COURSE TITLE: Aviation Rescue Swimmer Courses, Q-050-0600 Q-050-0602

CLASSIFICATION: Unclassified

LESSON PLAN NUMBER: 4.10

LESSON TOPIC: Overland SAR Operations

ALLOTTED LESSON TIME: 1.0 Classroom
7.5 Laboratory

INSTRUCTIONAL SUPPORT:
1 Classroom Instructor
1 Laboratory Instructor
Safety personnel and additional instructors as required per annex E, Staffing Requirements, of Curriculum Outline

INSTRUCTIONAL REFERENCES:

1. NAVAVSCOLSCOM/OMD Joint Command Agreement

2. NAVAVSCOLSCOM Inclement Weather Instruction

3. NWP 3-50.1 Navy Search and Rescue Manual

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 and overland rescues as outlined in NWP 3-50.1 and OPNAVINST 3130.6 series without injury to personnel or damage to equipment.

Enabling Objectives:
Completely supported by this lesson topic:

3.48 List procedures for day/night overland SAR, to include SAR carries and litter procedures.

3.49 Demonstrate day/night procedures for overland SAR in a simulated rescue environment, to include SAR carries and litter procedures.

CRITERIA TEST: None.

HOMEWORK: None.

INSTRUCTIONAL AIDS:

1. Trainee Guide

2. Two pair foamy earplugs per student

3. Student Flight Equipment

4. Instructor SAR Equipment

5. 4 SAR MEDIVAC litters

6. SAR Capable Helicopter with 2 Crewmen

7. Eye protection

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.

4. Reiterate DOR and TTO policy.

5. Ask the following questions:

a. Has anyone gone to the hospital/branch — Refer questionable cases

DISCUSSION POINT	RELATED INSTRUCTOR ACTIVITY
clinic for treatment within 24 hours, and are you taking any medications?	to department medical representative for disposition.
b. Has anyone taken over-the-counter medications within 24 hours?	
c. Are there any potentially disqualifying illnesses/conditions for which you are currently being evaluated?	
B. State Lesson Objectives.	Turn to cover page of Lesson Plan and paraphrase objectives.
C. Establish Readiness	
1. Motivating Statements	Establish importance and relevance of lesson material using personal experience or anecdote.
While Naval SAR-capable units have traditionally operated within the maritime environment, it is becoming increasingly necessary for those units to also operate inland. Because of increased air traffic density, military training areas both in the United States and abroad have been positioned inland, often over the most remote and rugged terrain.	
2. Lesson Overview	Briefly outline material to be covered.
a. Lesson Topic: Overland SAR Operations	

DISCUSSION POINT | RELATED INSTRUCTOR ACTIVITY

b. Major Teaching Points:

(1) Overland Rescue methods

(2) Practical applications

PRESENTATION:

WARNING

Regardless of the type of rescue to be utilized, when effecting a military SAR in the immediate vicinity of the aircraft crash site, extreme care shall be used due to the possibility of carbon fiber hazards and unexpended ordnance; i.e., parachute ballistic spreaders, ejection-seat ordnance, etc.

WARNING

Inhalation of composite fibers resulting from aircraft fires or damaged aircraft materials may be harmful to rescue personnel. If smoke is present, rescue personnel shall be deployed upwind and will approach the aircraft in a manner as to avoid any smoke.

A. RESCUE METHODS

1. There are five basic rescue methods which can be utilized:

a. Landing to effect a rescue

b. Rescue via hoist

c. Rescue via one skid/wheel

d. Rappelling

e. Short haul evolution

2. Landing to effect a rescue.

a. The preferred rescue method in all overland cases is to land. A landing rescue is more expeditious, reduces pilot/crew fatigue, and is more simplified than other rescue methods.

b. Procedures for a rescue by landing

(1) If the survivor's location is beyond the sight of the aircraft, the travel between the two should be kept to a minimum to reduce crew fatigue. In such instances, on the first trip to the survivor(s) the following gear should be carried.

