U.S. Department of
Homeland Security

United States
Coast Guard

COAST GUARD HELICOPTER RESCUE SWIMMER MANUAL

COMDTINST M3710.4D
November 2018

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

Commandant
United States Coast Guard

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COMDTINST M3710.4D
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COMMANDANT INSTRUCTION M3710.4D

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, rescue swimmers, aircrews tasked with operations, as well as customers of Coast Guard aviation.

2. ACTION. Area, district, and sector commanders, commanding officers of air stations, Asset Project Offices, cutters, bases, training commands, headquarters units, assistant commandants, Judge Advocate General, and special 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 M3710.4C, is canceled.

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

5. MAJOR CHANGES. Due to significant changes to this Manual in both context and formatting, a change list is not provided. Changes in context are highlighted in the margins with a vertical line.

6. IMPACT ASSESSMENT. Specific impacts associated with training and administrative procedures have been considered, and any questions on procedures or compliance should be directed to Commandant (CG-711).

DISTRIBUTION – SDL No. 168

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NON-STANDARD DISTRIBUTION:

7. ENVIRONMENTAL ASPECT AND IMPACT CONSIDERATIONS.

   a. The development of this Manual and the general policies contained within it have been thoroughly reviewed by the originating office in conjunction with the Office of Environmental Management, Commandant (CG-47). This Manual is Categorically Excluded (CE) under current Department of Homeland Security (DHS) Categorical Exclusion (CATEX) A3 from further environmental analysis in accordance with Implementation of the National Environmental Policy Act (NEPA), DHS Instruction Manual 023-01-001-01 (series).

   b. This Manual will not have any of the following: significant cumulative impacts on the human environment; substantial controversy or substantial change to existing environmental conditions; or inconsistencies with any Federal, State, or local laws or administrative determinations relating to environment. All future specific actions resulting from the general policy in this Manual must be individually evaluated for compliance with the National Environmental Policy Act (NEPA), Department of Homeland Security (DHS) and Coast Guard NEPA policy, and compliance with all other applicable environmental mandates.

8. DISTRIBUTION. No paper distribution will be made of this Manual. An electronic version will be located on the following Commandant (CG-612) web sites. Internet: http://www.dcms.uscg.mil/directives/ , and CGPortal: https://cg.portal.uscg.mil/library/directives/SitePages/Home.aspx . Additionally, an electronic version of this Manual will be provided via the Coast Guard Electronic Flight Bag (EFB).

9. RECORDS MANAGEMENT CONSIDERATION. This Manual has been thoroughly reviewed during the directives clearance process, and it has been determined that there are no further records scheduling requirements, in accordance with Federal Records Act, 44 U.S.C. 3101 et seq., NARA requirements, and Information and Life Cycle Management Manual COMDTINST M5212.12 (series). This policy does not create significant or substantial change to existing records management requirements.

10. FORMS/REPORTS. None.

11. REQUESTS FOR CHANGES. Proposed changes to this Manual shall be submitted to Commandant (CG-711) via the requesting unit's Commanding Officer.

MICHAEL P. RYAN /s/
Rear Admiral, U.S. Coast Guard
Assistant Commandant for Capability (CG-7)

RECORD OF CHANGES

Change Number	Date of Change	Date	By Whom Entered
Original	08 November 2018		

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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 Coast Guard Helicopter Rescue Swimmer (RS) Program, is to provide Rotary Wing (RW) stations with the deployment capability of a properly trained and conditioned person to assist distressed parties 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 mental capacity, flexibility, mobility, strength, power, agility, endurance, and equipment to function for at least 30 minutes in heavy seas, on unstable platforms, on rugged terrain during severe adverse weather conditions. The RS must also possess Emergency Medical Technician (EMT) skills in order to provide basic pre-hospital life support for the rescued individual(s). In addition, the RS shall have the survival training, knowledge, understanding, and experience to survive at sea or on land if left onscene for greater than 24 hours.

   The RS shall have the ability to safely and effectively extricate survivors from roof tops, fully understand the hazards and how to negotiate flood and swift water, and understand and utilize high angle ropes rescue techniques.

3. Rescue Restriction. Self-Contained Underwater Breathing Apparatus (SCUBA) procedures or equipment shall be neither used nor maintained by rescue swimmers.

   Rescue swimmers shall not swim under parachutes, layers of ice, 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 (PIC) must request alternate assistance through the Search and Rescue (SAR) mission coordinator or operations center.

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

B. REQUIREMENTS.

1. Training Requirements. The Coast Guard Air Operations Manual, COMDTINST M3710.1 (series), contains the RS qualification and recurrent flight training requirements. The physical training, swimming, and EMT training requirements are contained in Chapter 2 of this Manual. Failure to meet these requirements subjects the member to the provisions set forth in Air Operations Manual, COMDTINST M3710.1 (series) and Enlistments, Evaluations, and Advancements, COMDTINST M1000.2 (series).

2. Special Duty Assignment Pay. Rescue swimmers are authorized Special Duty Assignment Pay (SDAP), as provided in Special Duty Assignment Pay (SDAP), COMDTINST 1430.1 (series). To be eligible, a RS must be serving at a helicopter unit that is tasked to maintain helicopter rescue swimmers, and fulfill all requirements specified in the Coast Guard Air Operations Manual, COMDTINST M3710.1 (series), and this Manual.

   The unit Commanding Officer shall certify in writing to Commandant (CG-711), either by memorandum or electronic mail, that the member meets all eligibility requirements. This certification is due annually in January.

3. Equipment Inspection. Prior to assuming duty and conducting any flight operations, the RS shall inspect their own personal gear, all ready gear, supplemental SAR equipment, and EMT equipment IAW applicable Maintenance Procedure Cards (MPC).

4. 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).

5. Protective Clothing/Equipment. Policy, authorization, and instructions pertaining to the procurement, configuration, use, and maintenance of protective clothing and equipment authorized for helicopter rescue swimmers conducting Coast Guard missions from an aircraft are outlined in the Coast Guard Air Operations Manual, COMDTINST M3710.1 (series).

CHAPTER 2. HELICOPTER RESCUE SWIMMER TRAINING REQUIREMENTS

A. PERIODIC TRAINING REQUIREMENTS.

1. Introduction. This Chapter establishes minimum training requirements not covered in the Air Operations Manual, COMDTINST M3710.1 (series) for Coast Guard Rescue Swimmers (RS).
   Aviation Survival Technicians (AST) in the ranks of E-7 thru E-9 are not required to maintain an RS Qualification. This does not prohibit the AST from flying in the Basic Aircrew (BA) position providing all requirements are maintained In Accordance With (IAW) Air Operations Manual, COMDTINST M3710.1 (series).

2. Training. Training requirements, as listed in this Chapter, provide rescue swimmers with adequate time and guidelines for maintaining physical fitness, proficiency in nonflight training minimums, and Emergency Medical Technician (EMT) knowledge and practical skills. All flight training requirements are outlined in the Air Operations Manual, COMDTINST M3710.1 (series).
   It is the responsibility of the Shop Chief to ensure the rescue swimmers are physically training safely and properly. The Shop Chief should contact Aviation Technical Training Center (ATTC) Elizabeth City, AST A School Instructors and/or Aviation Training Center (ATC) Mobile, RS Stan Division Instructors when questions arise about how to set up safe and effective training programs.

3. Water Training Facility Requirements. The water portion of the Physical Training Assessment (PTA) and swim training sessions shall be performed in a measured pool of 25 yards or more and should have a depth of 8.5 feet or more to allow adequate space and depth for proper procedure execution.
   To allow flexibility and realistic training, rescue swimmers may occasionally conduct the swim training session in a river, ocean, lake, etc.

4. Training Records. All RS training events not tracked in Asset Logistics Management Information System (ALMIS), shall be documented on the Rescue Swimmer Training Record, which can be located on the Rescue Swimmer Standardization Division Portal, or on a locally generated equivalent indicating date of completion. This record shall be maintained at the unit for a minimum of 18 months.

   a. Non-Flight Training Requirements. The minimums for non-flight training requirements are designed to ensure the RS maintains proficiency for mission execution. These are minimum requirements, it is highly encouraged and recommended to maintain a level of performance that exceeds the listed requirements.
      In order to achieve mastery of craft, when the operational tempo allows, the physical training session should be completed three times per week and the water training session should be completed two times per week.

   b. Frequency of Non-Flight Training Requirements. Frequency of non-flight training events are prescribed in Table 2-1.

Table 2-1. Frequency of Non-Flight Training Requirements

Event	Frequency
PTA Land Portion	Once per quarter
PTA Water Portion	Once per quarter
Water Training Session	One time per calendar week
Physical Training Session	Two times per calendar week
Lifesaving Drills	Once per quarter
Litter Recovery	Every 180 days from date of last completion
Harness/Parachute Disentanglement	Every 180 days from date of last completion
EMT Recurrent Classroom	Three hours per quarter
EMT Recurrent Practical	Three hours per quarter
EMT 24-hour Recurrent Refresher	Prior to expiration of current certification

- In addition to the minimum requirements listed above, all rescue swimmers shall pass the Land and Water Portion of the PTA administered by the RS Stan Division every four years during their unit's annual standardization visit.
- Rescue swimmers that are not qualified are exempt from completing Litter Drills and Harness/Parachute disentanglement.
- The water training session is waived when a swimming pool is temporarily unavailable or an RS is deployed away from home station without access to a pool. In lieu of this, the RS shall complete the land training session three times per calendar week.
- Operational deployments can be used to fulfill the Lifesaving Drills, Litter Recovery and Harness/Parachute Disentanglement requirements.

B. TRAINING EVALUATIONS.

1. Physical Training Assessment. The PTA is an assessment of speed, strength, power, agility, endurance, and functional ability of the RS. The assessment is designed around concepts such as body awareness, movement mechanics, acceleration, deceleration, and stability, that will keep the RS fit and functional. The PTA also helps mitigate training related injuries by reducing the need to train high repetitions of the same exercise.

   a. PTA Administration. Commands shall provide sufficient time for completion of the PTA.

      The water portion and land portion shall be passed per quarter. In the event of a failure of one portion, the RS qualification is lapsed until the failed portion is passed. If it transfers to the next quarter, both portions shall be passed before the RS regains qualification. Document any failure in the member's training record.

The PTA shall be completed before entering the initial RS Qualification Syllabus, upon reporting aboard after a PCS, or after being grounded for more than 30 days.

The land portion shall be completed within one hour and the water portion shall be completed within one hour. Each portion may be, but is not required to be, completed consecutively. For the land portion no more than five minutes rest shall be allowed after the complex, no more than two minutes rest shall be allowed after every other exercise. The alternate dead lift is an authorized mode for use during the PTA. For the water portion no more than five minutes rest shall be allowed after each exercise.

Timers shall record the individual times and average times to the nearest tenth of a second. Rounding of the numbers is not authorized.

The water portion shall be completed with approved booties, fins, mask, and snorkel IAW Aviation Life Support Manual, COMDTINST M13520.1 (series).

NOTE

Any RS failing to complete the PTA is not authorized to stand duty or deploy as an RS until the PTA requirements are met.

The PTA shall be administered by the AST shop supervisor, RS Flight Examining Board member, RS Instructor or RS Stan Division Instructor.

All land portion events shall be completed IAW protocols listed in Appendix (A).

All water portion events shall be completed IAW protocols listed in Appendix (B).

b. PTA Standards. Minimum PTA Standards are prescribed in Table 2-2.

Table 2-2. Minimum Physical Training Assessment Standards

Land Portion	
Complex	Complete sub events, sprint - 27.0 seconds
Body Weight Row	12 repetitions
Pushup	30 repetitions
Side Plank	65.0 seconds
Dead Hang Pull-up	5 repetitions
300-Meter Shuttle	79.0 seconds
Water Portion	
400-Yard Gear Swim	6 minutes, 30.0 seconds, yard pool 7 minutes, 10.0 seconds, meter pool
6x50 Swim	37.0 seconds, yard pool 41.0 seconds, meter pool

Table 2-2. Minimum Physical Training Assessment Standards Continued

Water Portion (Continued)	
4x50 Buddy Tow	1 minute, 15.0 seconds, yard pool 1 minute, 24.0 seconds, meter pool
4x50 Underwater Down Swim Back	Every 1 minute, 15.0 seconds, yard pool Every 1 minute, 24.0 seconds, meter pool

2. Physical Training. Physical Training (PT) is required by the RS to maintain the flexibility, mobility, strength, power, and endurance to function for 30 minutes in heavy seas.

   Commands shall provide sufficient time for rescue swimmers to complete, at a minimum, two PT sessions per calender week. The sessions will require up to 90 minutes to complete and should include a dynamic warm-up, plyometrics, stability training, speed, agility, power, strength, energy system development, and regeneration tactics.

3. Water Training. Water Training (WT) is required by the RS to maintain swimming technique, fin efficiency, strength, power, and endurance to function for 30 minutes in heavy seas.

   Commands shall provide sufficient time for rescue swimmers to complete, at a minimum, one WT session per calendar week. Additional WT sessions are strongly recommended. The sessions will require up to 90 minutes to complete and should include a warm-up, gear swim, sprints, water confidence drills, buddy tows, and regeneration tactics.

4. Lifesaving Drills. The following lifesaving drills shall be completed as prescribed in this Manual:

   - Front surface approach
   - Rear surface approach
   - Noncompliant approach
   - Front head hold release
   - Rear head hold release
   - Front head hold escape
   - Rear head hold escape

   This should take place in a pool to allow better visibility for skill evaluation but it may be completed in open water.

5. Litter Recovery and Parachute Disentanglement Drills. The litter recovery and parachute disentanglement drills shall be completed as prescribed in this Manual. This should take place in a pool to allow better visibility for skill evaluation but it may be completed in open water.

6. EMT Recertification Requirements. All rescue swimmers must complete the continuing education requirement prior to their current National Registry of Emergency Medical Technicians (NREMT) certification expiration date.

All continuing education requirements shall be completed within the current 2 year registration cycle (1 April to 31 March).

The continuing education requirements consists of an NREMT approved refresher course and additional continuing education. The Coast Guard Recertification class at TRACEN Petaluma satisfies the refresher course requirement. The EMT knowledge and practical skills requirements outlined in this Chapter satisfy the continuing education requirement.

