

**NATIONAL ASSOCIATION FOR
SEARCH AND RESCUE**

**CRITERIA FOR SEARCH PERSONNEL
SAR TECH TM I/CREWLEADER III**

INTRODUCTION

In 1992 the SAR Community was presented with the new NASAR CRITERIA for SAR TECH™ TYPE III & II. SAR TECH™ III & II was born from the desire to begin the process of adopting a national CRITERIA for search and rescue in the United States. The national response to this program of testing for certification has been rewarding to those who developed this original CRITERIA. Many states have adopted the CRITERIA as a requirement for all search responders who are assigned to the field. Many more local SAR Teams and K-9 SAR Teams, have adopted the CRITERIA as a minimum certification for operational personnel. In some areas of the country where the CRITERIA has been in place for several years, Incident Commanders report that the level of response and indeed the level of success in finding the lost subject has been measurably improved.

In September 1994, the NASAR Education Committee began developing the next level of certification for operational personnel under ICS (NIIMS) guidelines. This became SAR TECH™ TYPE I / SAR CREWLEADER TYPE III. The committee determined that the next need of Incident Commanders was to be able to identify those persons able and qualified to be assigned as leaders for SAR crews. This position would need to build on the foundation established by SAR TECH™ II and test the knowledge and skills most needed by the Crewleader.

Also September 1994 Craig Bannerman was appointed as the Program Director for Certification and assigned the task of providing a finished CRITERIA as well as develop the supporting text and course work. A committee to develop the CRITERIA was established and the CRITERIA was written. The CRITERIA was revised into a draft and sent for review to all NASAR Coordinators, Evaluators, Instructors, Board of Directors, and other SAR personnel. The CRITERIA was revised based on comment each of the three times this process was repeated.

The SAR TECH™ TYPE I / SAR CREWLEADER TYPE III Committee worked many long hours and days on this project. Many other individuals contributed to the CRITERIA throughout the process and these need to be recognized by NASAR with much appreciation.

Craig Bannerman, NASAR Program Director for Certification
Bryan Christy, Burke County SAR Team
Steve Foster, VP for Education NASAR
Darwin Glassford, Black Mountain Fire Department, Mountain Tactical Unit - SAR
Larry Jones, President NC SAR Council, Guilford County SAR
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Jim Stumph, ICS Program Director
Tom Millen, ISAR - FUNSAR Program Director
Jim Jones, VASAR
William Johnson, Randolph County SAR Team
Bruce Keever, Burke County SAR Team
Larry Pugh, Chief, Randolph County Search and Rescue Team
Jim Taylor, Burke County SAR Team
Gary Williams, Randolph County SAR Team

A special thanks goes to all of the individuals (too many to list) who took the time to review the CRITERIA, and return your comments, for each of the three revisions. Without your help this CRITERIA would not have been possible. Also for those who have taken the SAR TECH™ program as their own and helped bring it to the SAR Community.

In February 1995, the Education Committee approved SAR TECH™ TYPE I / SAR CREWLEADER TYPE III, and the development of the course and text to support the CRITERIA.

In March 1996, the CRITERIA was tested for the first time in Asheboro NC. Much gratitude is due the members of the Randolph County Search Team, who provided untold hours in preparation for this exam and also provided gracious hospitality to those who attended. Randolph County Community College extended the use of it's resources for this inaugural event and this was much appreciated as well.

The implementation of the testing procedures began in April of 1996.

The CRITERIA was revised by Craig Bannerman, Program Director for Certification in 2002 based on comments from Coordinators and Evaluators within the program.

SCOPE

The knowledge and performance skills needed by a SAR Crewleader in rural and wilderness environments, normally are not taught to any other emergency service personnel.

To effectively lead a SAR crew in a safe, efficient, and timely manner, requires the Crewleader to possess skills needed in management of small units, difficult navigation situations, improvising care for injured, working in difficult, sometimes hostile, environments while maintaining leadership of the group.