(a) Hand held radio

(b) Medical kit (first aid kit)

(c) Rescue litter/SAR MEDEVAC litter

(2) When the survivor(s) is beyond the

sight of the pilots, the crewman must perform a Primary Survey and keep the pilots appraised of the survivors(s) condition and requirements via the hand-held radio. When only one crewman is on board, the copilot may be

required to aid the crewman in first aid treatment and recovery of the survivor(s).

3. Rescue Via Hoist

WARNING

Only as a last resort should the crewman be lowered through trees or dense foliage to the survivor. This is to be performed only when absolutely no clear area exists in the proximity of the survivor(s) and the condition of the survivor(s) appears to require immediate medical attention.

a. Terrain or foliage may prohibit landing to effect the rescue. In such cases, a hoist recovery is most advantageous. Even though rescue via hoist is not the most desirable method, it is a widely used rescue technique and training should be geared toward its use.

b. The crewman shall evaluate the survivor’s medical condition and determine which type of rescue device is required. If the survivor is suspected of having neck/back

injuries, a rescue litter shall be used.

c. Procedures For a Hoist Recovery:

WARNING

Buildup of static electricity necessitates that the crewman allow the rescue hook to touch the ground before it is touched.

Prior to hoisting, perform a final check:

(1) Survivor and/or crewman are properly attached to rescue device.

(2) Knurled fittings on locking carabiners are down and locked.

(3) Hoist cables are not obstructed/ entangled.

4. Rappelling

a. Rappelling to a survivor is the most expeditious means of getting a crewman to the deck when a landing is not practical.

b. Rappelling has many advantages over hoisting, the ability of the crewman to control the descent allows for a safer means of descending through trees, dense foliage, and rugged terrain.

c. Rappelling reduces hover time and the increased speed of the evolution combined with the advantage of controlled descent makes rappelling a valuable rescue technique

in the inland rescue environment.

NOTE

Only rappel-qualified crewman shall conduct SAR rappelling operations in accordance with OPNAVINST 3130.6 series.

5. Short Haul Evolution

a. The short-haul evolution is a rescue method utilized for the extraction of a survivor on vertical or near vertical terrain.

b. It may also be used in cases where the hoist cable length is insufficient or the hoist is inoperative.

c. The short-haul evolution terminates at a predetermined landing zone. This provides a rapid means of rescue from inaccessible locations.

6. Overland SAR Carries and Litter Training

a. Preparation

(1) Assess, Decide, React (ADR). Crewchiefs and Gunners will have to make quick decisions that may affect flight safety and mission success. Aircrewman must Assess the situation, make a Decision that will not

Explain: Though it is a non-combative environment, Rescuers still need to be aware of their surrounding for hazards. ADR gives a

DISCUSSION POINT	RELATED INSTRUCTOR ACTIVITY
adversely affect or violate safety, crew or mission integrity, and then React to the situation accordingly. This process, at times, will have to be done in a split second.	good foundation for proper headwork.
(2) Ensure that the Litter is ready to go prior to landing.	Explain: This will include the medical kit and Radio(s).
(3) Two person Primary Survey/Proper Log Roll Technique. (a) Face Down (b) Face Up	Demonstrate the proper technique for primary survey being conducted by two rescuers and proper log rolls face down/up.
b. Carries (Fireman's-Chair-Drag)	During Day Overland SAR, these carries will be demonstrated and practiced while the student is waiting for next event.
(1) This provides options when litter is all ready being utilized. (2) Requires headwork	
(a) Fireman's Carry a. Used for extremity injury b. Two man carry c. Lift with legs not back d. Crewman must be relatively the same size	

DISCUSSION POINT | RELATED INSTRUCTOR ACTIVITY

(b) Chair Carry
   a. Used for abdominal injury
   b. Two man carry
   c. Reverse or Front

(c) Drag
   a. Life over limb
   b. Last resort

SUMMARY:

A. State Lesson Objectives — Turn to cover page for objectives.

B. Review Major Teaching Points — Briefly summarize and check for understanding.

APPLICATION:

Execute day overland SAR operations.