It is highly encouraged and recommended that EMT continuing education be obtained through partnering with Flight Surgeons, Coast Guard Clinics or local Emergency Medical Services (EMS).

Coast Guard EMT School at TRACEN Petaluma can assist with additional questions pertaining to continuing education.

Recertification registration shall be completed IAW the NREMT website requirements.

7. EMT Continuing Education. Completion of EMT continuing education shall be completed online IAW NREMT regulations.

   a. EMT Continuing Education Knowledge Requirements. EMT Continuing Education Knowledge Requirements are prescribed in Table 2-3.

Table 2-3. EMT Continuing Education Knowledge Requirements

EMT Knowledge Requirements	
1st Quarter Jan-Mar	Respiratory and Cardiac Emergencies and Automated External Defibrillator (AED) Review
	Injuries to the Head and Spine
	Obstetrical and Pediatric Emergencies
2nd Quarter Apr-Jun	Water Related Emergencies and Near-Drowning
	Heat Emergencies
	Burns and Soft Tissue Injuries
3rd Quarter Jul-Sep	Multiple-Casualty Incidents and EMS Response to Terrorism
	Musculoskeletal Injuries and Acute Abdominal Emergencies
	Hypothermia and Localized Cold Injuries
4th Quarter Oct-Dec	Anatomy and Physiology/Blood Pathogens (Level I)
	Assessment of the Trauma/Medical Patient
	Medical Emergencies

b. EMT Continuing Education Practical Skills Requirements. EMT Continuing Education Practical Skills Requirements are prescribed in Table 2-4.

Table 2-4. EMT Continuing Education Practical Skills Requirements

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

CHAPTER 3. PROCEDURES

A. DEPLOYMENT PROCEDURES.

1. Introduction. This Section describes standard deployment procedures and equipment. These procedures shall be used when the RS has assessed that the task is within their capabilities and the PIC has elected to deploy the RS.

2. Definitions.

WARNING

AN OPERATING PROCEDURE, TECHNIQUE, OR PRACTICE THAT, IF NOT 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.

3. Locking Hoist Hook. The locking hoist hook is made up of a single-gated hook with a knurled slide-bar locking mechanism and a single-eye opening. The slide-bar is a two-position lock. Full-up will lock the bail and prevent any device from coming off the hook and full-down unlocks the bail.

   The locking hoist hook shall be in the LOCKED position for the following:

   - Direct deployments of the RS to a vertical surface
   - Rescue litter recoveries

   The locking hoist hook should be in the LOCKED position for the following:

   - Rescue basket deployments and recoveries
   - Rescue litter deployments

   The locking hoist hook shall be in the UNLOCKED position for bare hook recoveries of the RS.

   The locking hoist hook should be in the UNLOCKED position for all other RS deployments and recoveries.

4. Crewmember's Aircraft Safety Belt.

WARNING

- **WHEN WORN AROUND THE WAIST, ENSURE THE BELT IS SNUG AND FULLY LATCHED TO PREVENT INADVERTENT RELEASE OF LATCH MECHANISM.**
- **WHEN WORN AROUND THE CHEST, BE AWARE OF POSSIBLE CRUSHING CHEST INJURIES IF THE RS HARNESS IS INADVERTENTLY INFLATED.**

NOTE

Manner of wear is snug around either the waist or chest.

The crewmember's aircraft safety belt, hereafter known as the gunner's belt, is a safety restraint system that should be used by the RS during flight operations when not secured in the aircraft five point seat harness.

5. Hoist Static Discharge.

The Hoist Static Discharge (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.

WARNING

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

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

There are environmental conditions that can cause the development of substantial electrical fields. These conditions include: widespread and low thick ceilings, electrical storms forming nearby, and calm sea states. The area where electrical fields meet the surface (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 the continual disturbances of the water surface in the boundary layer. There is no exact methodology for predicting when substantial electrical fields exist, only more probable conditions as described above.

The HSD should be used for personnel deployments (rescue swimmer, vertical delivery of boarding team members, etc.) unless it is 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, emergency recovery, significant vessel rigging, wrapping hazard during direct deployment, etc.).

6. Onscene Prioritization. For single and multiple survivors in the water, or other environments, the RS shall determine the priority for survivor rescue based on injuries, onscene conditions, environmental conditions, rescue asset endurance, and available equipment.

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

If there are multiple survivors, the crew may deploy an uninflated raft or inflated life vests/rings to survivors before the RS enters the water.

For multiple survivors in a raft, the RS shall determine rescue priority and ensure survivors are carried far enough away from the raft so the helicopters rotor wash does not affect the remaining survivors or the raft.

7. Raft Disposition.

WARNING
IF THERE IS ANY DOUBT CONCERNING THE NUMBER/LOCATION OF SURVIVORS, THE LIFE RAFT SHOULD BE LEFT ONSCENE.

Careful consideration should be given when determining raft disposition. The aircrew and RS should make every attempt to confirm that all survivors are accounted for prior to puncturing and discarding a life raft(s). If number of survivors cannot be determined, and the decision is made to leave an inflated raft onscene, record raft position, sea state, wind direction, wind speed, and raft manufacture/serial number. This information will help prevent confusion and/or inadvertent/unnecessary launching of additional rescue assets.

8. Deployment Methods.

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.

Five methods for RS deployments are described in this Section; Free Fall, Sling, Harness, Direct, and Disembark Deployment to Ice. The rescue basket may be utilized as an alternate deployment method. Due to RS confinement, it is not a preferred method of deployment but certain operational circumstances may dictate its use.

Direct deployments are specifically used when it is desirable for the RS to remain attached to the locking hoist hook, such as in surf, ice, swift water, vertical surfaces, or when predators are present. Basket deployments are used primarily for deploying non-RS personnel (e.g., divers and flight surgeons) or a RS when other deployment methods are not feasible. Disembark procedures are used when touch-down on ice is possible.

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

a. Free Fall Deployment. The free fall deployment was developed as a means to deploy the RS in a maritime environment without use of a hoist.

Free Fall Deployment Procedures for helicopter rescue swimmers are prescribed in Table 3-1.

WARNING

- **A FREE FALL DEPLOYMENT IS USED ONLY IN DAYLIGHT AND REQUIRES A MINIMUM WATER DEPTH OF 12 FEET AND A MAXIMUM AIRCRAFT ALTITUDE OF 15 FEET, AS DISPLAYED ON THE RADALT.**
- **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.**

Only graduates of a formal military helicopter RS program are permitted to perform free fall deployments. Exceptions to this rule may be granted on a case-by-case basis upon authorization from Commandant (CG-711).

Table 3-1. Free Fall Deployment Procedures

Step	Action
1	After FM directs RS to door, assume a sitting position in doorway with gunner's belt attached. Prior to cabin door entry RS shall: • Verify required gear is donned • Verify gunner's belt connection points Mask placement is at RS discretion and may be placed on face or front of helmet during deployment.

Table 3-1. Free Fall Deployment Procedures Continued

Step	Action
2	After FM taps RS once on chest, RS shall: • Check gear • Release gunner's belt • Give ***READY*** signal
3	After FM taps RS three times on shoulder, RS shall: • Verify altitude (maximum 15 feet) • Ensure area is clear • Deploy from helicopter Immediately upon clearing helicopter, RS assumes an upright, partially seated position with eyes on horizon, knees slightly bent, fins pointing up, and places one hand on face mask and the other arm across chest.
4	After water entry, RS shall: • Approach surface with mask clear • Signal ***I AM ALRIGHT*** • Swim toward target

b. Sling Deployment. The sling deployment was primarily developed as a means to deploy in a heavy sea maritime environment but may be used to deploy rescue swimmers or other trained personnel elsewhere.

WARNING
DUE TO THE DANGER OF FALLING OUT, THE SLING DEPLOYMENT SHALL NOT BE USED BY THOSE NOT SPECIFICALLY TRAINED IN ITS USE.

Use of the rescue sling, as developed, provides the capability to quickly egress the device when hoisted to a safe distance from a survivor or submersion into the water. To allow quick egress, use of the chest strap is not required. A sling deployment should be used at night or anytime other deployment methods are not feasible (e.g., debris in water, low visibility, questionable water depth, sea state, or high winds).

(1) Sling Deployment (Water) Procedures. Sling Deployment Procedures (Water) for helicopter rescue swimmers are prescribed in Table 3-2.

Table 3-2. Sling Deployment (Water) Procedures

Step	Action
1	After FM directs RS to door, assume a sitting position in doorway with gunner's belt attached. Prior to cabin door entry RS shall: • Verify required gear is donned • Position rescue sling around torso and under arms • Connect rescue sling V-rings to locking hoist hook • Verify gunner's belt connection points Mask placement is at RS discretion and may be placed on face or front of helmet prior to deployment.
2	After FM taps RS once on chest, RS shall: • Check gear • Don mask • Release gunner's belt • Give ***READY*** signal RS should keep arms crossed over rescue sling while being hoisted.
3	After being deployed to a safe distance above the water or water entry, RS shall: • Slip out of rescue sling • Signal ***I AM ALRIGHT*** • Swim toward target

(2) Sling Deployment (Non-Water) Procedures. Sling Deployment (Non-Water) Procedures for helicopter rescue swimmers are prescribed in Table 3-3.

Table 3-3. Sling Deployment (Non-Water) Procedures

Step	Action
1	After FM directs RS to door, assume a sitting position in doorway with gunner's belt attached. Prior to cabin door entry RS shall: • Verify required gear is donned • Position rescue sling around torso and under arms • Connect rescue sling V-rings to locking hoist hook • Verify gunner's belt connection points Mask or other authorized eye protection placement is at RS discretion and may be placed on face or front of helmet prior to deployment.

Table 3-3. Sling Deployment (Non-Water) Procedures Continued

Step	Action
2	After FM taps RS once on chest, RS shall: • Check gear • Don mask or other authorized eye protection • Release gunner's belt • Give ***READY*** signal RS should keep arms crossed over rescue sling while being hoisted.
3	After being hoisted to a safe position, RS shall: • Slip out of rescue sling • Signal ***I AM ALRIGHT*** • Proceed toward target

c. Harness Deployment. The harness deployment was developed as a means to deploy the RS, allowing the RS to maintain a semi-seated position, which allows the use of both hands when deployed to the water, land, vessel, ice, or other platforms. A harness deployment should be used at night or anytime other deployment methods are not feasible (e.g., debris in water, low visibility, questionable water depth, sea state, or high winds).

(1) Harness Deployment (Water) Procedures. Harness Deployment (Water) Procedures for helicopter rescue swimmers are prescribed in Table 3-4.

Table 3-4. Harness Deployment (Water) Procedures

Step	Action
1	After FM directs RS to door, assume a sitting position in doorway with gunner's belt attached. Prior to cabin door entry RS shall: • Verify required gear is donned • Connect harness lifting V-ring to locking hoist hook • Verify gunner's belt connection points Mask placement is at RS discretion and may be placed on face or front of helmet prior to deployment.
2	After FM taps RS once on chest, RS shall: • Check gear • Don mask • Release gunner's belt • Give ***READY*** signal

Table 3-4. Harness Deployment (Water) Procedures Continued

Step	Action
3	After FM completes load check, RS shall: • Adjust harness (as required) • Give ***READY*** signal
4	After water entry, RS shall: • Disconnect from locking hoist hook • Signal ***I AM ALRIGHT*** • Swim toward target

(2) Harness Deployment (Non-Water) Procedures. Harness Deployment (Non-Water) Procedures for helicopter rescue swimmers are prescribed in Table 3-5.

Table 3-5. Harness Deployment (Non-Water) Procedures

Step	Action
1	After FM directs RS to door, assume a sitting position in doorway with gunner's belt attached. Prior to cabin door entry RS shall: • Verify required gear is donned • Connect harness lifting V-ring to locking hoist hook • Verify gunner's belt connection points Mask or other authorized eye protection placement is at RS discretion and may be placed on face or front of helmet prior to deployment.
2	After FM taps RS once on chest, RS shall: • Check gear • Don mask or other authorized eye protection • Release gunner's belt • Give ***READY*** signal
3	After FM completes load check, RS shall: • Adjust harness (as required) • Give ***READY*** signal
4	After being hoisted to a safe position, RS shall: • Disconnect from locking hoist hook • Signal ***I AM ALRIGHT*** • Proceed toward target

d. Harness Deployment with Trail Line. The Harness Deployment with trail line was developed as a means of stabilizing/guiding the RS while being deployed to an unstable vessel or platform. 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.

WARNING

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

Proper aircraft position is critical for ensuring a safe deployment of the RS. Unlike a conventional trail line delivery of a rescue device, a harness deployment with trail line will require the RS to be lowered to a safe height while moving the aircraft to provide the necessary vertical positioning needed to deliver the RS to the target. The trail line should only be used as a method of stabilizing/guiding the RS during descent to the target. Pilots shall minimize lateral separation from the hoisting reference while maintaining proper altitude to ensure the most vertical position for deployment is maintained.

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.

Based on sea state, size of unstable vessel and/or platform, the use of the harness deployment with trail line 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 preclude the use of this deployment.

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.

(1) MH-65 Harness Deployment with Trail Line Procedures. MH-65 Harness Deployment with Trail Line Procedures for helicopter rescue swimmers are prescribed in Table 3-6.

Table 3-6. MH-65 Harness Deployment with Trail Line Procedures

Step	Action
1	After FM directs RS to door, assume a sitting position in doorway with gunner's belt attached. Prior to cabin door entry RS shall: • Verify required gear is donned • Connect harness lifting V-ring to locking hoist hook • Connect fixed eye of trail line quick-release to harness self-locking hook • Verify gunner's belt connection points Mask or other authorized eye protection placement is at RS discretion and may be placed on face or front of helmet prior to deployment.
2	After FM taps RS once on chest, RS shall: • Don mask or other authorized eye protection • Check equipment • Release gunner's belt • Give ***READY*** signal
3	After FM completes load check, RS shall: • Adjust harness (as required) • Give ***READY*** signal
4	After FM booms out, RS shall: • Assume a repel position (feet against airframe) • Maintain visual reference with FM and target • Assist FM with delivery of trail line (as required)
5	After FM delivers trail line, RS shall connect weak link end of trail line to gated eye of trail line quick-release.
6	After being hoisted to a safe position, RS shall: • Disconnect from locking hoist hook • Detach trail line • Signal ***I AM ALRIGHT*** • Proceed toward target

(2) MH-60T Harness Deployment with Trail Line Procedures. MH-60T Harness Deployment with Trail Line Procedures for helicopter rescue swimmers is prescribed in Table 3-7.