This CRITERIA addresses common minimal levels of knowledge and performance skills needed by SAR Crewleaders. Further development of the positions within the ICS organization structure will continue. All positions are based on SAR skills needed for that position under the Incident Command System (NIIMS) position guidelines.

INCIDENT COMMAND SYSTEM SAR POSITION DESCRIPTIONS

SAR TECH™ TYPE - I

Has advanced knowledge and field performance competence. Has knowledge and field performance skills in the use of SAR Tactics including K-9 attachments to a SAR crew, advanced land navigation skills, group leadership, and management.

SAR TECH™ TYPE - II

Has basic knowledge skills and field performance competence.

SAR TECH™ TYPE - III

Has basic knowledge skills.



NASAR CERTIFICATION CRITERIA FOR SAR TECH™ I/ SAR CREWLEADER III

PURPOSE

- I. The SAR TECH™ - TYPE I/SAR CREWLEADER III CRITERIA are designed to define the minimum knowledge skills and performance skills needed by an individual to perform as a highly proficient and effective member of a SAR CREW and/or as basic SAR CREWLEADER during land search operations.
- II. The SAR TECH™ - TYPE I/SAR CREWLEADER III should be able to perform these functions anytime of the year, day or night, and in all weather conditions experienced in his/her community or jurisdiction.

REFERENCES

- I. "Search And Rescue Fundamentals", by Cooper, LaValla, and Stoffel, Third Edition, 1990.
- II. "Search Is An Emergency", by NASAR, Third Edition, 1987.
- III. "(Crew) Strike Team Leader", NIIMS, 1984.
- IV. "Small Unit Leadership - A Common Sense Approach", by Col. Dandridge M. Malone, USA (Ret.)
- V. "Critical Separation", by Peter Howells, NASAR Conference Proceedings, 1992.
- VI. "High Angle Rescue TECH niques", by Tom Vines and Steve Hudson, Revised Edition, 1992.
- VII. "On Rope", by Allen Padgett and Bruce Smith, First Edition 1987.
- VIII. "Probability of Detection (POD) Research, And Other Concepts For Search Management" A collection of papers, featuring Critical Separation, by Dave Perkins, August 1989.
- IX. "Be Expert With Map And Compass, The Orienteering Handbook", by Bjorn Kjellstrom, Revised Edition, 1976
- X. "(FM 21-26) Map Reading And Land Navigation", United States Army, Sept. 1987
- XI. "Some Grid Search Techniques For Locating Individuals In Wilderness Areas", by William Syrotuck, 1974

QUALIFICATIONS

- I. Physically and mentally capable of performing the functions of the certification CRITERIA. Other agencies, organizations, and/or SAR authorities may have an age requirement for their members to apply for certification or perform the functions of these CRITERIA.

EQUIPMENT REQUIREMENTS

- I. Possess proper equipment as outlined in Attachment I, "SAR TECH™ - TYPE I/SAR CREWLEADER III MINIMUM PERSONAL EQUIPMENT LIST"

CERTIFICATION PROCEDURES

(Revised 02/15/2003)

- I. Recommendations
 - A. The Candidate should have documented at least one hundred (100) hours of time spent on actual searches.
 - B. The Candidate should have one hundred (100) hours of land based SAR training.
 - C. The Candidate should have a minimum of two years of active membership with a land based SAR organization.
 - D. This documentation should be accompanied by a signed letter of recommendation from the supervisor of the Candidates SAR organization.
- II. Requirements
 - A. It is required that the Candidate must possess a current Advanced First Aid certification or above and a current CPR certification or above. An ideal crewleader should be at the EMT level or above.
- III. The following criteria must be met in order to qualify for certification as a SAR TECH™ - TYPE I/SAR CREWLEADER III:
 - A. The Candidate must be certified at Advanced First Aid or above, and CPR, and provide a photocopy of this documentation at the exam test site.
 - B. The Candidate must be certified as a SAR TECH™ II and provide a photocopy of this documentation at the exam test site.
 - C. Pass a written test within the limits defined for each knowledge and performance skill, with a score of at least 70%.
 - D. Pass a practical test within the limits defined for each performance objective.
- IV. Certification
 - A. Upon successful completion of the requirements a certificate will be issued to the person by NASAR. This certificate does not constitute a license to practice the skills taught in the training program or practice the knowledge and performance skills that have been evaluated. The certification does signify that the person holding the certificate has met the requirements of an established CRITERIA of knowledge and/or performance skill on the date indicated on the certificate.