HELICOPTER HOISTING OPERATIONS

TRAINING: Instructors and students shall wear a complete set of RFT equipment (i.e. helmet, flight suit, flight boots, and Rescue Swimmer gloves IAW

DISCUSSION POINT	RELATED INSTRUCTOR ACTIVITY
CNETINST 3710.1. A duty van shall be used to transport students to overland training area. Overland SAR hoisting shall be conducted in accordance with references (1), (2), and (3). Procedures used shall be per reference (3). The instructor in charge shall ensure that all students have met the prerequisites prior to operations and that all students are physically qualified to participate. The instructor in charge shall not be in the training area under the helicopter but outside the area keeping watch on the training. The instructor in charge shall position himself where the Operations Instructor and staging Instructor will always be able to see him. Another Instructor (Staging Instructor) shall be with the students waiting to go into the training area. Before students go into the training area he shall make a final inspection on the students safety equipment. This Instructor also shall be in charge of the safety of students not in the training area. Students and instructors shall don flight equipment prior to entering the operating area. The instructor in charge shall maintain communications with the helicopter and Rescue Swimmer School Office via two-way radio. When the helicopter is in position and the TSM has cleared training operations to commence the staging instructor shall send in two students to the operations Instructor who shall direct the training of	

hoisting operations.

One instructor (Training Instructor) shall be under the helicopter with two students for safety and to ensure that proper hoisting procedures are used. Students shall make a minimum of one complete hoisting evolution with the SAR MEDEVAC litter using the trail line. The requirement for hoists may be waived by the Commanding Officer in situations where students are unable to complete this training due to weather, or aircraft/facility availability.

TRAINING TEAM: The training team shall consist of:

One TSM.

One IOD to be overall coordinator of the training evolution and to maintain radio communications with both the helicopter and the ARSS bridge.

One operations instructor who will be positioned under helicopter with students during training.

One staging instructor who will maintain student safety for all students not in the training area.

One EMT.

One safety officer.

DISCUSSION POINT | RELATED INSTRUCTOR ACTIVITY

NOTE: Students shall demonstrate hoisting procedures in the training tank (pool) prior to live helicopter operations. Students shall be thoroughly briefed on sequence of events, safety precautions and emergency procedures prior to overland SAR operations.

SAFETY: Primary instructor shall ensure that weather conditions are within limits of reference (2), all students are physically qualified to participate, no more than two students and one instructors under the helicopter at any time.

Instructors shall ensure that all students wear foamy ear plug inserts during the entire evolution. Students shall keep eye protection on when in and around hoisting area.

Day overland SAR scenario

The day overland SAR scenario will simulate a rescue swimmer being hoisted to the ground to recover an aviator whose is land bound. Instructors shall have students simulate getting hoisted to the deck where they will signal for a level A medical kit. They will go to a pre-positioned simulated survivor and begin a primary survey, once primary survey is completed students will signal for

the litter and simulate putting survivor into litter and hoisting survivor up to helo. The student will then simulate getting hoisted back up to the helicopter where they will do a quick reassessment of the primary survey.

Night overland SAR scenario

DISCUSSION POINT	RELATED INSTRUCTOR ACTIVITY
The night overland SAR scenario will simulate a helicopter making a confined area landing and the crewchief and rescue swimmer having to march overland to get to the survivor. Instructors shall designate an area that will be the helicopter landing area. The instructor shall take two students and designate one as the crewchief and one as the swimmer and point them in the direction they are to find the downed aviator. A pre-staged survivor some distance away will have a signaling device illuminated. The students job is to find the survivor. Once there, the student designated as the crewchief will begin putting together the SAR Medevac litter and the student designated as the swimmer shall begin a primary survey which will include CPR. Once the primary survey is complete both students will place a simulated survivor into the SAR Medevac litter and carry it back to the helicopter landing area. Once there they will perform a quick reassessment of the primary survey.	

EVALUATION: Performance Test

ASSIGNMENT: None.