Table 3-7. MH-60T Harness Deployment with Trail Line Procedures

Step	Action
1	After FM directs RS to door, RS assumes a sitting position in doorway with gunner's belt attached. Prior to cabin door entry RS shall: • Verify required gear is donned • Connect harness lifting V-ring to locking hoist hook • Connect fixed eye of trail line quick-release to harness self-locking hook • Verify gunner's belt connection points Mask or other authorized eye protection placement is at RS discretion and may be placed on face or front of helmet prior to deployment.
2	After FM taps RS once on chest, RS shall: • Don mask or other authorized eye protection • Check equipment • Release gunner's belt • Give ***READY*** signal
3	After FM delivers trail line, RS shall connect weak link end of trail line to gated eye of trail line quick-release.
4	After FM completes load check, RS shall: • Adjust harness (as required) • Give ***READY*** signal
5	After being hoisted to a safe position, RS shall: • Disconnect from locking hoist hook • Detach trail line • Signal ***I AM ALRIGHT*** • Proceed toward target

e. Direct Deployment. The Direct Deployment encompasses both a deployment and recovery of the RS and was primarily developed as a means of ensuring the RS remained attached to the hoist cable while recovering survivors in multiple facetted environments (e.g., water, land, vessel, ice, vertical surface, tower, or other platforms).

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.

Cable management is imperative during every phase of each evolution to prevent cable entanglement by the survivor or RS.

WARNING

- **ANY TIME THE RESCUE SLING IS UTILIZED IN CONJUNCTION WITH THE QUICK STROP IT IS IMPORTANT NOT TO OVERTIGHTEN THE CHEST STRAP AS IT MAY RESTRICT THE SURVIVOR'S ABILITY TO BREATH.**
- **WHENEVER THE QUICK STROP IS USED THE POSSIBILITY EXISTS FOR THE SURVIVOR TO LOSE CONSCIOUSNESS. FAILURE TO CONNECT THE CROTCH STRAP ON AN UNCONSCIOUS OR INCAPACITATED SURVIVOR MAY RESULT IN THE SURVIVOR SLIPPING OUT.**
- **THE POSSIBILITY FOR THE SURVIVOR TO LOSE CONSCIOUSNESS IS GREATER WHEN FACING AWAY FROM THE RS. FOR THIS REASON, DURING TRAINING FLIGHTS, WHEN THE SURVIVOR IS FACING AWAY FROM THE RS, THE HOIST SHALL BE LIMITED TO 10 FEET.**

When utilizing the crotch strap, in order to maintain proper positioning of the quick strop, do not tighten until after the load is taken.

When being lowered, turning of the locking hoist hook may prevent constant visual contact of the survivor.

WARNING

ALL TRAINING HOIST EVOLUTIONS UTILIZING THE PHYSICAL GRIP RECOVERY SHALL BE CONDUCTED OVER WATER. THE HOIST HEIGHT SHALL BE LIMITED TO 10 FEET ABOVE THE WATER/HIGHEST WAVE CREST.

(1) Direct Deployment Methods.

Four methods of survivor recovery are authorized during direct deployment; Quick Strop, Double Lift, Physical Grip, and Vertical Surface.

(a) Quick Strop: In a quick strop direct deployment, the quick strop is solely used and enables the RS to quickly and safely recover a survivor. The RS is placed near the survivor, applies the quick strop, and both are hoisted together. The survivor may be hoisted facing towards or away from the RS.

(b) Double Lift: In a direct deployment recovery utilizing the double lift the rescue sling and quick strop are used together allowing the RS and survivor to be recovered together.

WARNING

DO NOT OVERTIGHTEN THE RESCUE SLING CHEST STRAP AS IT MAY RESTRICT THE SURVIVOR'S ABILITY TO BREATH.

NOTE

Based on the position, size and/or physical condition of the survivor this recovery may take up to 20 minutes to complete.

Although time consuming, the double lift is an effective means for hoisting a survivor when a semi-horizontal position hoist is warranted or anytime other deployment methods are not feasible.

(c) Physical Grip: The physical grip was developed as a last resort to recover a survivor when other rescue devices and/or recovery methods prove ineffective. This procedure is ideal where the application of current rescue devices cannot be applied (e.g., swift water, breaking surf, vertical surfaces, etc.). This recovery method is for extreme situations and should be thoroughly pre-briefed when possible. The RS should deploy with the quick strop for application once the survivor is removed from immediate danger.

WARNING

THE PHYSICAL GRIP RECOVERY MAY BECOME AN EMERGENCY IN THE EVENT THAT THE SURVIVOR GRABS THE RS PREVENTING THE APPLICATION OF A RESCUE DEVICE. IN AN EMERGENCY SITUATION, THE RS SHALL FOLLOW STANDARDIZED PHYSICAL GRIP RECOVERY PROCEDURES. THE FM SHALL IMMEDIATELY RECOGNIZE THIS SITUATION AS AN EMERGENCY AND SIMULTANEOUSLY HOIST THE RESCUE SWIMMER AND SURVIVOR. IF POSSIBLE, THE SURVIVOR IS BROUGHT INTO THE HELICOPTER FIRST, FOLLOWED BY THE RS.

(d) Vertical Surface: The direct deployment vertical surface was developed as a means to deploy a RS to a vertical surface (e.g., cliff, tower, or building). The quick strop is solely used with this recovery and allows the RS the ability to quickly and safely hoist a survivor while remaining in a semi-seated position and maintaining positive contact with the surface face. This procedure requires thorough planning and crew coordination. Briefing should include specific landmarks for insertion point and traverse route, as it may be difficult to maintain visual contact with survivor once in positive contact with surface.

WARNING

TRAVERSE ROUTE SHOULD AVOID EXPOSING SURVIVOR OR RS TO FALLING DEBRIS, ROTOR WASH, OR ANY OTHER HAZARDS. OVERHANGS SHOULD BE AVOIDED AS CONTACT WITH SURFACE MAY DAMAGE HOIST CABLE.

After predetermined route is chosen, the RS is hoisted to the general area of insertion point; then utilizing movement hand signals, the RS shall direct the aircraft to desired position, traversing the face using the prebriefed route.

WARNING

RS SHALL NOT FREE CLIMB, BUT REMAIN IN A SEATED POSITION (WAIST BENT AT 90 DEGREES, LEGS EXTENDED WITH KNEES SLIGHTLY BENT) ALLOWING HOIST CABLE TO SUPPORT WEIGHT.

Upon reaching the survivor, the RS applies the quick strop and both are hoisted together. The survivor may be hoisted facing towards or away from the RS.

WARNING

- **IN THE EVENT THE SURVIVOR GRABS THE RS, PREVENTING THE APPLICATION OF THE QUICK STROP, THE RS SHALL UTILIZE THE PHYSICAL GRIP. 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.**
- **DURING A VERTICAL SURFACE DEPLOYMENT, THE RS SHALL NOT DISCONNECT THE LOCKING HOIST HOOK FROM THEIR HARNESS.**
- **PRIOR TO TRAVERSING THE VERTICAL SURFACE, OR SIGNALING THE HELICOPTER, THE RS SHALL ENSURE HOIST CABLE IS IN LINE WITH CABIN (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.**

(2) Quick Strop Application. Quick strop application method may vary due to survivor position, size, physical condition, and shall be determined by RS after assessment. Four methods of quick strop application are listed below.

(a) Using the same arm as the quick strop is on, grasp the wrist of the survivor (right hand to left wrist or left hand to right wrist, when facing the survivor). Slide the quick strop down arm and up survivor's arm maneuvering the quick strop over survivor's head and other arm. Snug the quick strop under survivor's armpits, slide friction keeper as tight as possible, and hold the friction keeper in place with one hand.

(b) Disconnect one side of the quick strop (identified by the red webbing and silver reflective tape), feed it around survivor, back through friction keeper, and reconnect to harness self-locking hook. Snug the quick strop under survivor's armpits, slide friction keeper as tight as possible, and hold the friction keeper in place with one hand.

(c) Slide quick strop down arm and up the survivor's legs, maneuvering the quick strop under the survivor's armpits. Snug the quick strop under survivor's armpits, slide friction keeper as tight as possible, and hold it in place with one hand.

(d) Slide the quick strop down arm and over survivor's head maneuvering the quick strop under the survivor's armpits, slide friction keeper as tight as possible and hold the friction keeper in place with one hand.

WARNING

- **IT IS IMPERATIVE THE RS KEEP ONE HAND ON THE FRICTION KEEPER AS TIGHT AS POSSIBLE TO THE SURVIVOR WITH LEGS WRAPPED AROUND SURVIVOR'S ARMS UNTIL SAFE IN CABIN.**
- **THE RS SHALL ENSURE THE SURVIVOR IS WELL INSIDE CABIN, IN A SITTING OR SUPINE POSITION, WITH DOOR SHUT OR BLOCKED BY THE FM BEFORE DISCONNECTING FROM THE HOIST HOOK.**

(3) Direct Deployment (Quick Strop) Procedures. Direct Deployment (Quick Strop) Procedures for helicopter rescue swimmers are prescribed in Table 3-8.

Table 3-8. Direct Deployment (Quick Strop) Procedures

Step	Action
1	After FM directs RS to door, assume a sitting position in doorway with gunner's belt attached. Prior to cabin door entry RS shall: • Verify required gear is donned. • Connect quick strop V-rings to harness self-locking hook with webbing routed through friction keeper detachable side outboard. • Connect harness lifting V-ring to locking hoist hook. • Verify gunner's belt connection points. Mask or other authorized eye protection placement is at RS discretion and may be placed on face or front of helmet prior to deployment. Placement of quick strop during hoist is at RS discretion.
2	After FM taps RS once on chest, RS shall: • Don mask or other authorized eye protection • Check equipment • Release gunner's belt • Give ***READY*** signal
3	After FM completes load check, RS shall: • Adjust harness (as required) • Give ***READY*** signal During hoist RS shall give movement hand signals to FM.

Table 3-8. Direct Deployment (Quick Strop) Procedures Continued

Step	Action
4	Upon reaching survivor RS shall: • Assess survivor's condition • Apply quick strop with crotch strap (as required) • Verify all V-ring attachments • Verify hoist cable is free from obstruction • Give ***READY*** signal
5	During recovery hoist, RS shall: • Cradle and protect survivor. • Maintain one hand on the friction keeper. • Bring survivor in cabin first (if possible). • Ensure survivor is positioned well inside cabin with door shut or blocked by FM. • Disconnect from locking hoist hook. • Medically evaluate and provide care to survivor (as required).

(4) Direct Deployment (Double Lift) Procedures. Direct Deployment (Double Lift) Procedures for helicopter rescue swimmers are prescribed in Table 3-9.

Table 3-9. Direct Deployment (Double Lift) Procedures

Step	Action
1	After FM directs RS to door, assume a sitting position in doorway with gunner's belt attached. Prior to cabin door entry RS shall: • Verify required gear is donned. • Connect rescue sling V-rings; then quick strop V-rings to harness self-locking hook, with webbing routed through friction keeper and detachable side located outboard. • Connect harness lifting V-ring to locking hoist hook. • Verify gunner's belt connection points. Mask or other authorized eye protection placement is at RS discretion and may be placed on face or front of helmet prior to deployment. Placement of rescue sling and quick strop during hoist is at RS discretion.

Table 3-9. Direct Deployment (Double Lift) Procedures Continued

Step	Action
2	After FM taps RS once on chest, RS shall: • Don mask or other authorized eye protection • Check equipment • Release gunner's belt • Give ***READY*** signal
3	After FM completes load check, RS shall: • Adjust harness (as required) • Give ***READY*** signal During hoist RS shall give movement hand signals to FM.
4	Upon reaching survivor, RS shall: • Assess survivor's condition. • Apply rescue sling (under armpits, with chest strap secured) and quick strop (under knees, with one hand on the friction keeper). • Verify all V-ring attachments. • Verify hoist cable is free from obstruction. • Give ***READY*** signal.
5	During recovery hoist, RS shall: • Cradle and protect survivor • Maintain one hand on the friction keeper • Bring survivor in cabin first (if possible) • Ensure survivor is positioned well inside cabin, with door shut or blocked by FM • Disconnect from locking hoist hook • Medically evaluate and provide care to survivor (as required)

(5) Direct Deployment (Physical Grip) Procedures. Direct Deployment (Physical Grip) Procedures for helicopter rescue swimmers are prescribed in Table 3-10.

NOTE

- When physical grip pickup is planned, the RS and FM must prebrief what signal will be used for pickup.

- The gable grip, as prescribed in Appendix (C), is the preferred grip when performing a physical grip.

Table 3-10. Direct Deployment (Physical Grip) Procedures

Step	Action
1	After FM directs RS to door, assume a sitting position in doorway with gunner's belt attached. Prior to cabin door entry RS shall: • Verify required gear is donned. • Connect quick strop V-rings to harness self-locking hook, with webbing routed through friction keeper and detachable side located outboard. • Connect harness lifting V-ring to locking hoist hook. • Verify gunner's belt connection points. Mask or other authorized eye protection placement is at RS discretion and may be placed on face or front of helmet prior to deployment. Placement of quick strop during hoist is at RS discretion.
2	After FM taps RS once on chest, RS shall: • Don mask or other authorized eye protection • Check equipment • Release gunner's belt • Give ***READY*** signal
3	After FM completes load check, RS shall: • Adjust harness (as required) • Give ***READY*** signal During hoist RS shall give movement hand signals to FM.
4	Upon reaching survivor, RS shall: • Grab survivor, place arms under armpits, around torso, and interlock hands as prescribed in Appendix (C). • If able, wrap legs between or around survivor as a secondary. anchor point. After observing that RS has gained control of survivor (no hand signal from RS), FM shall hoist RS and survivor clear of area. If possible, RS and survivor should be air taxied to a safe location to allow application of quick strop before being hoisted into helicopter.