TEST METHODS

I. Written test

- A. The test shall consist of multiple choice questions based on the SAR TECH™ - TYPE I/SAR CREWLEADER III knowledge and performance objectives. Passing score is 70%.

II. Practical Test

- A. The practical test consists of "Performance Evaluation Stations" based on the performance objectives. Applicants must perform these skills in the presence of an approved Evaluator.
- B. Each performance skill has specific requirements and well-defined criteria for either a pass or fail score.

III. Re-testing

- A. Candidates who fail either the written or practical test are eligible for re-testing.

KNOWLEDGE AND PERFORMANCE OBJECTIVES

I. ICS Management System

- A. The Candidate shall explain the relationship of the ICS modular concept as it relates to a typical search incident.
 - 1. The five (5) functional sections
 - 2. The four management levels of the operations section.
- B. The Candidate shall identify the resources commonly managed under an ICS system during a SAR incident.
- C. The Candidate shall define the following components of comprehensive resource management:
 - 1. Single Resource
 - 2. Task Forces
 - 3. Strike Teams
- D. The Candidate shall define the three status conditions placed on resources when using comprehensive resource management.
 - 1. Available
 - 2. Assigned
 - 3. Out of service
- E. The Candidate shall correctly explain the information required for each entry on the ICS 204 form, Assignment List.
- F. The Candidate shall correctly explain the information required for each entry on ICS 214 form, Unit Log.
- G. The Candidate shall explain the use of a ICS 204 and 214 form, as it relates to the crew and the managers of a SAR incident.
- H. The Candidate shall list and describe the components of an Incident Action Plan.

- I. The Candidate shall describe the relationship of the IAP to the Crewleader and other SAR resources.
- J. The Candidate shall identify the information used to complete a ICS form 202, 203, 204, 205, and 206.

II. Small Unit Leadership

- A. The Candidate will be able to list and explain ten (10) of the character traits of a good leader.
- B. The Candidate will be able to list and explain eight (8) of the principles of leadership.
- C. The Candidate will be able to list and explain the six (6) elements of crew leading procedures.
- D. The Candidate shall explain the following:
 - 1. Conflict management
 - 2. Situational management
 - 3. Supervisory techniques
 - 4. Motivational techniques

III. Fitness

- A. The Candidate shall explain the techniques used to physically prepare for a SAR response.
- B. The Candidate shall describe a basic understanding of nutritional needs during extended periods of physical exertion.
- C. The Candidate shall describe the relationship between physical ability and the mental aspects of effective search techniques.

IV. Crew Safety

- A. The Candidate shall be able to identify and describe at least five (5) special hazards encountered on a SAR mission.
 - 1. Climatic hazards
 - 2. Travel/Terrain hazards
 - 3. Forest fires
 - 4. Hunters/poachers
 - 5. Searching on private property
 - 6. Drug production areas
 - 7. Animals

V. SAR Ready Pack for SAR TECH I/ SAR Crewleader III

- A. See Attachment - 1, SAR TECH™ - TYPE I/SAR CREWLEADER III MINIMUM PERSONAL EQUIPMENT LIST.
- B. The Candidate will have a 24-hour ready pack for SAR TECH™ I/ SAR Crewleader III and explain the use of its contents.
- C. The Candidate will be able to explain the difference between a 24-hour ready pack for SAR TECH™ I/ SAR Crewleader III and a crew members 24-hour ready pack.

