

LESSON PLAN

January 2007

COURSE TITLE: Surface Rescue Swimmer
Courses, A-050-0500

CLASSIFICATION: Unclassified

LESSON TOPIC NUMBER: 4.9

LESSON TOPIC: SAR Tactics

ALLOTTED LESSON TIME: 1.5 Classroom
17.0 Laboratory
13.0 Exam

INSTRUCTIONAL SUPPORT:

1 Classroom Instructor

INSTRUCTIONAL REFERENCE:

1. NTTP 3-50.1, Naval Search and Rescue Manual
2. Quartermaster 3&2 (sea state chart)
3. NWP 3-22.5 SAR TACAID

INSTRUCTIONAL AID:

1. Trainee Guide

TERMINAL OBJECTIVE:

Partially supported by this lesson topic:

- 3.0 Upon completion of this unit of instruction the student will demonstrate proper rescue techniques of military and civilian personnel, day or night, utilizing appropriate SAR equipment for at-sea rescues as outlined in NTTP 3-50.1 without injury to personnel or damage to equipment.

Enabling Objectives:

Completely supported by this lesson topic:

- 3.39 State the five stages of Search and Rescue operations.
- 3.40 Describe the SAR area conditions and survivor conditions which will allow for the execution of a multiple victim rescue.
- 3.41 Develop a rescue plan to affect a rescue of multiple survivors, when given a rescue scenario.
- 3.42 Describe the procedures for recovery of survivors from a motor whale boat/RHIB and forecandle.

3.43 Identify hand signals applicable to the specific rescue, when given a rescue scenario.

3.44 Demonstrate the procedures for parachute disentanglement of multiple victims in a simulated rescue scenario.

CRITERION TEST: Job Sheet 4.9, written test.

HOMEWORK: None

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

INTRODUCTION

A. Establish Contact

Display name and lesson topic.

1. Introduce self, give rank, current job.
2. State background, schools, duty stations, etc.
3. State question and answer policy.

B. State Lesson Objectives

Turn to cover page of Lesson Plan and paraphrase objectives.

C. Establish Readiness

1. Motivating statements

During this lesson, you will receive all the information needed to provide a sound, safe Search and Rescue (SAR) tactics foundation. Although it is not possible to provide answers to all the different rescue scenarios, applying these basics principles will enable you to deal with any situation that arises.

Establish importance and relevance of lesson material using personal experience or anecdote.

2. Lesson overview

Briefly outline material to be covered.

a. Lesson Topic: SAR Tactics

b. Major Teaching Points:

- (1) The Search and Rescue System
- (2) Rescue Platforms
- (3) Rescue Scene Initial Assessment

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- (4) Conditions for Multiple Rescues
- (5) Swimmer Deployment
- (6) Survivor/s and Swimmer Recovery Procedures

DISCUSSION POINT

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PRESENTATION

A. Search and Rescue System

The Search and Rescue system is a system that consists of a sequence of events called stages. Each stage represents a part of the logical approach to the overall rescue operation.

1. Awareness stage - SAR system becomes aware of incident.
2. Initial Action Stage - SAR facilities are alerted.
3. Planning Stage - Plan of operations is developed.
4. Operations Stage - SAR facilities proceed to the rescue scene, conduct search, rescue survivors, assist distressed craft, provide emergency care for survivors and deliver to suitable medical facility.

NOTE

The NTTP 3-50.1 contains information for the safe and effective application of Search and Rescue (SAR) procedures and the execution of SAR operations. However, it is not a substitute for sound judgment. A dynamic SAR environment may require on-site deviations or modifications from procedures prescribed therein to successfully accomplish a SAR mission. The existing risk of deviation must continually be weighted against the benefit of deviation from the NTTP 3-50.1. Some examples of areas where deviations or modifications of procedures are most strongly advised against are as follows: The proper application and use of rescue equipment restraint straps, safety straps, and safety devices as mandated by the NTTP 3-50.1.

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If a rescue crewmember makes the decision not to properly utilize/apply any of the above mentioned safety devices or deviate from authorized procedures he/she shall communicate his/her intentions to the rest of the SAR crew prior to deviation. This will help utilize the full potential and experience of the crew to make a decision to deviate from authorized procedures.

In all cases, all associated risks should be weighed prior to a decision to deviate from or modify a procedure as set forth in the NTTP 3-50.1.

5. Mission Conclusion Stage - SAR platforms return to base. Rescue swimmer assists in completion of rescue report.

B. Rescue Platforms

NOTE

The helicopter is normally the primary means of rescue during all weather day and night operations, except when the weather is below 300 feet and 1 mile visibility, then Motor-Whale Boat or Forecastle will be used. However, the goal is to use the fastest and most effective rescue platform for the given situation. Whichever is first on the scene will effect the rescue unless unable. The others should stay clear so as not to hamper the rescue operation and remain ready to assist if needed.