Table 3-10. Direct Deployment (Physical Grip) Procedures Continued

Step	Action
5	During recovery hoist (no reposition), RS shall: • Maintain physical grip of survivor. • Bring survivor in cabin first (if possible). • Ensure survivor is positioned well inside cabin with door shut or blocked by FM. • Disconnect from locking hoist hook. • Medically evaluate and provide care to survivor (as required). During recovery hoist (reposition), RS shall: • Assess survivor's condition. • Apply quick strop with crotch strap (as required). • Maintain one hand on the friction keeper. • Verify all V-ring attachments. • Verify hoist cable is free from obstruction. • Give ***READY*** signal. • Bring survivor in cabin first (if possible). • Ensure survivor is positioned well inside cabin with door shut or blocked by FM. • Disconnect from locking hoist hook. • Medically evaluate and provide care to survivor (as required).

(6) Direct Deployment (Vertical Surface) Procedures. Direct Deployment (Vertical Surface) Procedures for helicopter rescue swimmers are prescribed in Table 3-11.

Table 3-11. Direct Deployment (Vertical Surface) Procedures

Step	Action
1	After FM directs RS to door, assume a sitting position in doorway connected to ICS with gunner's belt attached. Prior to cabin door entry RS shall: • Verify required gear is donned. • Connect quick strop V-rings to harness self-locking hook, with webbing routed through friction keeper and detachable side located outboard. • Connect harness lifting V-ring to locking hoist hook. • Verify gunner's belt connection points. Mask or other authorized eye protection placement is at RS discretion and may be placed on face or front of helmet prior to deployment. Placement of quick strop during hoist is at RS discretion.
2	While sitting in doorway, RS shall be connected to ICS and participate in deployment brief.

Table 3-11. Direct Deployment (Vertical Surface) Procedures Continued

Step	Action
3	After FM taps RS once on chest, RS shall: • Disconnect ICS • Swap helmet (as required) • Don mask or other authorized eye protection • Check equipment • Release gunner's belt • Give ***READY*** signal
4	After FM completes load check, RS shall: • Adjust harness (as required) • Give ***READY*** signal During hoist RS shall give movement hand signals to FM.
5	Upon reaching insertion point, RS shall: • Gain positive contact with surface • Ensure hoist cable is plumb with helicopter (in line with cabin door) • Assume rappel position • Traverse vertical surface to survivor **NOTE** During vertical surface evolutions, the RS shall continue to give hand signals to maintain position with or at the survivor location.
6	Upon reaching survivor RS shall: • Assess survivor's condition. • Apply quick strop with crotch strap (as required). • Verify all V-ring attachments. • Verify hoist cable is plumb with helicopter (in line with cabin door). • Give ***READY*** signal. • Give directional signals, as needed, to clear vertical surface and maintain safe position.
7	During recovery hoist, RS shall: • Cradle and protect survivor. • Maintain one hand on the friction keeper. • Bring survivor in cabin first (if possible). • Ensure survivor is positioned well inside cabin with door shut or blocked by FM. • Disconnect from locking hoist hook. • Medically evaluate and provide care to survivor (as required).

f. Ice Operations. Operations over icy water and ice can be safely accomplished provided careful attention is paid to the thickness and quality of the ice. Of equal concern is the effect that ice and water in the rotor wash will have on a rescue swimmer and survivor, if air temperatures are below freezing and hoisting is to be accomplished.

The following applies to all deployments to ice:

WARNING

- **TO AVOID HAVING THE HOIST CABLE BLOWN INTO THE ROTOR ARC, THE FM SHALL TEND THE HOIST CABLE AT ALL TIMES. THE FM SHOULD MINIMIZE THE SLACK IN THE HOIST CABLE TO MINIMIZE ICE BUILD UP ON THE CABLE DUE TO EXTENSIVE CONTACT WITH ICE AND SNOW. WHEN NECESSARY, THE FM SHOULD TUG THE HOIST CABLE TO GET THE ATTENTION OF THE RS.**
- **THE HOIST CABLE SHOULD NOT BE USED TO PULL THE RS ACROSS THE ICE, DUE TO THE RISK OF POSSIBLE INJURY TO THE RS.**
- **WHILE ON THE ICE, THE RS SHOULD PERIODICALLY VIEW THE AIRCRAFT TO INCREASE SITUATIONAL AWARENESS.**
- **IF THE RS FALLS THROUGH THE ICE WHILE CONNECTED TO THE HOIST HOOK, EVERY ATTEMPT SHOULD BE MADE TO CLIMB OUT USING APPROPRIATE EQUIPMENT, ICE AWLS, CLEATS, ETC., PRIOR TO SIGNALING FOR EMERGENCY PICKUP.**

WARNING

- **SMOOTH ICE PROVIDES AN ALMOST FRICTIONLESS SURFACE, DO NOT EXPOSE SURVIVOR TO ROTOR WASH PRIOR TO RS CONTACT.**
- **WHEN PERFORMING A MULTIPLE SURVIVOR RECOVERY, THE RS MAY DISCONNECT FROM HOIST HOOK ENABLING MOVEMENT BETWEEN SURVIVORS. DISCONNECTION SHOULD ONLY OCCUR FOLLOWING POSITIVE DISCONNECT FROM HOIST HOOK SIGNAL CONFIRMATION BETWEEN RS AND FM.**

(1) Helicopter Ice Disembarkment Deployment. The helicopter ice disembarkment deployment is used only when the helicopter has touched down on the ice. Utilizing this method, the RS disembarks from the helicopter with the hoist cable attached and tended by the

FM. The primary function of the hoist cable is to prevent the RS from being swept under the ice in the event he/she falls through. The hoist cable permits a more expedient and safer recovery of the RS in the event the RS falls through the ice or is injured. Secondary functions included retrieval and guide for survivors. Units to which this procedure is applicable will carry the required additional SAR equipment.

When performing a multiple survivor recovery, the hoist cable may be used to guide survivors to the helicopter. If used, the RS and FM shall maintain positive tension on cable, providing a handhold for survivors as they walk to helicopter. This procedure shall be prebriefed prior to use.

(2) Helicopter Ice Disembarkment Deployment Procedures. Helicopter Ice Disembarkment Deployment Procedures for helicopter rescue swimmers are prescribed in Table 3-12.

Table 3-12. Ice Disembarkment Deployment Procedures

Step	Action
1	After FM directs RS to door, assume a sitting position in doorway with gunner's belt attached. Prior to cabin door entry RS shall: • Verify required gear is donned. • Connect quick strop V-rings to harness self-locking hook, with webbing routed through friction keeper and detachable side located outboard. • Connect harness lifting V-ring to locking hoist hook. • Verify gunner's belt connection points. Mask or other authorized eye protection placement is at RS discretion and may be placed on face or front of helmet prior to deployment. Placement of quick strop during deployment is at RS discretion.
2	After FM taps RS once on chest, RS shall: • Check gear • Don mask or other authorized eye protection • Release gunner's belt • Give ***READY*** signal
3	After FM taps RS three times on shoulder, RS shall: • Verify helicopter is touching ice (light on wheels) • Ensure area is clear • Deploy from helicopter (step onto ice) • Proceed toward survivor

Table 3-12. Ice Disembarkment Deployment Procedures Continued

Step	Action
4	Upon reaching survivor RS shall: • Assess survivor's condition • Apply quick strop with crotch strap (as required) • Verify all V-ring attachments • Verify hoist cable is free from obstruction • Give ***READY*** signal
5	During recovery hoist, RS shall: • Cradle and protect survivor. • Maintain one hand on the friction keeper. • Walk survivor back to helicopter. • Ensure survivor is positioned well inside cabin with door shut or blocked by FM. • Disconnect from locking hoist hook. • Medically evaluate and provide care to survivor (as required).

(3) Direct Deployment Ice Procedures. The Direct Deployment to ice is used when the ice will not support the weight of the helicopter but can support the weight of the RS, the ice is too thin to support the weight of the RS, the survivor has fallen through the ice, or any other time deemed necessary by the aircrew. Direct Deployment (Quick Strop) procedures outlined in Paragraph 3.A.8.e.(3) shall be used when conducting a Direct Deployment to Ice.

During this procedure the RS my traverse the ice to reach the survivor.

If rotor wash is negatively affecting the RS, the RS should give the ***BACK AWAY*** signal and assume a safe position (e.g., kneeling, sitting, or laying down) until the helicopter has repositioned.

B. SURVIVOR APPROACHES.

1. Introduction. This Section describes standard survivor approaches.

2. Methods. There are three approaches; the Front Surface, Rear Surface, and Noncompliant approach.

These methods were developed to provide a safe and effective means to approach and gain positive control of a survivor in the water.

WARNING
CARE MUST BE TAKEN AS TO NOT GRASP THE SURVIVOR IN A MANNER WHICH MAY RESULT IN RESTRICTED BREATHING OR CIRCULATION.

NOTE

- Prior to executing an approach, the RS should attempt to establish communication with the survivor.
- If survivor encircles the RS while performing an approach, the RS should immediately transition into an appropriate release or escape as prescribed in Paragraph 3.C. and Paragraph 3.D. of this Chapter.

a. Front Surface Approach. The Front Surface Approach Procedures prescribed in Table 3-13 should be used for an unresponsive survivor positioned face down and towards the RS.

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Table 3-13. Front Surface Approach Procedures

Step	Action
1	Approach survivor with head out of water and eyes on survivor.
2	Attempt to establish communication with survivor. • If communication is established and survivor is able: - Have survivor turn placing back towards RS. - RS shall approach from rear and place survivor in proper carry as prescribed in Paragraph 3.E. • If communications are not established, RS shall assess the situation and take necessary actions to safely approach the survivor.
3	Upon reaching a safe distance: • Execute a quick reverse. • Firmly grasp back of survivor's wrist (right hand to left wrist, or left hand to right wrist). • RS will firmly grasp survivor's tricep with free hand. • From this position, use both hands to pull survivor's arm across rescue swimmer's body, rotating the survivor on their back.
4	When survivor is rotated on their back, RS shall: • Gain control. • Place in proper carry as prescribed in Paragraph 3.E. • Establish communication. • Assess survivor's condition. • Perform a Safety Check as prescribed in Paragraph 3.F. • Determine rescue device and signal helicopter.

b. Rear Surface Approach. The Rear Surface Approach Procedures prescribed in Table 3-14 should be used for an unresponsive survivor positioned face down and away from the RS.

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NOTE

If survivor is wearing a survival suit or flotation device, swimming over survivor's back may not be feasible. In this circumstance, RS should approach survivor from the side prior to securing a controlled cross chest carry as prescribed in Paragraph 3.E. of this Chapter.

Table 3-14. Rear Surface Approach Procedures

Step	Action
1	Approach survivor with head out of water and eyes on survivor.
2	Attempt to establish communication with survivor. • If communication is established: - RS shall approach from rear and place survivor in proper carry as prescribed in Paragraph 3.E. • If communication is not established, RS shall assess the situation and take necessary actions to safely approach the survivor.
3	Upon reaching survivor, RS shall: • Swim over survivor's back. • Secure survivor in a controlled cross chest carry as prescribed in Paragraph 3.E. • Rotate survivor onto back.
4	When survivor is rotated on their back, RS shall: • Establish communication. • Assess survivor's condition. • Perform a Safety Check as prescribed in Paragraph 3.F. • Determine rescue device and signal helicopter.

c. Noncompliant Approach. The Noncompliant Approach Procedures prescribed in Table 3-15 should be used to gain control of survivors with an altered mental state.

NOTE

If an aggressive/panicked survivor happens to encircle the RS while performing the noncompliant approach, the RS should immediately transition into an appropriate release or escape as prescribed in Paragraph 3.C. and Paragraph 3.D.

Table 3-15. Noncompliant Approach Procedures

Step	Action
1	Approach survivor with head out of water and eyes on survivor.
2	Attempt to establish communication with survivor. • If communication is established and survivor is able: - Have survivor turn placing back towards RS. - RS shall approach from rear and place survivor in proper carry as prescribed in Paragraph 3.E. • If communication is not established, RS shall assess the situation and take necessary actions to safely approach the survivor.
3	Upon reaching a safe distance, RS shall: • Cautiously approach survivor while anticipating any attempt from the survivor to encircle or grab the RS. • Once survivor is within reach, initiate contact by placing either hand on survivor's opposite chest/shoulder to stop any forward momentum. - Maintaining positioning of the hand on chest/shoulder, use free hand to secure survivor's wrist (left hand to right wrist or right hand to left wrist). - Once control is established, transition hand from survivor's chest/shoulder under survivor's arm and firmly grasp survivor's tricep. • From this position, use both hands to pull survivor's arm across rescue swimmer's body, rotating survivor on their back.
4	When survivor is rotated on their back, RS shall: • Immediately secure survivor in a controlled cross chest carry as prescribed in Paragraph 3.E. • Gain control. • Establish communication. • Assess survivor's condition. • Perform a Safety Check as prescribed in Paragraph 3.F. • Determine rescue device and signal helicopter.

C. SURVIVOR RELEASES.

1. Introduction. This Section describes standard survivor release procedures.

2. Methods. There are two standard releases; the Front Head Hold and the Rear Head Hold.

   These methods were developed to allow the RS to establish a positive cross chest or control cross chest carry with an aggressive/panicked survivor.

WARNING

- **ONCE THE RELEASE IS COMPLETE, CARE MUST BE TAKEN BY THE RS NOT TO CARRY THE SURVIVOR IN A MANNER WHICH MAY RESULT IN RESTRICTED BREATHING OR CIRCULATION.**
- **IF THE SURVIVOR BECOMES SUBMERGED AT ANYTIME DURING THE FRONT OR REAR HEAD HOLD RELEASE, THE RS SHALL IMMEDIATELY GAIN CONTROL AND SURFACE WITH THE SURVIVOR TO ENSURE THE AIRWAY IS PROTECTED AND MAINTAINED.**

NOTE

Cross Chest Control is a stationary technique used to maintain survivor's position, it is not to be confused with the Controlled Cross Chest Carry prescribed in Paragraph 3.E.

a. Front Head Hold Release. The Front Head Hold Release Procedures prescribed in Table 3-16 should be used to gain control of an aggressive/panicked survivor that has grabbed the RS from the front.

