION OF DEPLOYMENT (75 NM SOUTH OF MOBILE AL, 00-00N 00-00W).

3. AIRCRAFT TYPE AND NUMBER (MH-65C, CGNR 6570).

4. WEATHER - Best estimate of weather at time and place of deployment (sky conditions, visibility, sea state, air temperature, water temperature).

5. DEPLOYMENT DATA.

a. Deployment/recovery method(s) used.

b. Equipment problems encountered.

c. Mishap to rescue swimmer, if any.

6. SURVIVOR DATA.

a. Number of survivors.

b. Survivor information: gender, age(s) if known.

c. Situation of survivors on arrival (in raft, swimming, etc.).

d. Physical condition upon recovery.

e. EMT treatment provided.

7. NARRATIVE DESCRIPTION OF RESCUE - Although brevity is desired be sure to provide a clear picture of what happened.

8. ADDITIONAL INFORMATION, COMMENTS OR RECOMMENDATIONS.

9. NAME, RANK, PHONE NUMBER OF POINT OF CONTACT - (F.A. Erickson, LCDR, FTS 555-1212).

BT

NNNN

B. USCG HELICOPTER RESCUE SWIMMER DEPLOYMENT MESSAGE –SAMPLE MESSAGE.

FM COGARD AIRSTA KODIAK AK
TO COMDT COGARD WASHINGTON DC//CG-711//
COMCOGARD FORCECOM ALAMEDA CA//FC-51//
COGARD ATC MOBILE AL
BT
UNCLAS FOUO//N01330//
SUBJ: RESCUE SWIMMER SAR DEPLOYMENT
A. COAST GUARD HELICOPTER RESCUE SWIMMER MANUAL, COMDTINST M3710.4C.
1. 30 JUN 09, 1225Q.
2. 185 NM EAST OF KODIAK AK 570-40N 146-36W.
3. MH-60T, CGNR 6012.
4. 2 OVC, VIS 1-2NM, WIND 170/30KTS, SEAS 10FT, OAT 50F, (EST) SWT 40F.
5. DEPLOYMENT DATA:
A. 1 SLING DEPLOYMENT, 5 BASKET RECOVERIES, 1 BARE HOOK RECOVERY.
B. DRY SUIT LEAKED IN THE FEET.
C. RS STRUCK ON FACE BY DEBRIS; 1" LACERATION ON CHEEK; TREATED UPON RTB.
6. SURVIVOR DATA:
A. 5.
B. 1-25M, 2-26M, 3-22F, 4-35F, 5-40M.
C. ALL 5 PERSONS IN RAFT WITH CANOPY, MANUFACTURER AND MODEL UNKNOWN. 4 OF THE 5 SURVIVORS WERE IN SURVIVAL SUITS, OTHER SURVIVOR IN RAIN SUIT.
D. SURVIVORS 1 2 3 AND 4 IN GOOD CONDITION, SURVIVOR 5 WAS WET AND SUFFERING FROM HYPOTHERMIA.
E. PLACED SURVIVOR 5 IN T.R.C.
7. A F/V WAS REPORTED TOW AND SINKING 185NM EAST OF KODIAK. 4 OF 5 CREWMEN DONNED SURVIVAL SUITS AND ALL CREWMAN ENTERED RAFT. MH-60T LOCATED RAFT AND ELECTED TO DEPLOY SWIMMER TO EXPEDITE RECOVERY AND ELIMINATE NEED TO HOVER OVER RAFT. WITH ONLY 40 MINUTES OF ON-SCENE FUEL REMAINING, SPEED WAS ESSENTIAL TO RECOVER ALL SURVIVORS IN ONE SORTIE. RS SLING DEPLOYED, SWAM EACH SURVIVOR AWAY FROM RAFT, AND PLACED IN BASKET FOR RECOVERY.
8. BECAUSE OF HIGH WINDS AND CONFUSED SEA STATE, RECOMMEND USE OF SMOKES FOR RS DEPLOYMENTS TO KEEP TRACK OF WIND DIRECTION. WITHOUT USE OF RS, RESCUE WOULD HAVE TAKEN TWO SORTIES WHICH WOULD HAVE PUT SURVIVORS IN DANGER.
9. F.A. ERICKSON, LCDR, FTS 555-1212.
BT
NNNN