VI. Maps, Symbology, and Land Navigation

- A. The Candidate shall be able to list the common maps used by land SAR personnel, aircraft search crews, and other SAR resources.
- B. The Candidate shall identify the different common coordinate systems and describe the common elements between them.
 - 1. UTM grid system
 - 2. Longitude and latitude
- C. The Candidate shall identify the photo revised sections of a USGS topo map.
- D. The Candidate shall describe the use of a back azimuth in locating a position.
- E. The Candidate shall demonstrate the ability to locate a position on a map, using a resectioning method.
- F. The Candidate shall demonstrate the use of tools and techniques used to determine road, trail, and straight-line distances on a map.
- G. The Candidate shall demonstrate the ability to navigate accurately around an obstacle blocking the path of travel.
- H. The Candidate shall demonstrate the ability to navigate an extended course at night, wearing his/her SAR TECH™ I ready pack, using a compass, map, grid coordinates, and terrain features for a distance of not less than fifteen hundred (1500) meters and not more than two thousand (2000) meters.
- I. The Candidate shall demonstrate a technique used to adjust a compass bearing for degrees of declination.
- J. The Candidate shall define and demonstrate the use of ICS symbols and markings used with land search maps.
- K. The Candidate shall define the advantages and disadvantages of the use of multiple handheld GPS units within a SAR crew.
- L. The Candidate shall describe the use of a GPS in guiding a SAR crew through an assigned mission.

VII. Search Techniques and Tactics

- A. The Candidate shall be able to define Probability of Detection (POD).

- B. The Candidate shall be able to describe the factors that effect the crew's Probability of Detection (POD).
- C. The Candidate shall be able to describe scanning and observation skills and techniques.
 - 1. Clue awareness
 - 2. Relevant and irrelevant clues
 - 3. Scanning vs. observing
 - 4. Scanning ranges
 - 5. Increasing observation effectiveness
- D. The Candidate shall identify the different types of searches, describe their differences, and demonstrate the techniques for maximizing the effectiveness of the following:
 - 1. Hasty searches (route or area)
 - a. Objectives of hasty searches
 - b. Types of resources used for hasty searches
 - c. Hasty search crew formations
 - d. Crew duties and assignments
 - 2. Efficient searches
 - a. Signcutting (PLS. vs. route)
 - b. Wide spacing line searches (100 feet or greater)
 - 3. Thorough Searches
 - 4. Confinement tactics
- E. The Candidate shall describe binary search strategy and tactics.
- F. The Candidate shall define critical spacing and explain how it is used.
- G. Canine/Crew Searches
 - 1. The Candidate shall define the different types of search dogs and describe the uses of each type.
 - a. Tracking/Trailing dog
 - b. Air scenting dog
 - c. Water search dog
 - d. Cadaver dog
 - e. Disaster dog
 - f. Avalanche dog
 - 2. The candidate shall define the differences between scent discrimination and non-scent discrimination trained dogs, and list the advantages and disadvantages of each.
 - 3. The Candidate shall describe the role of the search crew in supporting a dog crew and the role of the dog crew in supporting the search crew.

4. The Candidate shall describe the effects of the following on Tracking/Trailing and Airscenting dogs.
 - a. Wind
 - b. Weather
 - c. Terrain
 - d. Time of day
5. The Candidate shall describe the search strategy considerations when using SAR dogs in the following types of searching:
 - a. Hasty searches
 - b. Efficient searches
 - c. Thorough searches

VIII. Briefing

- A. The Candidate shall explain the information required and exchanged during a briefing.
- B. The Candidate will be able to list and explain the minimum information that must be obtained during a mission briefing.
- C. The Candidate will be able to explain the five (5) parts of a crew operations assignment briefing.
- D. The Candidate shall, given the proper briefing information, demonstrate briefing his/her crewmembers on an operational assignment.

IX. Debriefing

- A. The Candidate shall explain the need for crew debriefing as it relates to the management of a SAR incident.
- B. The Candidate shall list the information required to be prepared for a debriefing.

X. Hazardous Terrain Skills

- A. The Candidate shall explain the procedures for traversing hazardous terrain areas in order to complete a search mission.
- B. The Candidate shall demonstrate the use of webbing and rope to rig a single point anchor system.
- C. The Candidate shall explain the definitions of belay and its use in land based SAR.
- D. The Candidate shall demonstrate tying a Prusik sling and its use as a safety device.
- E. The Candidate shall demonstrate the tying and use of a Munter hitch.
- F. The Candidate shall combine the above skills, performing an evolution to demonstrate the use of these skills to allow a crew to safely traverse hazardous terrain.