1. Helicopter
2. Motor whaleboat or RHIB (Rigid Hull Inflatable Boat)
3. Forecastle

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C. Rescue Scene Initial Assessment (from rescue platform)

Upon arrival at the accident scene, assess the situation. Assessment begins in the rescue platform prior to swimmer deployment. The following factors should be determined prior to rescue swimmer deployment.

Review with students Information Sheet 4.9-1 in Trainee Guide.

Explain the three rules of SAR tactics basic guidelines

NOTE

Swimmer must be aware that the situation can change.

1. Number of survivors
2. Location of survivors and their relation to, distance from each other, and the rescue craft.
3. Visible injuries to the survivors:
 - a. Conscious/unconscious
 - b. Visible bleeding.
4. Flotation devices inflated/not inflated.
5. Parachute entanglement problem, or presence of ballooned parachute.
6. Sea state, wind direction, and water temperature.
7. Fuel in the water.
8. Debris littering the scene and its relation to survivors.

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9. Presence of sea predators.
10. Feasibility of attempting multiple/single rescue.
11. Rescue order established according to apparent injuries. The worst injured survivor shall be rescued first.

D. Conditions for Multiple Rescues

1. A multiple rescue occurs when there is more than one survivor and the rescue swimmer remains in the water aiding in the recovery of survivors.
2. Factors which should be considered before attempting a multiple rescue:
 - a. Sea state.
 - b. Visibility.
 - c. Your location.
 - d. Distance between survivors.

Remind students of the basic rules for SAR Tactics

WARNING

To avoid fatigue, the rescue swimmer shall avoid multiple rescues when a great deal of swimming is required between survivors. Additionally, the reduced visibility during night/IFR rescues makes multiple rescues hazardous.

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3. In the event of a multiple rescue the rescue swimmer shall:
 - a. Signal the rescue platform to deploy raft(s).
 - b. Inflate the raft(s) if necessary and commence boarding the survivors into the raft(s).

- E. Survivor(s) and Swimmer Recovery Procedures
 1. Motor whaleboat/RHIB and helicopter recoveries shall be performed per NTTP 3-50.1.

NOTE

Prior to all rescue boat deployments, aviation SAR swimmers shall familiarize themselves with rescue boat recovery procedures as outlined in NTTP 3-50.1.

The rescue boat shall remain close, but stay clear of the rescue until the helicopter rotating anti-collision lights are turned off. At this signal, the rescue boat will assume the responsibility for the rescue.

2. All recoveries of personnel in the water shall be attempted with the survivor facing the gunwale of the boat.

3. Ship-Alongside Rescue
 - a. When helicopter is not available.
 - b. The sea precludes lowering of the whale boat/RHIB.

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- c. When the rescue can be accomplished more expeditiously by ship.

NOTE

When directed from the bridge, every attempt should be made by the deck recovery detail to deploy life rings, yellow low padded monkey fist, etc., to gain contact or positive control of the survivor. If the distance is too great, a swimmer should be lowered into the water.

4. Shipboard recovery (Forecastle)

1. Hoisting

- a. Primary means for hoisting personnel from the water to the forecandle is the J-Bar Davit system with modified rescue strop attached. Advantages:
 - 1. Aircrew survivors are familiar with the strop.
 - 2. Rescue strop floats.
 - 3. The rescue strop can be tossed a short distance, which is an advantage over nets, litter, and seats that must be brought directly over or under the survivor.

Explain to students that the use of the J-bar Davit and snatch block makes the task easier.

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6. First Aid

- a. On board the rescue platform, First Aid and treatment for shock shall be administered to survivor as necessary.

NOTE

Rescue reports show that almost all survivors are in some form of shock.

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SUMMARY:

- A. State Lesson Objectives
- B. Review Major Teaching Points

Turn to cover page for objectives.
Briefly summarize.

APPLICATION:

NOTE

It is unrealistic for a survivor to act aggressively and chase the rescue swimmer. This is an impractical simulation of an active drowning victim as defined by the American Red Cross (Life guarding manual, pg. 56); GAO report (pg. 17) calls "belligerent and aggressive victims is a poor teaching method and an ineffective way to mentally condition students to perform under stress." Survivors **SHALL** be briefed to exhibit the following characteristics as detailed by the ARC:

1. Struggle to keep the face above water in an effort to breathe.
2. Have arms extended to the side, pressing down for support. There is no supporting kick.
3. Have a vertical body position in the water.
4. Struggles at the surface, unable to move forward, for approximately 20 to 60 seconds before submerging.