APPENDIX B. Helicopter Rescue Swimmer Special Duty Assignment Pay (SDAP) Certification Message

A. HELICOPTER RESCUE SWIMMER SPECIAL SDAP CERTIFICATION MESSAGE-SAMPLE MESSAGE.

R 231620Z JAN 08
FM COGARD ATC MOBILE AL
TO COMDT COGARD WASHINGTON DC//CG-711//
BT
UNCLAS //N12550//
SUBJ: HELICOPTER RESCUE SWIMMER SPECIAL DUTY ASSIGNMENT PAY
A. HELICOPTER RESCUE SWIMMER MANUAL, COMDTINST M3710.4 (SERIES)
B. SPECIAL DUTY ASSIGNMENT PAY (SDAP), COMDTINST 1430.1 (SERIES)
1. IN ACCORDANCE WITH REF (A), THE FOLLOWING IS A LIST OF
ALL OPERATIONAL RESCUE SWIMMERS WHO MET THE
ELIGIBILITY REQUIREMENTS SET FORTH IN REF (B) AND
RECEIVED SDAP DURING THE 2007 CALENDAR YEAR:
ASTCS CLAY HILL
ASTC THOMAS BEAUDRY
AST1 JAMES MCKINLEY
AST1 DOUG LATHROP
AST1 DUSTIN SKARRA
AST1 JOEL SAYERS
AST1 DAVID KROLL
2. THE FOLLOWING RESCUE SWIMMERS ARE CURRENTLY
DESIGNATED AS OPERATIONAL RESCUE SWIMMERS, MEET THE
ELIGIBILITY CRITERIA OF REF (B) AND ARE DRAWING SDAP:
ASTCS CLAY HILL
ASTC THOMAS BEAUDRY
AST1 JAMES MCKINLEY
AST1 DOUG LATHROP
AST1 DUSTIN SKARRA
AST1 JOEL SAYERS
AST1 DAVID KROLL
BT
NNNN

APPENDIX C. Helicopter Rescue Swimmer Training Ensemble

A. HELICOPTER RESCUE SWIMMER TRAINING ENSEMBLE. Table C-1 provides training ensemble description.

NOTE

Organizational clothing must be made in accordance with the Uniform Regulations Manual, COMDTINST M1020.6F, Financial Resource Management Manual, COMDTINST M7100.3 (series), Federal Acquisitions Regulations (FAR), Government Accounting Office (GAO), Principles of Federal Appropriations Law, Vol. 1, Article 4.C.13, and any subsequent Comptroller General Decisions.

Table C-1.

Description	Example
Warm Weather Training Ensemble **Shirt:** Dark gray cotton or polyester blend tank top, crew neck, mock turtleneck, long or short- sleeved shirt with 3 3/4-inch RS logo on left breast. **Shorts:** Black nylon/polyester blend, lined/unlined running shorts with matching thread, drawstring/elastic waistband with 4 inch to 8 inch inseam. Any visible manufacturer logo should not exceed 1 inch. **Socks:** Plain white ankle or calf socks. Any visible manufacturer logo should not exceed 1 inch. **Shoes:** High quality athletic shoe.	 Warm Weather Training Ensemble
NOTE Black compression shorts may be worn in conjunction with running shorts as long as they do not extend past the hem of the running shorts.	

Table C-1. Continued

Description	Example
Swim Training Ensemble Male: Shorts as described above. Female: One-piece black swimsuit. Any visible manufacturer logo should not exceed 1 inch.	
NOTE Females may substitute pictured style tank top and shorts for female style. **NOTE** Shirt shall be tucked into shorts to maintain military appearance.	