Table 3-16. Front Head Hold Release Procedures

Step	Action
1	Survivor's arms encircle the rescue swimmer's head from the front: • RS takes a quick breath of air • Tucks chin down and to the side
2	Positioning: • RS firmly grasps both elbow/tricep areas of the survivor.
3	In one continuous motion: • Push up and rotate the survivor's elbow/triceps area while simultaneously keeping chin tucked and ducking head under survivor's arms. • Maintain control of survivor's closest elbow/tricep area. • This is a continuous motion until the survivor's back is to the RS.

Table 3-16. Front Head Hold Release Procedures Continued

Step	Action
4	From a position behind the survivor, RS shall: • Reach free hand over survivor's near shoulder. • Initiate cross chest control. • Release survivor's elbow/tricep. • Transition free hand around survivor's back and under arm. • Place in proper carry as prescribed in Paragraph 3.E.
5	When survivor is rotated on their back: • Establish communications with survivor. • Assess survivor's condition. • Perform a Safety Check as prescribed in Paragraph 3.F. • Determine rescue device and signal helicopter.

b. Rear Head Hold Release. The Rear Head Hold Release Procedures prescribed in Table 3-17 should be used to gain control of an aggressive/panicked survivor that has grabbed the RS from the rear.

Table 3-17. Rear Head Hold Release Procedures

Step	Action
1	Survivor's arms encircle the rescue swimmer's head from the rear: • RS takes a quick breath of air • Tucks chin down and to the side
2	Positioning: • RS firmly grasps both elbow/tricep areas of the survivor.
3	In one continuous motion: • Push up and rotate the survivor's elbow/triceps area while simultaneously keeping chin tucked and ducking head under survivor's arms. • Maintain control of survivor's closest elbow/tricep area. • This is a continuous motion until the survivor's back is to the RS.

Table 3-17. Rear Head Hold Release Procedures Continued

Step	Action
4	From a position behind the survivor, RS shall: • Reach free hand over survivor's far shoulder. • Initiate cross chest control. • Release survivor's elbow/tricep. • Transition free hand under arm. • Place in proper carry as prescribed in Paragraph 3.E.
5	When survivor is rotated on their back: • Establish communications with survivor. • Assess survivor's condition. • Perform a Safety Check as prescribed in Paragraph 3.F. • Determine rescue device and signal helicopter.

D. SURVIVOR ESCAPES.

1. Introduction. This Section describes standard survivor escape procedures.

2. Methods. There are two standard escapes; the Front Head Hold and Rear Head Hold.

   These methods were developed to allow the RS to release positive control of an aggressive/panicked survivor, if RS is unable to complete a Front or Rear Head Hold Release as prescribed in Paragraph 3.C.

   a. Front Head Hold Escape. The Front Head Hold Escape Procedures prescribed in Table 3-18 should be used to get free from an aggressive/panicked survivor that has grabbed the RS from the front.

Table 3-18. Front Head Hold Escape Procedures

Step	Action
1	Survivor's arms encircle the rescue swimmer's head from the front: • RS takes a quick breath of air • Tucks chin down and to the side
2	Positioning: • RS firmly grasps both elbow/tricep areas of the survivor.

Table 3-18. Front Head Hold Escape Procedures Continued

Step	Action
3	In one continuous motion: • Push up and rotate the survivor's elbow/triceps area while simultaneously keeping chin tucked and ducking head under survivor's arms. • Once free, RS swims safely out of reach of survivor.
4	After reaching a safe distance, RS will decide which approach to use as prescribed in Paragraph 3.B.

b. Rear Head Hold Escape. The Rear Head Hold Escape Procedures prescribed in Table 3-19 should be used to get free from an aggressive/panicked survivor that has grabbed the RS from the rear.

Table 3-19. Rear Head Hold Escape Procedures

Step	Action
1	Survivor's arms encircle the rescue swimmer's head from behind: • RS takes a quick breath of air • Tucks chin down and to the side
2	Positioning: • RS firmly grasps both elbow/tricep areas of the survivor.
3	In one continuous motion: • Push up and rotate the survivor's elbow/triceps area while simultaneously keeping chin tucked and ducking head under survivor's arms. • Once free, RS swims safely out of reach of survivor.
4	After reaching a safe distance, RS will decide which approach to use as prescribed in Paragraph 3.B.

E. SURVIVOR CARRIES.

1. Introduction. This Section describes standard survivor carries.

2. Methods. There are three standard survivor carry methods; the Cross Chest, Controlled Cross Chest, and Collar/Equipment Tow.

   These methods for towing a survivor were developed to provide an effective way to maintain control and keep airways clear.

WARNING
DO NOT CARRY THE SURVIVOR IN ANY MANNER THAT MAY RESULT IN RESTRICTED BREATHING OR CIRCULATION.

NOTE

- Regardless of the carry method chosen, the RS should position the survivor's back into the prevailing seas/wind to aid in airway management.

- During the recovery hoist, upon reaching rotor wash, position survivor's back towards helicopter.

a. Cross Chest Carry. The Cross Chest Carry Procedures prescribed in Table 3-20 should be used for responsive and unresponsive survivors.

Table 3-20. Cross Chest Carry Procedures

Step	Action
1	From a position behind the survivor: • Reach over survivor's shoulder and across the chest • Place hand under armpit of survivor • Survivor's shoulder is tucked securely into rescue swimmer's armpit • Rescue swimmer's arm firmly clamped against survivor's chest
2	When survivor is on their back, the RS turns to side placing hip directly against survivor's back.

b. Controlled Cross Chest Carry. The Controlled Cross Chest Carry Procedures prescribed in Table 3-21 should be used for an aggressive/panicked survivor.

NOTE

- The Seatbelt Grip, as prescribed in Appendix (C), is the preferred grip when performing a Controlled Cross Chest Carry.

- If RS is unable to apply the Seatbelt Grip, RS should decide which variation of the Controlled Cross Chest Carry Grip to use as prescribed in Appendix (C).

- RS may free up a hand prior to receiving the rescue device by using dominant carry arm to gain a firm grasp of webbing located on the RS harness. Refer to Harness Carry Procedures as prescribed in Appendix (C).

Table 3-21. Controlled Cross Chest Carry Procedures

Step	Action
1	From a position behind the survivor: • Reach over survivor's shoulder and across the chest. • Place hand under armpit of survivor. • Interlock free hand with hand across chest as prescribed in Appendix (C). • Survivor's shoulder is tucked securely into rescue swimmer's armpit. • Rescue swimmer's arm firmly clamped against survivor's chest.
2	When survivor is on their back, the RS turns to side placing hip directly against survivor's back.

c. Collar/Equipment Tow Carry. The Collar/Equipment Tow Carry Procedures prescribed in Table 3-20 should be used for responsive and unresponsive survivors.

Table 3-22. Collar/Equipment Tow Carry Procedures

Step	Action
1	From a position behind the survivor, grasp the survivor's shirt collar or flotation/flight equipment.
2	When survivor is on their back, the RS assumes the sidestroke position.

F. SAFETY CHECK PROCEDURES.

1. Introduction. This Section describes how to properly execute safety checks when the RS cannot visually confirm survivor is clear of all debris.

WARNING
IN ORDER TO PREVENT SHOCK, ALLOW ALL DEVICES TO TOUCH WATER, VESSEL, LAND, ETC., BEFORE HANDLING.

2. Methods. There are two safety check procedures described in this Chapter; the Spinal Highway Procedure and the Side Control Procedure.

WARNING
- **THE RS SHALL DETERMINE WHICH PROCEDURE TO USE BASED ON SURVIVOR AND ONSCENE CONDITIONS.**
- **FLUTTER KICK THROUGHOUT THESE PROCEDURES TO KEEP THE SURVIVOR'S HEAD ABOVE THE WATER.**

NOTE

- A full secondary sweep is only required on downed aviators.
- Communication between the RS and survivor is critical to the successful completion of these procedures.

a. Spinal Highway Procedure. The Spinal Highway Procedure prescribed in Table 3-23 should be used when it is questionable whether or not the survivor is entangled in any sort of debris. This procedure shall not be used when a spinal injury is suspected.

Table 3-23. Spinal Highway Procedures

Step	Action
1	Perform approach procedures in Paragraph 3.B.
2	Brief survivor that a safety check will be completed for hoist preparation. • Clear head, neck, chest area, shoulders, and arms.
3	Brief survivor before submerging to clear the legs. • Utilize the hand over hand method to work down survivor's spine placing head just below survivor's tailbone. • Clear legs. • Utilize hand over hand method back up survivor's spine. • Place in proper carry.

b. Side Control Procedure. The Side Control Procedure prescribed in Table 3-24 should be used when it is questionable whether or not the survivor is entangled in any sort of debris. This is the preferred method when spinal injury is suspected.

Table 3-24. Side Control Procedures

Step	Action
1	Perform approach procedures in Paragraph 3.B.
2	Brief survivor that a safety check will be completed for hoist preparation. • Clear head, neck, chest area, shoulders, and arms.
3	Brief survivor before moving down the side of their body to clear the legs. • Using the survivor's waistline as a reference, grasp the clothing at survivor's waist and move to their side. • Use free hand to clear the survivor's leg. • Once leg is clear reverse procedure to move back to survivor's head. • Repeat for the other side. • Place in proper carry.

G. RECOVERY PROCEDURES.

1. Introduction. This Section describes standard recovery procedures and equipment being used.

WARNING

IN ORDER TO PREVENT SHOCK, ALLOW ALL DEVICES TO TOUCH WATER, VESSEL, LAND, ETC., BEFORE HANDLING.

2. Methods. There are five recovery procedures described in this Chapter; the Rescue Basket Recovery, the Litter Recovery, the Sling Augmented Double Pick-up (SADPU) Recovery, the Military Augmented Double Pick-up (MADPU), and the Sling/Harness Recovery of the RS.

   These methods were developed to provide safe and effective means of recovery.

   a. Rescue Basket Recovery. The Rescue Basket Recovery Procedures prescribed in Table 3-25 is a rescue device that provides a measure of protection for the individuals and survivors being hoisted.

WARNING

- **WHEN PLACING SURVIVOR IN THE RESCUE BASKET, ENSURE THE DEVICE IS BETWEEN THE HELICOPTER AND RS. FAILURE TO DO SO COULD RESULT IN INJURY TO THE RS.**
- **WHEN PLACING SURVIVOR IN THE RESCUE BASKET IN HEAVY SEAS, TIMING OF THE SEA STATE IS CRITICAL TO PREVENT INJURY TO SURVIVOR.**
- **RS SHALL ENSURE SURVIVOR IS FULLY INSIDE BASKET AND REMAINS IN A SEATED POSITION WITH HEAD ABOVE WATER.**
- **WHEN REMOVING THE RESCUE BASKET FROM THE HOIST HOOK, PLACE A HAND UNDER BOTH BAILS TO PREVENT THEM FROM FALLING ON THE SURVIVOR AS A SAFETY PRECAUTION IN CASE THE BAIL KEEPER FAILS.**

Table 3-25. Rescue Basket Recovery Procedures

Step	Action
1	Perform approach procedures in Paragraph 3.B.
2	After completing approach procedures, RS shall: • Swim survivor to basket • Ensure basket is positioned between helicopter and RS • Place survivor inside basket • Give ***READY*** signal • Maintain control of basket until plumb underneath helicopter Once device is clear of water, RS should swim to the helicopter's 1 to 2 o'clock position, maintaining eye contact with the device.

b. Litter Recovery. The Litter Recovery Procedures prescribed in Table 3-26 is utilized for a survivor with a suspected spinal injury or any warranted condition determined by the RS that requires the survivor to be hoisted in a supine position.

When completing a Litter Recovery in the water, the RS should keep the survivor's airway clear and back into the prevailing seas/winds. Upon reaching the rotor wash, position survivor's back toward helicopter.

WARNING

- **SURVIVORS WEARING BUOYANT IMMERSION SUITS WILL EFFECT THE FLOTATION CHARACTERISTICS OF THE LITTER.**
- **THE LITTER HOISTING SLING CABLES MUST BE KEPT FROM INTERFERING WITH THE PATIENT RESTRAINT STRAPS AS THEY COULD BECOME FOULED UNDER THE SURVIVOR.**
- **THE RS MAY ENCOUNTER SOME DIFFICULTY IF THE SURVIVOR HAS FLOTATION, HOWEVER, SURVIVOR FLOTATION SHOULD ONLY BE REMOVED AS A LAST RESORT TO EFFECT THE RESCUE.**

CAUTION

THE MEDEVAC BOARD THAT IS SOMETIMES USED IN CONJUNCTION WITH THE LITTER HAS NO FLOTATION CAPABILITY AND SHALL NOT BE USED IN THE WATER.

Table 3-26. Litter Recovery Procedures

Step	Action
1	Perform approach procedures in Paragraph 3.B.
2	After completing approach procedures, RS shall: • Swim survivor to litter. • Disconnect litter from host hook. • Give ***DISCONNECT FROM HOIST HOOK*** signal to indicate to FM the litter is disconnected from hoist hook. • Guide survivor into litter, ensuring sling cables are kept clear of restraint straps. • Connect gray restraint strap under survivor's arms and over chest.
3	Continue connecting remainder of restraint straps. • Sequence of connection is at rescue swimmer's discretion. • The black strap shall be connected last, restraining survivor's arms under strap.
4	Prior to giving ***READY*** signal, the RS shall: • Ensure all restraint straps are properly connected. • Litter sling cables are free and clear. • Ensure folding couplers are tightened. Give ***READY*** signal.
5	When FM delivers locking hoist hook the RS shall: • Gain control of locking hoist hook • Simultaneously attach both sides of litter sling cables • Place locking hoist hook in the LOCKED position • Give ***READY*** signal • Maintain control of litter until plumb underneath helicopter Once device is clear of water, RS should swim to the helicopter's 1 to 2 o'clock position, maintaining eye contact with the device and await recovery.

c. Sling Augmented Double Pickup Recovery. The Sling Augmented Double Pickup (SADPU) Recovery Procedures prescribed in Table 3-27 is a recovery method utilizing the rescue sling. It allows for the survivor and the RS to be recovered into the helicopter with one hoist.