- G. The Candidate shall demonstrate the construction of an improvised litter. This litter shall be suitable for the emergency transport of a victim. The litter shall be improvised using supplied equipment normally contained in a SAR Crew's (4 person) 24-hour packs. This litter is intended only for the emergency transport of a victim who is not seriously injured with no suspected spinal injury. (Local protocols should always be followed.)

XI. Stress Management

- A. The Candidate shall explain the four (4) categories of symptoms relating to adverse stress reactions.
- B. The Candidate shall explain the four (4) ways to help prevent adverse stress reactions.

ATTACHMENT - I MINIMUM PERSONAL EQUIPMENT LIST

- I. The following equipment is commonly compiled to form what is referred to as a "24-hour ready pack for a SAR TECH™ - TYPE I/SAR CREWLEADER III". Such a pack holds those items that would allow the holder to function in a safe, effective, and efficient manner during a SAR incident as a SAR TECH™ - TYPE I/SAR CREWLEADER III. Some items may be carried on a belt, in pockets, or strapped to the person. This equipment should be carried on all missions in rural or wilderness areas and is considered the minimum amount. Consult a physician for recommendations about analgesics and other drugs you may carry in the SAR pack.

EVERY ITEM ON THIS LIST MUST BE PRESENT FOR THE CANDIDATE TO PASS THIS STATION. THERE ARE NO EXCEPTIONS.

Personal/Crew First Aid Kit (For personal use by crew members)

- | | |
|---------------------------------------|---|
| 10 - Acetaminophen or aspirin tablets | 1 - Splinter forceps, tweezers |
| 10 - Antacid tablets | 1 - Scissors, multi-purpose |
| 10 - Antihistamine, 25mg Benadryl | 1 - Space blanket |
| 6 - Antiseptic cleansing pads | 4 - Sterile dressings (4x4 gauze pads) |
| 1 - Antiseptic ointment (Tube) | 10 - Water purification tabs in sealed container or commercially approved purification device |
| 6 - Band-Aids, various sizes | |
| 1 - Moleskin | |
| 2 - Pair of latex gloves | |
| 4 - Roller Bandage | |

Personal/Crew Survival Kit

- | | |
|--|------------------------------|
| 1 - Candle, long burning | 2 - Quarters, for phone call |
| 4 - Cotton swabs, non sterile | 1 - Razor blade, single edge |
| 1 - Duct tape, 5-10 ft. | 4 - Safety pins, large |
| 2 - Leaf bags, large | 2 - Towelette, clean |
| 16 - Matches | 1 - Whistle |
| 1 - Matches container, waterproof | |
| 1 - Plastic bag, zip lock, qt. size, for kit | |

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Personal/Crew SAR Equipment

4 -	Bags, various sizes, zip lock	1 -	Metal cup or pot
1 -	Bandanna, handkerchief	1 -	Mirror, small
1 -	Cap or other headgear	1 -	Nylon twine or small rope, 50 feet
2 -	Carabiner, locking gate	1 -	Pace counter
1 -	Clothes bag, waterproof	1 -	Pack, adequate to carry required equipment
1 -	Clothing, adequate for climate and environment	1 -	Pad and pencil
1 -	Clothing, extra set, suitable for climate	2 -	Prusik cords (6MM - 8MM - 6 ft. length)
1 -	Compass, orienteering (Silva Ranger or equivalent)	1 -	Rainwear, durable
2-	Extra leaf bags	1 -	SAR personal identification
2 -	Flagging tape, roll	1 -	Safety Rope 75 ft. (one rescuer life line @ NFPA)
1 -	Flashlight or lantern	1 -	Shelter Material, 8x10
1 -	Flashlight extra, extra batteries and bulb	1 -	Sterno or stove
1 -	Footwear, sturdy, adequate for climate	1 -	Socks, extra pair
1 -	Grid reader (UTM)	1 -	Sunscreen lotion
1-	Gloves, leather palm	1 -	Tissue paper
2 -	ICS 214 Forms	1 -	Tracking stick, 42" long
1 -	Insect repellent	1 -	Watch
1 -	Knife, multi-purpose	2 -	Water container, at least liter size
1 -	Lip balm, with sunscreen	1 -	Webbing, 20 ft. length of 1 in. tubular
1 -	Measuring device, 18 in. minimum	1 -	Wire, 5-10 ft., 14 ga. steel