Table C-1. Continued

Description	Example
Cold Weather Training Ensemble **Sweat Suit:**Dark gray crew neck/hooded, zippered/nonzippered sweatshirt, with 3 3/4-inch RS logo on left breast. Dark gray sweatpants with/without pockets, drawstring, and no RS logo. Black gloves and watch cap are optional. **NOTE** The helicopter rescue swimmer training ensemble shall be worn under the cold weather physical training uniform. **Foul Weather**: Black solid color,nylon/polyester blend, lined/unlined, zippered/nonzippered, hooded/nonhooded water proof/repellant running suit. Any visible manufacturer logo should not exceed 1 inch. **Socks:** Plain white ankle or calf socks. Any visible manufacturer logo should not exceed 1 inch. **Shoes:** High quality athletic shoe.	 Cold Weather Training Ensemble

B. LAND DEPLOYMENT ENSEMBLES.

1. Table C-2 provides land deployment ensemble descriptions with examples.

2. During a land mission, the RS is required to wear a flight suit or anti-exposure flight garment, lugged sole boots, aircrew flight helmet with the visor down, flight gloves, yellow armbands, and RS harness.

Table C-2.

Description	Example
Land Ensemble with Flight Suit. Arm bands shall be worn during deployment.	
Land Ensemble with Dry Suit.	

C. WATER DEPLOYMENT ENSEMBLES.

1. Table C-3 provides water deployment ensemble descriptions with examples.

2. RS may choose any of the following water ensembles or combination thereof based on air and water temperature variables, with mask, snorkel, fins, and RS harness. Gloves are optional.

Table C-3.

Description	Example
RS Dry Suit (Nomex).	
Shorty (3 mm).	

Table C-3. Continued

Description	Example
Core Warmer (3 mm) with Short Sleeve Rash Guard. **NOTE** Core warmer may be worn in conjunction with any wet suit ensemble to provide extra insulation. **NOTE** When wearing the core warmer by itself or in conjunction with the hooded vest, the appropriate rash guard (short sleeve, long sleeve, or full body jumpsuit) must be worn.	
Hooded Vest (3 mm Vest/5 mm Hood) with Core Warmer and Short Sleeve Rash Guard. **NOTE** Hooded vest may be worn in conjunction with any wet suit ensemble to provide extra insulation	

Table C-3. Continued

Description	Example
Jump Suit (Jelly Fish) (3 mm).	
Jump Suit (7 mm Torso and Legs/5 mm Arms).	

APPENDIX D. Helicopter Rescue Swimmer Hand Signals

A. RS DAY OR NIGHT HAND SIGNALS. Table D-1 shows the standard RS day or night hand signals.

Table D-1.

Signal		Meaning
	Raised arm with open palm facing forward.	I AM ALRIGHT
	Both arms extended vertically and crossed over the swimmer's head with fist clinched.	DEPLOY RAFT
	Hand held to ear.	MONITOR RADIO **NOTE** Hand signal may be given by RS or FM.

Table D-1. Continued

Signal	Meaning
 Both arms extended vertically over the swimmer's head with fingers interlocked.	DEPLOY RESCUE SLING
 One arm raised and extended vertically with palm open facing forward. The other arm shall be raised so that it crosses the swimmer's head and touches the extended arm at the elbow.	DEPLOY RESCUE LITTER
 Both arms raised and extended over the swimmer's head at a 45° angle with the palms open facing forward.	DEPLOY RESCUE BASKET
  Raised arm with open palm. RS pumps hand back and forth towards helicopter.	BACK AWAY

Table D-1. Continued

Signal	Meaning
 With elbow bent and fingers extended, slash throat with back and forth motion.	TERMINATE EVOLUTION **NOTE** Hand signal may be given by RS or FM if deemed necessary to terminate evolution.
 Grasp clinched fist and separate.	DISCONNECT FROM HOIST HOOK **NOTE** Hand signal may be given by RS or FM if deemed necessary to disconnect from hoist hook. **NOTE** RS shall disconnect from hook prior to giving the signal to prevent themselves from being inadvertently jerked from water.

B. RS DAY HAND SIGNALS. Table D-2 shows the standard RS day hand signals.

Table D-2.