WARNING
DO NOT OVERTIGHTEN THE RESCUE SLING CHEST STRAP AS IT MAY RESTRICT THE SURVIVOR'S ABILITY TO BREATH.

NOTE

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

Table 3-27. Sling Augmented Double Pickup Recovery Procedures

Step	Action
1	Perform approach procedures in Paragraph 3.B.
2	After completing approach procedures, RS shall: • Swim survivor to rescue sling. • Ensure survivor is positioned between helicopter and RS. • Route rescue sling around survivor. • Connect rescue sling V-rings and RS harness V-ring to locking hoist hook with RS harness V-ring outboard and secure chest strap. Chest strap can be secured before or after RS hooks up to locking hoist hook. • Complete a final check to ensure rescue sling V-rings, RS harness V-ring, and chest strap are secured. • Give ***READY*** signal. • Ensure survivor is positioned well inside cabin with door shut or blocked by FM. • Disconnect from locking hoist hook. • Medically evaluate and provide care to survivor, as required.

d. Military Aviator Double Pickup Recovery. The Military Aviator Double Pickup (MADPU) Recovery Procedures prescribed in Table 3-28 is a recovery method utilizing the self-locking hook on the RS harness to hook into a survivor with a harness style life vest that is acceptable for hoisting.

WARNING

- **IN THE EVENT OF A SUSPECTED SPINAL INJURY, THE MADPU SHOULD NOT BE USED.**
- **DURING TRAINING WITH TWO SWIMMERS, THE RS WILL CONNECT THE SELF-LOCKING HOOK TO THE SURVIVOR RS LIFTING V-RING.**

Table 3-28. Military Aviator Double Pickup Recovery Procedures

Step	Action
1	Perform approach procedures prescribed in Paragraph 3.B.
2	After completing approach procedures, RS shall: • Connect self-locking hook to survivor's lifting device. • Swim survivor to locking hoist hook. • Ensure survivor is positioned between helicopter and RS. • Connect rescue swimmer's lifting V-ring to locking hoist hook. • Complete a final check to ensure lifting V-ring, self-locking hook, and survivor's lifting device are secured properly. • Give ***READY*** signal. • Ensure survivor is positioned well inside cabin with door shut or blocked by FM. • Disconnect from locking hoist hook. • Medically evaluate and provide care to survivor, as required.

e. Sling/Harness Recovery of RS. The Sling/Harness Recovery of RS Procedures prescribed in Table 3-29 is a method used to recover only the RS.

Table 3-29. Sling/Harness Recovery of RS Procedures

Step	Action
1	RS shall ensure surrounding area is clear for hoist.
2	After giving ***READY*** signal, RS shall: • Swim/walk to locking hoist hook. • Connect rescue swimmer's lifting V-ring to locking hoist hook or position rescue sling around back and under arms, connect free end of rescue sling to locking hoist hook. • Complete a final check to ensure lifting V-ring or V-rings are secured properly. • Give ***READY*** signal. • Regardless of recovery method used, the RS should enter the cabin backwards.

H. PARACHUTE DISENTANGLEMENT PROCEDURES.

1. Introduction. There are many different types of military parachute harnesses that a RS might encounter. With the exception of the different types of fittings, inflation of the flotation device, or removal of the parachute harness, the basic disentanglement procedures remain the same.

WARNING

- **DUE TO THE VIOLENT NATURE OF AN AVIATOR BEING EJECTED FROM AN AIRCRAFT, THE POSSIBILITY OF SUSTAINING A BACK INJURY IS VERY LIKELY. FOR THIS REASON, AN AVIATOR WHO HAS BEEN EJECTED FROM AN AIRCRAFT WILL ALWAYS BE SUSPECTED OF HAVING A BACK INJURY AND THE LITTER SHOULD BE CONSIDERED FOR USE IN THE RECOVERY.**
- **RS MUST BE AWARE THAT MILITARY AVIATORS WILL OFTEN BE TETHERED TO THEIR LIFERAFT AND THERE IS A POSSIBILITY OF ENTANGLEMENT IN THE RAFT'S RETAINING LINE.**

2. Equipment. It is the responsibility of the Survival Shop Chief to research and identify which types of equipment aviator's will be utilizing in their AOR and to ensure their rescue swimmers are familiar with them.

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

3. Methods. There are three procedures used for parachute disentanglement; the Ballooned Canopy, Side Control, and Spinal Highway.

WARNING

- **UNDER NO CIRCUMSTANCES SHALL A RS SUBMERGE UNDER A PARACHUTE CANOPY.**
- **THE PARACHUTE SHOULD NEVER BE ALLOWED TO COME BETWEEN THE RS AND THE SURVIVOR. THE RS CAN LOSE SIGHT OF THE SURVIVOR OR BECOME ENTANGLED IN THE PARACHUTE OR SUSPENSION LINES.**
- **POSSIBLE CHEST CRUSHING INJURIES CAN RESULT IF CHEST FITTING IS NOT DISCONNECTED PRIOR TO INFLATING SURVIVOR'S FLOTATION.**
- **SHROUD LINES SHOULD ONLY BE CUT IF NECESSARY. THE PREFERRED METHOD OF CUTTING SHROUD LINES IS WITH A HOOK KNIFE TO PREVENT POSSIBLE INJURY TO SURVIVOR OR RS.**

a. Ballooned Canopy Disentanglement. The Ballooned Canopy Disentanglement Procedures prescribed in Table 3-30 should be used when the survivor is under a ballooned canopy and has no means of self egress.

Table 3-30. Ballooned Canopy Disentanglement Procedures

Step	Action
1	Attempt to establish communication with survivor to determine condition. • Attempt to locate shroud line closest to survivor. • Pull on shroud line. • Kick away from chute.
2	Once survivor is at the edge of canopy: • Gain control of survivor by grasping harness. • Remove parachute material from survivor. • Once survivor is free of canopy, pull into the wind away from parachute.
3	Perform either the Side Control disentanglement procedure as prescribed in Paragraph 3.H.3.b. or the Spinal Highway Disentanglement procedures as prescribed in Paragraph 3.H.3.c.
4	Signal helicopter for appropriate rescue device.

b. Side Control Disentanglement. The Side Control Disentanglement Procedures prescribed in Table 3-31 should be used when back injury is suspected.

Table 3-31. Side Control Disentanglement Procedures

Step	Action
1	Attempt to establish communication with survivor to determine condition. • If communication is established and survivor is able: - Have survivor turn, placing back towards RS - RS shall approach from rear - Place survivor in proper carry • If communication is not established: - Approach from rear - Grasp survivor's harness - Pull into wind away from parachute
2	Remove oxygen mask, if applicable. • Attempt to establish communication • Clear survivor's head, neck, and chest • Disconnect chest fitting, if applicable • Inflate survivor's flotation device (if applicable)

Table 3-31. Side Control Disentanglement Procedures Continued

Step	Action
3	Clear shoulders and arms. • Disconnect shoulder fittings, if applicable • Disconnect and remove seat pan, if applicable
4	Using side of survivor as a reference: • Proceed hand-over-hand along left (or right) side clearing legs. • Disconnect leg fittings, if applicable. • When side is cleared, move up and around to other side clearing legs. • Disconnect leg fittings, if applicable. • Move back up to regain control of survivor's harness.
5	Perform a final check from head-to-toe to ensure survivor is clear.
6	Signal helicopter for appropriate rescue device.

c. Spinal Highway Disentanglement. The Spinal Highway Disentanglement Procedures prescribed in Table 3-32 should be used when no back injury is suspected and the side control method is not feasible.

Table 3-32. Spinal Highway Disentanglement Procedures

Step	Action
1	Attempt to establish communication with survivor to determine condition. • If communication is established and survivor is able: - Have survivor turn, placing back towards RS - RS shall approach from rear - Place survivor in proper carry • If communication is not established: - Approach from rear - Grasp survivor's harness - Pull into wind away from parachute
2	Remove oxygen mask (if applicable) • Attempt to establish communication. • Clear survivor's head, neck, and chest. • Disconnect chest fitting, if applicable. • Inflate survivor's flotation device, if applicable.
3	Clear shoulders and arms. • Disconnect shoulder fittings, if applicable • Disconnect and remove seat pan, if applicable

Table 3-32. Spinal Highway Disentanglement Procedures Continued

Step	Action
4	Using center of survivor's back as a reference: • Submerge. • Proceed hand-over-hand down survivor's back. • Clear legs. • Disconnect leg fittings, if applicable. • Move back up to regain control of survivor's harness.
5	Perform a final check from head-to-toe to ensure survivor is clear.
6	Signal helicopter for appropriate rescue device.

I. AIRCRAFT RADIO VECTORING PROCEDURES.

1. Introduction. The effectiveness of radio vectoring operations relies on the ability of the RS to accurately communicate guidance information to the aircraft. Standard voice phraseology reduces the chance of miscommunication.

2. Methods. Prior to giving vectoring commands, ensure communications are established with aircraft. Local Coast Guard working frequencies are used for all RS radio operations. During SAR situations, the RS may use alternate frequencies to call in other assets that may be responding.

   Before attempting to transmit or receive, ensure radio speakers are free of water and antenna is pointed up not touching the water. Once initiated, aircraft vectoring procedures shall continue until the aircrew re-establishes positive visual contact with RS.

   Always have the aircraft turn toward your position, for example, if the aircraft is moving from left to right, have the aircraft turn right. When vectoring at night the use aircraft navigation nights to determine position and flight direction of aircraft. 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.

   Keep in mind the delay from when the command is given to the actual movement of the aircraft. The goal is to give the least amount of commands to get the desired outcome. Between the vectoring commands the RS may give advisories, condition of RS and survivors, winds relative to aircraft position and signaling devices being used.

3. Procedures. The Aircraft Radio Vectoring Procedures prescribed in Table 3-33 should be used when the aircraft has lost position of RS or is returning after leaving RS onscene.

Table 3-33. Aircraft Radio Vectoring Procedures

Commands	Meaning
“COMMENCE RIGHT TURN”	Start turn to the right.
“COMMENCE LEFT TURN”	Start turn to the left.
“STOP TURN”	Stop turn (continue forward flight).
“CONTINUE _____ TURN”	Continue turning right or left.
“MARK, MARK, MARK”	Mark position (aircraft should be directly overhead of RS on last mark).
Advisory	**Meaning**
“I AM AT YOUR ___ O’CLOCK, APPROXIMATELY ___ MILE(S)”	The rescue swimmer’s present position and distance relative to the aircraft.

APPENDIX (A). PHYSICAL ASSESSMENT LAND PORTION PROTOCOLS

A. COMPLEX.

1. Objectives. To assess muscular strength utilizing an external load, acceleration stabilization, deceleration stabilization, changing of direction dynamically, and anaerobic capacity.
2. Required Equipment.
   - A stopwatch
   - A 150-pound barbell
   - A pull-up bar
   - Cones, for marking a measured distance of 50 meters
3. Assessment Procedures.
   a. Set up testing area with the 150-pound barbell and a pull-up bar offset to the side at one end of the measured 50-meter distance.
   b. RS under evaluation assumes position at the dead lift station.
   c. On the command "BEGIN," the RS under evaluation will perform five dead lift repetitions.
      (1) Maintain three points of contact (if a dowel is placed in a line from the back of head, between the shoulder blades and buttocks, it should rest in a straight line touching all three points), shoulders in neutral position, chest out, core stabilized, head in neutral position (not looking up).
      (2) For each repetition, the barbell plates must touch the deck. After the last repetition is completed the bar is lowered to the ground, not dropped.
   d. Upon completing dead lifts, and not to exceed 5.0 seconds, the RS under evaluation shall walk over to 50-meter distance and assume a starting position.
      (1) Once in starting position, the timer shall start the watch on the command "GO."
      (2) The RS under evaluation will sprint to the 50-meter mark turn around and sprint back. The timer stops the watch at the end of the 100-meter sprint.
      (3) The timer will stop the watch once the RS under evaluation crosses the end line to complete the 100-meter sprint.
   e. Upon completing the 100-meter sprint, and not to exceed 5.0 seconds, the RS under evaluation will complete five pull-ups. The pull-ups shall be completed with full extension at the bottom and the chin clearing the bar at the top without kipping.
4. Passing Criteria. To receive a GO for this evolution, all dead lifts and pull-ups must be completed as described and the sprint time shall be no more than 27.0 seconds.

B. BODY WEIGHT ROW.

1. Objectives. To assess endurance in the musculature involved during an upper extremity horizontal pull as well as stabilization of the posterior closed kinetic chain.

2. Required Equipment.

   - Suspension training device - TRX or set of rings that is suspended from pull-up bar to position the shoulders one to two inches off the deck.
   - Metronome - set to 60 Beats-per-Minute (BPM).

3. Assessment Procedures.

   a. The RS under evaluation shall assume the following position:

      (1) Hold on to suspension training device with arms straight and directly under the pull-up bar, with the body parallel to the deck, and the shoulders one to two inches off the deck.

      (2) Hands shall be in a neutral position.

      (3) Feet shall be together.

   b. Once in position and keeping the body rigid, the evaluator shall state “BEGIN” and start the metronome.

      (1) On the first beat, the RS under evaluation shall pull body up until the wrist creases are in line with the chest.

      (2) On the second beat, the RS under evaluation shall lower the body until the arms are straightened.

   c. The RS under evaluation shall repeat steps B.3.b.(1) and B.3.b.(2) to perform repetitions while keeping time with the metronome.

   d. Discontinue the test if any of the following occurs:

      (1) Member fails to properly execute a pull-up where the wrists crease is even with the chest.

      (2) Buttocks touches the floor.

      (3) Feet become separated.

      (4) Member fails to maintain pace with the metronome.

4. Passing Criteria. To receive a GO for this evolution, 12 repetitions must be completed.

C. PUSHUP.

1. Objectives. To assess endurance in the musculature involved in the upper body horizontal push as well as stabilization of the anterior closed kinetic chain.

2. Required Equipment.

   - Metronome - set to 80 BPM
   - A flat surface

3. Assessment Procedures.

   a. The RS under evaluation shall perform the following:

      (1) Begin by assuming the push up position with one knee on the ground.