Optional Personal Support Equipment Not required, but recommended

1 -	Altimeter	1 -	Rain cover, pack
1 -	Binoculars	1 -	Sun glasses, 97% UV protection
1-	Foam pad	1 -	Trail snacks
2 -	Food, nonperishable	1 -	Protractor
1 -	Gaiters	1-	Hand held GPS (SAR appropriate) with 2 sets of extra batteries
1 -	Goggles, clear		

ATTACHMENT II - PROCEDURES FOR CERTIFICATION SAR TECH™ I / CREWLEADER III

- A. The cost of certification for SAR TECH I / CREWLEADER III will be determined as needed by the Board of Directors of NASAR.
 - 1. The certification cost will be due each time a person takes a certification exam or any part of the exam.

- B. SAR TECH™ I / CREWLEADER III Certification requires prior certification as a SAR TECH™ II.

- C. SAR TECH™ I / CREWLEADER III Exam may be scheduled by anyone wishing to sponsor an exam. The cost of the above certification fee will be determined by the expenses of the test Coordinator and test Evaluator's expenses.
 - 1. Candidates must pass both the written and practical exam to become certified as a SAR TECH™ I / CREWLEADER III
 - 2. Candidates who fail the SAR TECH™ I exam will have one year to re-take and successfully pass the exam. Candidates who do not retest within a year shall retake the entire exam.
 - 3. It will be the Candidates responsibility to make arrangements to retest.
 - 4. Candidates who fail the written portion of the exam and pass the skill portion of the exam will only be required to retest the written portion of the exam, however not on the same day the exam was given.
 - 5. Candidates Persons failing any station must retake the station at another exam.
 - 6. Candidates failing two or more stations may not retake the station on the same day they were failed. Persons failing more than two stations must retake all of the practical stations at another exam.

- D. General Guideline For Conducting SAR TECH™ I Test
 - 1. Registration
 - a. Equipment and Supplies
 - (1) Registration Forms (include all stations)
 - (2) Receipt Book
 - (3) Exam Roster
 - b. Have all Candidates complete registration forms
 - (1) Have them print all information
 - (2) The name used will appear on the certificate
 - 2. Establish a staging area
 - 3. Have Candidates report to staging
 - 4. Brief Candidates on how the exam will be given
 - 5. Candidates taking the practical exam must report to staging upon the completion of a station. The Candidate will be checked off for each station and sent to the next available testing station.

ATTACHMENT III - SAR TECH™ I / CREWLEADER III SKILLS TEST

STATION # 1 - 24 HOUR PACK

I. EQUIPMENT AND SUPPLIES

- A. Equipment checklist
- B. Station evaluation sheets

II. SITUATION

- A. The Candidate will be given the equipment check list.
- B. The Evaluator will instruct the Candidate to place the separated contents of the pack on the shelter material that is unfolded and place on the floor or ground.
- C. The Evaluator will inspect and check off all the items present.
- D. The Evaluator will inspect the Candidate's pack to determine if it is suitable for SAR operations

III. SCENARIO

- A. You are to unfold your shelter material and place it on the ground.
- B. You are to remove all the items from your pack and display them so that they are visible.

IV. EVALUATION OBJECTIVES

- A. To determine if the Candidate's pack is suitable for SAR operations.
- B. To Determine if all of the items required on the checklist are present.

V. EVALUATOR INSTRUCTIONS

- A. Ensure that all equipment and supplies are available.
- B. Introduce yourself to the Candidate. Enter the Candidates name on the station evaluation sheet.