Signal		Meaning
	Raised arm Thumb up.	READY FOR PICKUP READY TO BE HOISTED
	Vigorous waving of one arm.	IN TROUBLE, NEED ASSISTANCE (Emergency)

C. RS NIGHT/LOW VISIBILITY HAND SIGNALS. Table D-3 shows the standard RS night/low visibility hand signals.

Table D-3.

Signal		Meaning
	Wave chemical light.	READY FOR PICKUP
	Strobe on.	IN TROUBLE, NEED ASSISTANCE (Emergency)

D. RS AFTER HOOK-UP TO HOIST HOOK HAND SIGNALS. Table D-4 shows the hand signals to be used upon initial hook up by RS or once survivor has been placed in rescue device.

Table D-4.

Signal		Meaning
	Arm raised thumb up.	READY TO BE HOISTED
	Arm raised, clenched fist.	STOP HOISTING
	Arm raised thumb down.	LOWER CABLE

E. RS HAND SIGNALS FOR VERTICAL SURFACE, RESCUE SLING/HARNESS DEPLOYMENT, AND DIRECT DEPLOYMENT. Table D-5 shows direct deployment hand signals for vertical surface or water deployment. These signals are also used while the RS is attached to the hoist cable and being delivered or recovered from water, vessel, or any solid surface.

Table D-5.

Signal	Meaning
 FM View Extend arm and bend elbow to touch head with open palm.	UP
 FM View With finger pointed down, rotate forearm in horizontal circle.	DOWN

Table D-5. Continued

Signal	Meaning
 FM View Sweep horizontal using entire arm.	LEVEL OFF
 FM View Point in direction of desired movement.	MOVE IN DIRECTION INDICATED

APPENDIX E. Pre-Exercise Movements, Corrective/Static Stretches, and Exercise Description

A. MOVEMENT PREPARATION AND STATIC STRETCHING TIPS.

1. The idea behind a good warm-up and pre/post stretching regimen is to gently lengthen muscles and lubricate joints before and after any form of exercise. This will also help to improve tissue elasticity/flexibility. If done correctly, a proper warm-up and stretching regimen will help prevent injuries and increase athletic performance.

2. The following key points should be remembered while stretching:

   a. Begin with gradual mobility exercises of all the joints, dynamic stretching is preferred. This will allow the body's natural lubrication (synovial fluid) to protect the surface of your bones at these joints.

   b. Always warm up the body prior to stretching, as this increases blood flow around the body.

   c. After exercise, slowly bring your heart rate down before you begin static stretches in order to avoid blood pooling within your muscles, which can lead to cramping and dizzy spells.

   d. Never bounce during static stretches.

   e. Hold the static stretch until you feel the muscle loosen, hold for 15 seconds, release, and then repeat.

   f. While stretching, you should feel some slight discomfort. If you do not feel anything, then you may be performing the stretch incorrectly, or simply the muscle has eased off.

   g. Stop immediately if you feel any severe pain.

   h. Remember to breathe regularly and rhythmically; do not hold your breath.

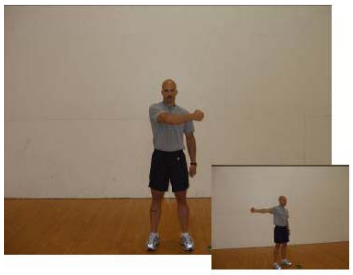
B. EXAMPLES OF MOVEMENT PREPARATION, STATIC STRETCHES, AND EXERCISE DESCRIPTIONS.

Table E-1 and Table E-2 provides proper form and execution of each maneuver. (Refer to http://cgweb.arsc.uscg.mil/attc/AST/index.html.)

Table E-1.

EXAMPLES OF MOVEMENT PREPARATION.