      (2) Hands directly below shoulders, no more than a fist's distance outside shoulder width.

   b. On the command "READY," the RS under evaluation will straighten bent leg and assume a full pushup position.
   RS under evaluation shall maintain three-points of contact (if you place a dowel in a line from the back of head, in-between the shoulder blades and buttocks, it should rest in a straight line touching all three points) from head to shoulder blades to buttocks.

   c. Examiner will start metronome.

      (1) On the first beat, the RS under evaluation shall lower body to a position with elbows bent to 90-degrees and no closer than 45-degrees to the torso.

      (2) On the second beat, the RS under evaluation shall extend arms until straightened.

   d. The RS under evaluation shall repeat steps C.3.c.(1) and C.3.c.(2) to perform repetitions while keeping time with the metronome.

   e. Discontinue the test if any of the following occurs:

      (1) Member fails to properly maintain straight line between back of head to feet.

      (2) Lower back starts to have an excessive arch.

      (3) Head drops out of alignment.

      (4) Hips or shoulders do not rise in unison.

      (5) Member fails to maintain pace with the metronome.

4. Passing Criteria. To receive a GO for this evolution, 30 repetitions must be completed.

D. SIDE PLANK.

1. Objectives. To assess core stabilization and lateral stabilization endurance in a full closed kinetic chain position.

2. Required Equipment.

   - A stopwatch
   - A flat surface
   - A pad is optional

3. Assessment Procedures.

   a. The RS under evaluation shall perform the following:

      (1) Lay on side with the forearm of the bottom arm on the floor and the elbow bent at a 90-degree angle so the fingers point away from the individual.

      (2) Top arm is flat against body.

      (3) Place top foot just in front of the bottom.

      (4) Ensure feet are angled up with natural position of body, feet shall not be flat on the deck.

      (5) Maintain a straight line from neck to foot.

   b. Once position is attained, the examiner will begin timing.

      RS under evaluation shall maintain plank position for the prescribed time of 65.0 seconds. Time will be stopped when member's straight line is broken (hip or knee touches the ground).

4. Passing Criteria. To receive a GO for this evolution the RS under evaluation must maintain proper plank position a minimum of 65.0 seconds.

E. DEAD HANG PULL-UP.

1. Objectives. To assess endurance of the upper body musculature involved in a vertical pull and closed kinetic chain stabilization endurance.

2. Required Equipment.

   - A pull-up bar
   - Metronome - set to 60 BPM

3. Assessment Procedures.

   a. Set bar to a height that will allow for the tallest participant's legs to hang straight, without touching the ground, when the arms are fully extended.

      (1) A bench or stool may be used to initially grasp the bar.

      (2) Assistance to the bar with a step-up, jumping, or being lifted up is authorized.

   b. The RS under evaluation shall perform the following:

      (1) Grasp the bar with the palms facing forward (away from the body). Spacing of the hands may be no greater than one fist's width outside the shoulder.

      (2) Arms fully extended beneath the bar.

      (3) Legs fully extended with the feet free from touching the ground and the body is motionless.

   c. Once position is attained, the examiner will give the command "GO" and start the metronome.

      (1) On the fifth beat, pull the body upward until the chin is above the bar and lower the body until the arms are fully extended.

      (2) Repeat a pull-up starting on each fifth beat. At no time may the RS under evaluation be allowed to rest their chin on the bar.

      (3) A repetition will be counted when a correct and complete pull-up is performed.

   d. Discontinue the test if any of the following occurs:

      (1) Member fails to properly maintain straight line between head to feet.

      (2) Piking, kicking, kipping, whipping of the body or legs, or any movement used to assist in the vertical progression of the pull-up occurs or is thought to occur.

      (3) The test will be terminated if the RS under evaluation drops from the bar.

4. Passing Criteria. The goal is for the participant to complete as many repetitions as possible. To receive a GO for this evolution five repetitions must be completed as described.

F. 300-METER SHUTTLE.

1. Objectives. To assess acceleration stabilization, deceleration stabilization, changing of direction dynamically and anaerobic capacity.

2. Required Equipment.

   - A stopwatch or timer clock
   - Cones, for marking a 25-meter measured distance

3. Assessment Procedures. Explain that each 300-meter evolution is a 100 percent individual effort.

   a. The RS under evaluation shall assume a starting position at the start line of the 25-meter distance.

   b. Once in position, the examiner will give the command “GO” and start timer.

      (1) The RS under evaluation will sprint to the 25-meter line, turn, and sprint back to the start line.

      (2) Repeat six times to complete a total of 300-meter distance.

      (3) Timer will stop the clock when the RS under evaluation crosses the line on the sixth evolution. Record time appropriately.

   c. RS under evaluation will be given a 5-minute rest period. During the rest period, the RS under evaluation may walk around and stretch as needed.

   d. At the end of the 5-minute rest period, the RS under evaluation will repeat the 300-meter shuttle.

   e. Record the time achieved for the second evolution. Average the times achieved during each evolution and record as final time.

4. Passing Criteria. To receive a GO for this evolution, the average time must be 79.0 seconds or less.

APPENDIX (B). PHYSICAL ASSESSMENT WATER PORTION PROTOCOLS

A. 400-METER SWIM.

1. Objectives. To assess swim efficiency with booties, fins, mask, and snorkel; as well as aerobic capacity.

2. Required Equipment.

   - A stopwatch or timer clock
   - A swimming pool
   - Booties, fins, mask, and snorkel

3. Assessment Procedures. Explain that each 400-yard/meter swim evolution is a 100 percent individual effort.

   a. The RS under evaluation shall assume a starting position at one end of the pool.

   b. Once in position, the examiner will give the command “GO” and start timer.

      (1) The RS under evaluation will swim the necessary number of laps to complete a 400-yard/meter front crawl swim.

      (2) Timer will stop the clock when RS under evaluation touches the end of the pool to completing the required distance.

   c. Timer will record the time to complete the evolution.

4. Passing Criteria.

   - To receive a GO for this evolution, the time to complete the evolution shall be 6 minutes, 30.0 seconds or less for distances measured in yards or 7 minutes, 10.0 seconds or less for distances measured in meters or less.
   - Swimming World Time Conversion converts an average time of 1 minute, 38.0 seconds per 100 yards to 1 minute, 47.0 seconds per 100 meters, which averages an additional 10.0 seconds per 100 meters.

B. 6X50 SWIM.

1. Objectives. To assess swim efficiency with booties, fins, mask, and snorkel; as well as anaerobic capacity and power endurance.

2. Required Equipment.

   - A stopwatch or timer clock
   - A swimming pool
   - Booties, fins, mask, and snorkel

3. Assessment Procedures. Explain that each 50-yard/meter swim evolution is a 100 percent individual effort.

   a. The RS under evaluation shall assume a starting position at one end of the pool.

   b. Once in position, the examiner will give the command “GO” and start timer.

      (1) The RS under evaluation will complete a 50-yard/meter front crawl sprint.

      (2) Timer will stop the clock when the RS under evaluation touches the end of the pool and record time.

   c. The RS under evaluation will be given a 15.0-second rest period.

      (1) At the end of the 15.0-second rest period, the timer will give the “GO” command, at which time the RS under evaluation will complete another 50-yard/meter front crawl sprint.

      (2) Repeat until six evolutions are completed.

   d. Timer will average the recorded times to complete each evolution.

4. Passing Criteria.

   - To receive a GO for this evolution, the averaged time to complete the evolution shall be 37.0 seconds or less for distances measured in yards or 41.0 seconds or less for distances measured in meters.
   - Swimming World Time Conversion converts an average time of 37.0 seconds per 50 yards to 41.0 seconds per 50 meters, which averages an additional 4.0 seconds per 50 meters.

C. 4X50 BUDDY TOW.

1. Objectives. To assess fin efficiency in a functional capacity with booties, fins, mask, and snorkel; as well as anaerobic capacity and power endurance.

2. Required Equipment.

   - A stopwatch or timer clock
   - A swimming pool
   - A 180-pound (or heavier) framed person
   - Booties, fins, mask, and snorkel

3. Assessment Procedures. Explain that each 50-yard/meter swim evolution is a 100 percent individual effort.

   a. The RS under evaluation shall assume a starting position, while grasping survivor, at one end of the pool.

   b. Once in position, the examiner will give the command “GO” and start timer.

      (1) The participant will complete a 50-yard/meter buddy tow.

      (2) Timer will stop the clock when the RS under evaluation touches the end of the pool, completing the required distance.

      (3) Record time.

   c. The RS under evaluation will be given a 20.0-second rest period. During the rest period, the RS under evaluation may reposition the survivor as needed.

   d. At the end of the 20.0-second rest period, the RS under evaluation will repeat the 50-yard/meter buddy tow.

   e. Repeat the 50-yard/meter buddy tow to complete four evolutions, recording the time to complete each evolution.

   f. Average the times achieved during each evolution and record as final time.

4. Passing Criteria.

   - To receive a GO for this evolution, the average time to complete the evolution must be 1 minute, 15.0 seconds or less for distances measured in yards or 1 minute, 24.0 seconds or less for distances measured in meters.
   - Swimming World Time Conversion converts an average time of 1 minute, 15.0 seconds per 50 yards to 1 minute, 24.0 seconds per 50 meters, which is an additional 9.0 seconds per 50 meters.

D. 4X50 UNDERWATER DOWN SWIM BACK.

1. Objectives. To assess water confidence in a functional capacity with booties, fins, mask, and snorkel; as well as anaerobic capacity.

2. Required Equipment.

   - A stopwatch or timer clock
   - A swimming pool
   - Booties, fins, mask, and snorkel

3. Assessment Procedures. Explain that each 50-yard/meter swim evolution is a 25-yard/meter underwater swim and a 25-yard/meter front crawl swim.

   a. The RS under evaluation shall enter the water and assume a vertical position at one end of the pool.

   b. The examiner will give the command “GO” and start the timer.

      (1) The RS under evaluation will fully submerge, without pushing off the wall.

      (2) Once fully submerged, the RS under evaluation pushes off the wall and swims 25 yards/meters underwater, surfacing only after the swimmer touches the wall on the other side

      (3) The RS under evaluation will immediately complete a 25-yard/meter front crawl swim.

   c. Once in position, the examiner will give the command “GO” and start timer.

   d. On the 1-minute, 15.0-second (yards) or 1-minute, 24-second (meters) mark, the RS under evaluation will complete another underwater down swim back evolution.

   e. On the 2-minute, 30.0-second (yards) or 2-minute, 48.0-second (meters) mark, the RS under evaluation will complete another underwater down swim back evolution.

   f. On the 4-minute (yards) or 4-minute, 12.0-second (meters) mark, the RS under evaluation will complete the final underwater down swim back evolution.

4. Passing Criteria.

   - To receive a Go for this evolution, the four underwater down swim backs shall be completed in the allotted time period.
   - Swimming World Time Conversion converts an average time of 1 minute, 15.0 seconds per 50 yards to 1 minute, 24.0 seconds per 50 meters, which is an additional 9.0 seconds per 50 meters.

APPENDIX (C). LIFESAVING GRIPS/TECHNIQUES

A. LIFESAVING GRIPS.

NOTE

All grips/techniques described in this appendix may be used at the rescue swimmers discretion when working in operational or training environments.

1. Seatbelt Grip.

   a. Purpose. Preferred grip when performing a Controlled Cross Chest Carry.

   b. Advantage. Allows RS to pull with one arm and squeeze with the other to maximize torque.

   c. Procedures.

   - Make a fist with the hand over survivor's shoulder and place across survivor's chest.
   - Transition free hand under survivor's opposite arm and interlock both hands.

   d. Key Points.

   - Place fist hand (thumb down) on survivor's chest.
   - Hand under survivor's arm always grabs fist hand.
   - Minimize space between survivor and RS by focusing on squeezing RS elbows together while simultaneously pulling survivor towards RS.

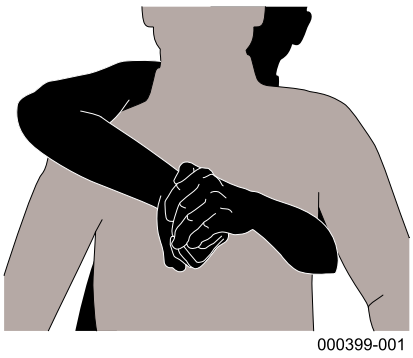

Figure (C)-1. Seatbelt Grip

2. Gable Grip.

   a. Purpose. Preferred grip to use when performing a Physical Grip or Sling Deployment. May also be used as an alternative grip when performing a Controlled Cross Chest Carry.

   b. Advantage. Strongest integrity; eliminates any unnecessary strain on fingers or wrist. May be performed regardless of survivor's orientation to the RS (facing, facing away).

   c. Procedures.

   - Route both hands under survivor's arms.
   - Interlock hands by going palm-to-palm, keeping fingers together as a unit.

   d. Key Points.

   - Once hands are interlocked, pull survivor towards RS while simultaneously collapsing elbows on rescue swimmer's lower abdomen area.
   - Ensure that thumbs are not sticking out when going palm-to-palm; this weakens the integrity of the grip by putting strain on the fingers and wrists and leaving a gap between the palms.
   - If utilizing the gable grip to secure survivor in a controlled cross chest carry, slide grip under survivor's armpit once hands are interlocked.

000401-001

Figure (C)-2. Gable Grip

3. S-Grip.

   a. Purpose. Alternative grip when performing a Controlled Cross Chest Carry.

   b. Advantage. Pliable, useful when dealing with a large frame survivor and unable to apply Gable Grip.

   c. Procedures.

   - Place dominant hand over survivor's shoulder and across survivor's chest.
   - Transition free hand under survivor's opposite arm and interlock both hands.

   d. Key Points.

   - Hook fingers-to-fingers to interlock hands, forming the S-Grip.
   - Once hands are interlocked, slide grip under survivor's armpit.
   - Minimize space between survivor and RS by focusing on squeezing RS elbows together while simultaneously pulling survivor towards RS.