- C. Read the scenario to each Candidate and answer any questions for each part of the station. Ensure each Candidate understands the requirement for each objective.
- D. Ensure each Candidate is read the same scenario.
- E. Place an "X" in the appropriate column on the station evaluation sheet if the Candidate fails to perform the skill properly. If the Candidate partially performs a skill, the Candidate has not performed the skill properly and should receive an "X". There are no cumulative skills for this station. Failure to complete any object will result in an automatic failure.
- F. Place a "P" or "F" in the appropriate past-fail column to indicate the Candidates final grade for the station.
- G. The Candidate will be allowed five (5) minutes to arrange the contents of the pack for inspection.
- H. The Candidate's pack must be sturdy, durable and large enough to contain the required equipment on the list.
- I. Thank the Candidate for their participation and have them to return to the Staging Area. Make sure the Candidate retrieves their personal equipment used at this station. **DO NOT** indicate to the Candidate that he/she has passed or failed this station.
- J. Under no circumstances should the Evaluator leave the area or be distracted while evaluating a Candidate.
- K. The maximum number of Candidates to be evaluated at one time by one Evaluator is one Candidate.

VI. EVALUATOR EQUIPMENT CHECK LIST FOR SAR TECH™. I

- 10 - Acetaminophen or aspirin tablets
- 10 - Antacid tablets
- 10 - Antihistamine, 25mg Benadryl
- 6 - Antiseptic cleansing pads
- 1 - Antiseptic ointment (Tube)
- 6 - Band-Aids, various sizes
- 1 - Moleskin
- 2 - Pair of latex gloves
- 4 - Roller Bandage
- 1 - Splinter forceps, tweezers
- 1 - Scissors, multi-purpose
- 1 - Space blanket
- 4 - Sterile dressings (4x4 gauze pads)
- 10 - Water purification tabs in sealed container or commercially approved purification device
- 1 - Candle, long burning
- 4 - Cotton swabs, non sterile
- 1 - Duct tape, 5-10 ft.
- 2 - Leaf bags, large
- 16 - Matches
- 1 - Matches container, waterproof
- 1 - Plastic bag, ziplock, qt. size, for kit
- 2 - Quarter, for phone call
- 1 - Razor blade, single edge
- 4 - Safety pins, large
- 2 - Towelette, clean
- 1 - Whistle
- 4 - Bags, various sizes, ziplocked
- 1 - Bandanna, handkerchief
- 1 - Cap or other headgear
- 2 - Carabiner, locking gate
- 1 - Clothes bag, waterproof
- 1 - Clothing, adequate for climate and environment
- 1 - Clothing, extra set, suitable for climate
- 1 - Compass, orienteering (Silva Ranger or equivalent)
- 2 - Extra leaf bags
- 2 - Flagging tape, roll
- 1 - Flashlight or lantern
- 1 - Flashlight extra, extra batteries and bulb
- 1 - Footwear, sturdy, adequate for climate
- 1 - Grid reader (UTM)
- 1 - Gloves, one pair, leather palm
- 2 - ICS 214 Forms
- 1 - Insect repellent
- 1 - Knife, multi-purpose
- 1 - Lip balm, with sunscreen
- 1 - Measuring device, 18 in. minimum
- 1 - Metal cup or pot
- 1 - Mirror, small
- 1 - Nylon twine or small rope, 50 feet
- 1 - Pace counter
- 1 - Pack, adequate to carry required equipment
- 1 - Pad and pencil
- 2 - Prusik cords (6MM - 8MM - 6 ft. length)
- 1 - Rainwear, durable
- 1 - SAR personal identification
- 1 - Safety Rope 75 ft. (one rescuer life line @ NFPA)
- 1 - Shelter Material, 8x10
- 1 - Sterno or stove
- 1 - Socks, extra pair
- 1 - Sunscreen lotion
- 1 - Tissue paper
- 1 - Tracking stick, 42" long
- 1 - Watch
- 2 - Water container, at least liter size
- 1 - Webbing, 20 ft. length of 1 in. tubular
- 1 - Wire, 5-10 ft., 14 ga. steel