Front Arm Swing

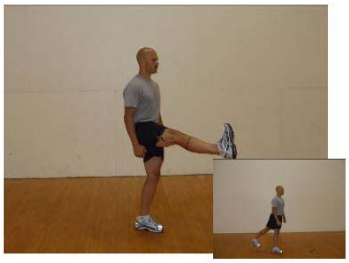


Cross Body Arm Swing

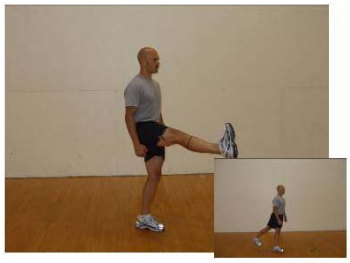
Front Arm Raise With Band

Side Arm Raise With Band

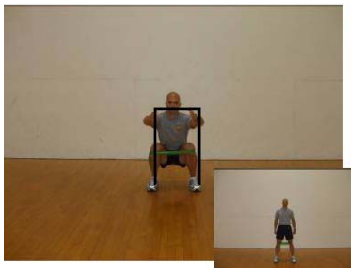
Rear Arm Raise With Band



Straight Leg Swing



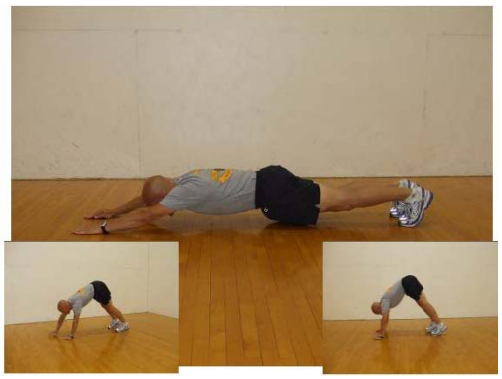
Straight Leg Swing With Band



Deep Squat With Band

Lateral Alternate Steps With Band

Hand to Instep Crawl With Multi Stretch



Inch Worm Crawl

Table E-2.

EXAMPLES OF STATIC STRETCHES	
Description	**Example**
Deltoid Stretch Cross the left arm horizontally over your chest, grasping it with either your right-hand or forearm, just above the elbow joint. Exhale, slowly pulling your upper arm in toward your chest until stretch is felt in your deltoid. Switch arms. **NOTE** The hips and shoulders should be facing forward throughout the stretch.	
Triceps Stretch Extend the left-hand down the center of your back, fingers pointing downward. Grasp the left elbow with the right-hand. Exhale slowly, pulling downward on your elbow, aiming to take your fingers along your spine until the stretch is felt in your tricep. Switch arms.	
Calf Stretch From a standing position lean forward and place the hands on the floor approximately shoulder width apart. Keeping a slight bend in the knee, straighten the legs. Gently press one or both feet towards the floor, until the stretch is felt in the calf. Switch legs. **NOTE** During the stretch, the back should remain flat and the abs in.	

Table E-2. Continued

EXAMPLES OF STATIC STRETCHES	
Description	**Example**
Swimmer Stretch While sitting on the floor, place arms behind back slightly wider than shoulder width. Gently push chest forward until stretch is felt.	
Ankle Rotations Sit on the floor and place left ankle on right knee. Rotate left ankle five times in each direction. Repeat for the opposite ankle.	
Lower Back Twist Sit on the floor crossing the left leg over the right and turn to the left, locking your right elbow behind the knee. Twist to the left until the stretch is felt in the lower back. Switch sides.	
Inner Thigh Stretch Sit on the floor with feet pressed together and elbows on knees. Keeping abs in, lean forward until the stretch is felt in your inner thighs.	