IN NO CASE WILL THE SURVIVOR CHASE THE RESCUE SWIMMER.

SAFETY NOTES: Students shall wear a complete set of rescue swimmers equipment including a SAR-1 vest during all training sessions. The mishap plan shall be activated by any of the instructors, safety observers, or pool monitors whenever he observes an accident/injury. Instructor shall ensure all pool drain covers are installed prior to commencing any disentanglement training.

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SCENARIO #1

Survivor #1

Equipment... AIRSAVE CMU-33/P over torso harness, FULLY INFLATED flotation with parachute, HGU helmet, MBU-12 oxygen mask, SKU/RSSK

Scenario... Under ballooned chute, Unconscious

survivor #2

Equipment... AIRSAVE CMU-33/P over torso harness, FULLY INFLATED flotation with parachute, HGU helmet, MBU-12 oxygen mask, SKU/RSSK

Scenario... Under ballooned chute, Conscious

SCENARIO #2

Survivor #1

Equipment... CMU-33A/P AIRSAVE (non-ejection seat), FULLY INFLATED LPU-33, HGU helmet

Scenario... In a multi person raft, unconscious

Survivor #2

Equipment... CMU-33A/P (non-ejection seat), PARTIALLY INFLATED LPU-32, HGU helmet

Scenario... In a multi-person life raft assisting unconscious survivor

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SCENARIO #3

Survivor #1

Equipment... CMU-33A/P (non-ejection seat),
FULLY INFLATED
LPU-33, HGU helmet

Scenario... In a single man life raft
conscious

Survivor #2

Equipment... Free floater with FULLY INFLATED
LPU-32

Scenario... Unconscious

SCENARIO #4

Survivor #1

Equipment... AIRSAVE CMU-33/P over torso
harness from E-2 Hawkeye,
PARTIALLY INFLATED Flotation,
O2 mask, RSSK/SKU and
HGU helmet and parachute
connected

Scenario... Unconscious floating next to
raft

Survivor #2

Equipment... AIRSAVE CMU-33/P over torso
harness from E-2 Hawkeye,
FULLY INFLATED flotation,
O2 mask, RSSK/SKU
HGU helmet and parachute
connected

Scenario... Unconscious floating in raft w/
parachute in raft.

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SCENARIO #5

Survivor #1

Equipment... AIRSAVE CMU-33/P over torso
harness FULLY INFLATED
flotation, helmet O2 mask
RSSK/SKU and attached
parachute

Scenario... conscious floating next to raft

Survivor #2

Equipment... AIRSAVE CMU-33/P over torso
harness FULLY INFLATED flotation
and helmet

Scenario... Unconscious in raft

SCENARIO #6 Multiple free floaters in a multi-person
raft

NOTE

During multiple rescue scenarios a litter shall be used
during at least one scenario, more if time is permitting

Final multiple rescue will consist of one of the following:

- a. A Pilot and WSO eject out of an F/A-18F and the crew
is as follows:
AIRSAVE CMU-33/P over torso harness FULLY
INFLATED flotation, helmet, O2 mask, RSSK/SKU and
attached parachute who is conscious in a raft
under a ballooned canopy who is attempting to get
himself out from under the ballooned canopy.
Another AIRSAVE CMU-33/P over torso harness FULLY
INFLATED flotation, helmet, O2 mask RSSK/SKU,

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attached parachute who is unconscious floating next to a raft.

- b. A helicopter has gone down, the crewmembers are as follows:

There is a multi-person raft in the water with two crewmembers in it. They are wearing helicopter configured gear one of the survivors is waving at the helicopter the other is unconscious. There is a third survivor floating out and away from the raft who is also unconscious and not breathing.

- c. During a routine training flight an E-2 has ditched, the crewmembers are as follows:

Three crewmembers are in the water two in rafts one in the water holding on to one of the rafts the survivor holding on to the raft has partially inflated flotation, but is otherwise fine. The occupant of the raft supporting the man in the water has fully inflated flotation and is unconscious and not breathing. The last man in a raft has fully inflated flotation is conscious and has a deployed parachute and is complaining of back pain.

NOTE

During the final multi's a litter shall be used and graded.

NOTE

Final multi's are scheduled for four evolutions. During a testing evolution only one scenario shall be selected and utilized and during the next successive evolution it shall not be reused. During the fourth evolution a scenario may be reused but then may not be used during the retest portion of

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the schedule. Retests consist of two evolutions each evolution shall consist of one of the two remaining scenarios.

EVALUATION: Final multiple and written test.

ASSIGNMENT: None.

RELATED INSTRUCTOR ACTIVITY