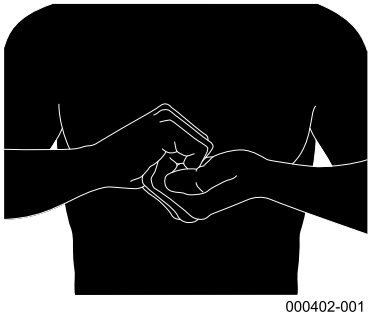

Figure (C)-3. (Sheet 1 of 2)
S-Grip

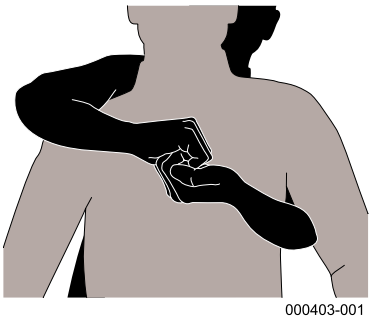

Figure (C)-3. (Sheet 2 of 2)
S-Grip

4. C-Clamp Grip.

   a. Purpose. Gain control of survivor's wrist during the Front Surface or Noncompliant Approaches; maintain control of survivor's elbow/tricep area during either release; grasping both of survivor's elbow/triceps area when performing either escape.

   b. Advantage. Quick and easy way to maintain control of the survivor.

   c. Procedures.

      - Firmly grasp back of survivor's wrist or elbow/tricep area.
      - Squeeze thumb and fingers together.

   d. Key Points.

      - When squeezing, focus on connecting thumb to the middle and ring fingers, this maximizes the integrity of the grip while minimizing fatigue in forearm muscles.

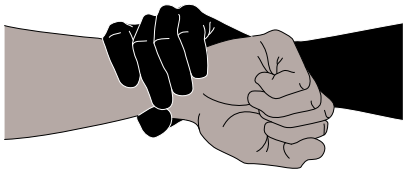

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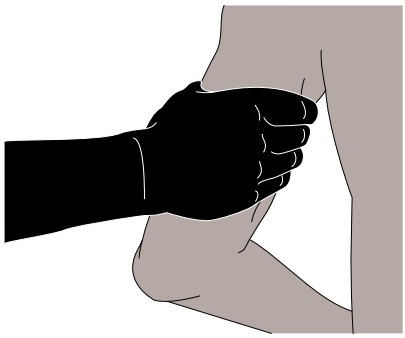
Figure (C)-4. (Sheet 1 of 2)
C-Clamp Grip



000406-001

Figure (C)-4. (Sheet 2 of 2)
C-Clamp Grip

5. Cobra Grip.

   a. Purpose. Grasp survivor's tricep during Front Surface or Noncompliant Approach; used to prevent survivor from encircling RS during Noncompliant Approach.

   b. Advantage. Protects RS thumb while engaging with survivor; allows RS to place hand on survivor's bicep and slide hand down to survivor's wrist freely during Noncompliant Approach.

   c. Procedures.

      - Keep thumb and fingers together at all times.
      - Maintain a slight curve with fingers.
      - Initial contact should be made with palm of hand not fingers.

   d. Key Points.

      - Use cobra grip on tricep to pull survivor towards and across RS body in an upward motion rotating survivor onto their back.
      - Timing the survivor's stroke once RS has engaged survivor is crucial when using the cobra grip on survivor's bicep.
      - When transitioning the cobra grip from survivor's bicep to wrist, RS should already be setting up the C-clamp grip so that it can be quickly applied once at the survivor's wrist.

000407-001

Figure (C)-5. Cobra Grip

B. LIFESAVING TECHNIQUES.

1. Harness Carry.

   a. Purpose. Alternative method for towing a survivor.

   b. Advantage. Allows the RS to free up a hand, if necessary, while towing an aggressive/panicked survivor.

   c. Procedures.

   - Slide interlocked hands under survivor's armpit or as close to RS harness as possible.
   - Disconnect hands and maintain control of survivor with hand across chest.
   - Use free hand to grab RS harness webbing and pass it to hand across chest.
   - Firmly grasp webbing with hand across chest.

   d. Key Points.

   - Size of survivor ultimately determines where RS will be able to grab harness.
   - Grabbing webbing connected to the talon hook may be necessary to provide more space when towing a larger framed survivor.
   - RS shall be aware of where the pull toggle is at all times to prevent inadvertently inflating vest when grabbing webbing.

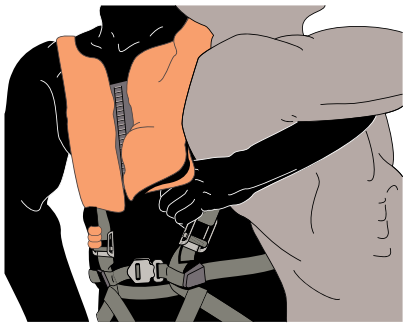


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Figure (C)-6. Harness Carry

2. Arm Drag.

   a. Purpose. To control and orient survivor in a preferred position prior to towing.

   b. Advantage. RS is able to control survivor's arm with two hands (one on wrist, one on tricep) prior to pulling and rotating survivor.

   c. Procedures.

   - Gain control of survivor's wrist using the C-Clamp Grip.
   - Maintaining control of survivor's wrist, use free hand to grasp survivor's tricep on the same arm.
   - Once wrist and tricep control are established, simultaneously use both hands to pull survivor's arm across the RS body rotating survivor on their back.

   d. Key Points.

   - Pull survivor's arm across rescue swimmer's entire body prior to transitioning to the next step.
   - Release tricep then wrist and quickly interlock hands.
   - Hand that releases from tricep goes over survivor's shoulder and across chest.
   - Hand that releases from wrist goes under survivor's opposite arm and interlocks with hand across chest.

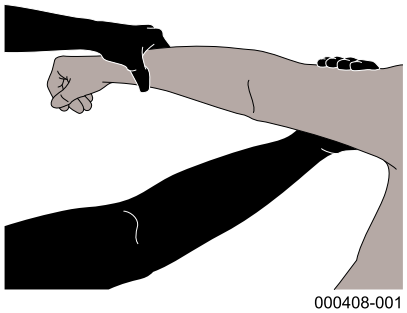


Figure (C)-7. Arm Drag

3. Cross Block.

   a. Purpose. Stop forward momentum of survivor swimming towards RS.

   b. Advantage. Keeps survivor from being able to encircle the RS while attempting to gain control of wrist and perform an arm drag.

   c. Procedures.

   - Once survivor is within reach, place hand on survivor's opposite chest/shoulder area (RS right hand, survivor's right chest/shoulder).

   d. Key Points.

   - Once cross block is established, maintain that position until RS is able to gain control or survivor's wrist.
   - It is important to place hand on the survivor's opposite chest/shoulder area (right hand to right shoulder or left hand to left shoulder), which allows for a quicker transition to grasp the closest tricep of the survivor.

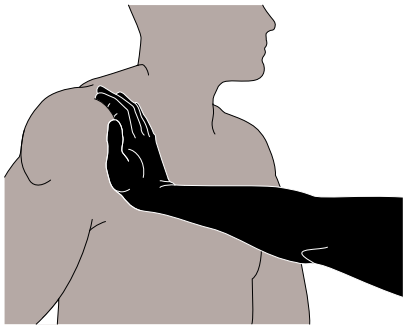


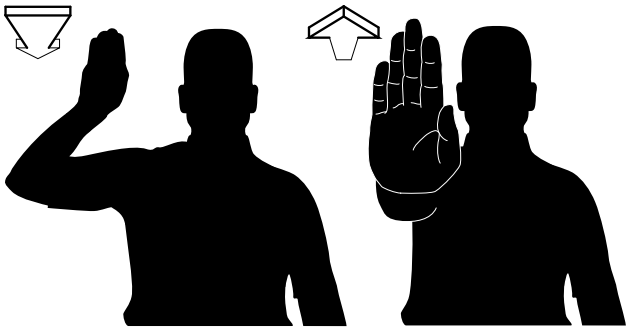
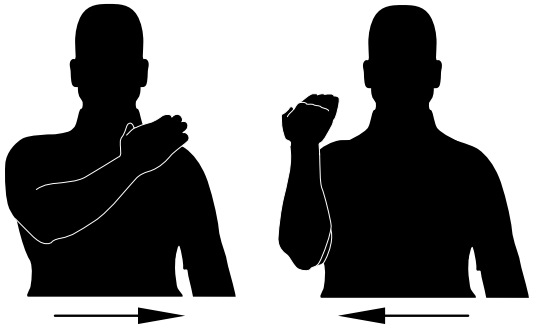
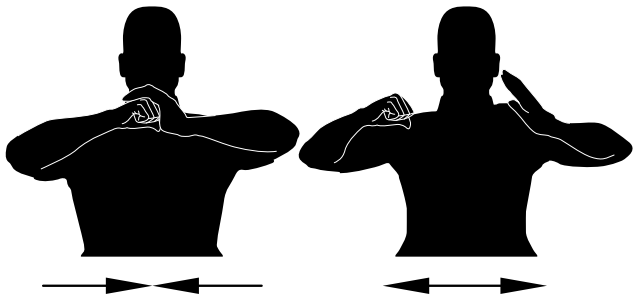
Figure (C)-8. Cross Block

APPENDIX (D). RESCUE SWIMMER HAND SIGNALS

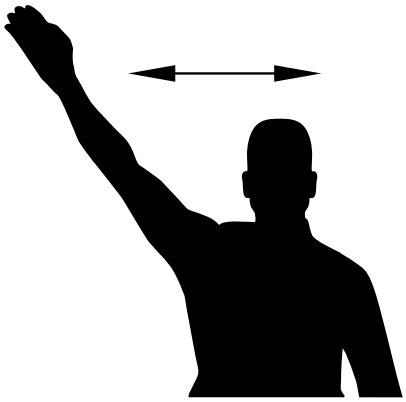
A. RS DAY OR NIGHT HAND SIGNALS.

Signal	Meaning
 000198-001 Raised arm with open palm facing forward.	I AM ALRIGHT
 000199-001 Both arms extended vertically and crossed over the swimmer's head with fist clenched.	DEPLOY RAFT
 000200-001 Hand held to ear.	MONITOR RADIO **NOTE** Hand signal may be given by RS or FM.

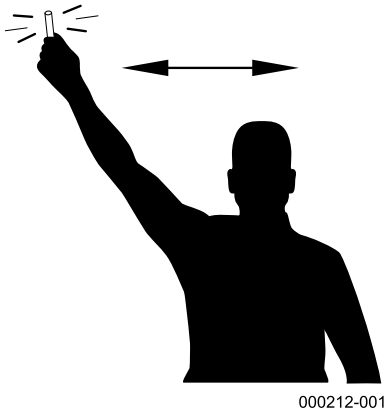
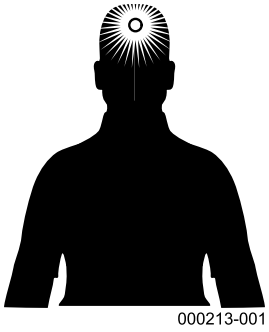
Signal	Meaning
 000201-001 Both arms extended vertically over the swimmer's head with fingers interlocked.	DEPLOY RESCUE SLING
 000202-001 One arm raised and extended vertically with palm open facing forward. The other arm shall be raised so that it crosses the swimmer's head and touches the extended arm at the elbow.	DEPLOY RESCUE LITTER
 000203-001 Both arms raised and extended over the swimmer's head at a 45° angle with the palms open facing forward.	DEPLOY RESCUE BASKET

Signal	Meaning
 000207-001 Raised arm with open palm. RS pumps hand back and forth towards helicopter.	BACK AWAY
 000208-001 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.
 000209-001 Grasp clenched fist and separate.	DISCONNECT FROM HOIST HOOK **NOTE** Hand signal may be given by RS or FM if deemed necessary to disconnect from locking hoist hook. RS shall disconnect from hook prior to giving the signal to prevent themselves from being inadvertently jerked from water.

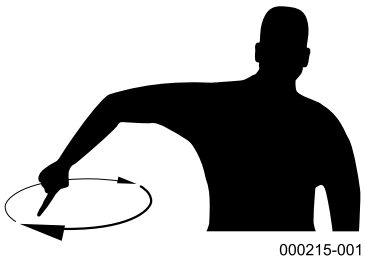
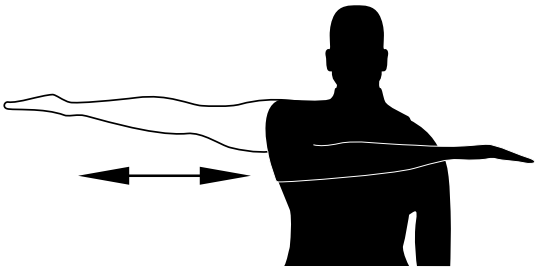
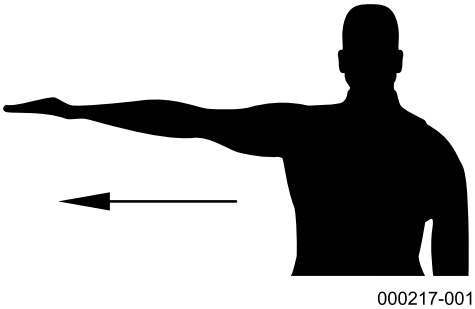
B. RS DAY HAND SIGNALS.

Signal	Meaning
 000210-001 Raised arm with thumb up.	READY FOR PICKUP, READY TO BE HOISTED
 000211-001 Vigorous waving of one arm.	IN TROUBLE, NEED ASSISTANCE (Emergency)

C. RS NIGHT/LOW VISIBILITY HAND SIGNALS.

Signal	Meaning
 000212-001 Wave chemical light.	READY FOR PICKUP
 000213-001 Strobe on.	IN TROUBLE, NEED ASSISTANCE (Emergency)

D. RS VERTICAL SURFACE, RESCUE SLING/HARNESS/DIRECT DEPLOYMENT HAND SIGNALS.

Signal	Meaning
 000214-001 Extend arm and bend elbow to touch head with open palm.	UP
 000215-001 With finger pointed down, rotate forearm in horizontal circle.	DOWN
 000216-001 Sweep horizontal using entire arm.	LEVEL OFF
 000217-001 Point in direction of desired movement.	MOVE IN DIRECTION INDICATED

E. RS AFTER HOOK-UP TO HOIST HOOK HAND SIGNALS.

Signal	Meaning
 000218-001 Arm raised thumb up.	READY TO BE HOISTED
 000219-001 Arm raised, clenched fist.	STOP HOISTING
 000220-001 Arm raised thumb down.	LOWER CABLE