Table E-2. Continued

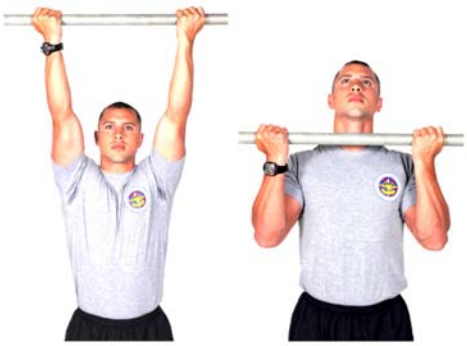
EXAMPLES OF STATIC STRETCHES	
Description	**Example**
Hip Stretch Lie on your back with knees bent. Cross left foot over right knee. Clasp hands behind right thigh and gently pull the leg in towards the chest until stretch is felt in the buttocks and hips. Switch legs.	
Hamstring Stretch Lie on your back with knees bent. Concentrating on keeping both your head and buttocks in contact with the floor, slowly extend one leg upward, grasping it with both hands, either around the calf, the hamstrings, or a combination of both. Keeping the leg straight, gently pull leg towards the chest until stretch is felt in the hamstring. Switch legs.	
Quadriceps Stretch Lie face down on the floor, resting your forehead on your right-hand. Press your hips firmly into the floor and bring your left foot up towards your buttocks. Take hold of the left foot with the left-hand and ease the foot closer to your buttocks until the stretch is felt in your quadriceps. Switch legs.	

C. EXERCISE DESCRIPTIONS. Table E-3 provides exercise descriptions with examples (refer to http://cgweb.arsc.uscg.mil/attc/AST/index.html).

Table E-3.

Description	Example
Push-ups Assume the front lean and rest position. Place your hands approximately shoulder width apart. Your back, buttocks, and legs must be straight from head to heel. Begin the exercise by lowering your entire body as a unit until your elbows are bent at 90 degrees. Return to the start position by locking your elbows.	
Sit-ups Start the exercise sitting up and your thighs flexed at 45 degrees to the body plane. The knees are flexed at 90 degrees. Forearms are crossed across the chest. The feet are held by a partner or placed under a bar. Lower the body until your lower back touches the ground and return to the start position, moving the body up and forward until the elbows contact the knees.	
Pull-ups Hang from the bar with the arms fully extended, palms facing forward. Begin by pulling yourself up until your chin is above the level of the bar. Lower yourself until the arms are fully extended. Repeat the proper number of repetitions.	

Table E-3. Continued

Chin-ups Hang from the bar with the arms fully extended, palms facing backward. Begin by pulling yourself up until your chin is above the level of the bar. Lower yourself until the arms are fully extended, repeat the proper number of repetitions.	

APPENDIX F. Helicopter Rescue Swimmer Training Record Example

A. HELICOPTER RESCUE SWIMMER TRAINING RECORD.

1. The Helicopter Rescue Swimmer Training Record, Figure F-1, shall be maintained for a period of 18 months.

2. Refer to Coast Guard Helicopter Rescue Swimmer Manual, COMDTINST M3710.4, Chapter 3, for explanation of each category.

3. Any RS medically grounded for 30 days or more must place an X in the grounded box located in the Administered By signature block of the Helicopter Rescue Swimmer Training Record. A copy of the individual's medical grounding chit shall be attached as documentation.

NAME:

UNIT:

YEAR:

HELICOPTER RESCUE SWIMMER TRAINING RECORD

	January	February	March	April	May	June
Monthly Requirements:						
Shoulder Width Pushups (50 min)						
Situps (60 min)						
Pullups (5 min)						
Chinups (5 min)						
500-yd Crawl Swim (Completed within 12 min)						
25-yd Underwater Swim (x4)						
200-yd Buddy Tow						
Lifesaving Drills (Include Date)						
Administered By: (Sign and Date)	Grounded ☐	Grounded ☐	Grounded ☐	Grounded ☐	Grounded ☐	Grounded ☐

	July	August	September	October	November	December
Monthly Requirements:						
Shoulder Width Pushups (50 min)						
Situps (60 min)						
Pullups (5 min)						
Chinups (5 min)						
500-yd Crawl Swim (Completed within 12 min)						
25-yd Underwater Swim (x4)						
200-yd Buddy Tow						
Lifesaving Drills (Include Date)						
Administered By: (Sign and Date)	Grounded ☐	Grounded ☐	Grounded ☐	Grounded ☐	Grounded ☐	Grounded ☐

Semi-Annual Requirements:	
Vector (Include Date)	
Litter (Include Date)	
Parachute Disentanglement (Include Date)	

cg9100151a

Figure F-1.