STATION # 2 - HAZARDOUS TERRAIN SKILLS

I. EQUIPMENT AND SUPPLIES

- A. The Candidate will use the contents of their SAR TECH™ I "24 hour ready pack" for this practical evaluation.
- B. The Evaluator must provide two stationary objects, preferably medium size trees, poles or other object, to be used as "bomb proof" anchor points.
- C. One piece of one inch (1") tubular webbing long enough to be tied as a harness for the Evaluator.
- D. Station evaluation sheets.

II. SITUATION

- A. The Candidate must don an improvised harness before start of the practical evaluation.
- B. The Candidate shall remove two carabiners, one 75ft. section of one person life line rope, and two Prusik slings from their pack.
- C. The Evaluator will identify the objects that the Candidate will use as an anchor points.
- D. The Evaluator will function when needed as the SAR Crew person that is being belayed.

III. SCENARIO

- A. You are the Crewleader of a three person Type II search crew. During your search mission you arrive at an area that will be hazardous to traverse. As Crewleader you are responsible for setting up a safety belay system to be used while traversing the hazard. You will be evaluated on your ability to tie and demonstrate the use of the safety belay system and perform a hazardous terrain traverse evolution. Do you have any questions?
- B. Using the 20 ' section of 1" webbing, tie a seat harness around yourself.

- C. Tie a figure eight “stopper knot” in one end of the rope.
- D. Using your 75 ft. section of rope and one Carabiner, please tie a tensionless anchor around the first anchor point.
- E. Using one of your Prusik cords, form a sling by joining the two ends of the cord together with a Double Fisherman's knot (also known as a Grapevine knot) or a Figure 8 Bend [follow through] knot.
- F. Prior to crossing the “hazard”, you will instruct the crew member (the Evaluator) on how to remove the tensionless hitch from the anchor point, and then how to attach the rope with the Carabiner when instructed to do so.
- G. Using the Prusik sling you just constructed, please tie at least a two wrap Prusik on your 75ft. section of rope, attach it to your improvised harness with one Carabiner, and demonstrate its use as a safety device while traversing hazardous terrain to the next anchor point.
- H. At anchor point two (2) the Candidate shall remove the harness and use the webbing to attach a single point tensionless anchor. Attach the lifeline to the anchor using one Carabiner and a Munter hitch.
- I. Instruct the crew member, (The Evaluator) to remove the tensionless anchor and attach the rope to their harness.
- J. Demonstrate the use of the Munter Hitch to belay the crew member across the hazard.

IV. EVALUATION OBJECTIVES

- A. The Candidate shall tie a Figure 8 “stopper knot” 2 to 3 feet from one end of the Lifeline.
- B. The Candidate shall tie a Figure Eight on a Bight in one end of the Lifeline.
- C. The Candidate shall tie a tensionless anchor hitch around the “bombproof” anchor point using a Lifeline rope and one Carabiner.

- D. The Candidate shall instruct the Evaluator on how to remove the tensionless anchor hitch from the anchor point. The Candidate shall instruct the Evaluator in attaching the Lifeline to the Evaluators harness when told to do so.
- E. The Candidate shall join two ends of a Prusik cord together using a Double Fisherman's knot or a Figure 8 Bend follow through knot.
- F. The Candidate shall tie at least a two wrap Prusik on the 75 ft. section of rope and attach it to their improvised harness with a Carabiner.
- G. The Candidate shall demonstrate to the Evaluator the use of the Prusik as a safety device while traversing a hazard.
- H. The Candidate shall tie a single point anchor around the second anchor point using webbing and a Carabiner.
- I. The Candidate shall tie attach the Lifeline to the single point anchor using a Munter Hitch and one Carabiner.
- J. The Candidate shall tell the Evaluator when to remove the tensionless hitch and attach the Lifeline to the Evaluators harness.
- K. The Candidate shall demonstrate the use of the Munter Hitch when belaying the Evaluator across the hazard.

V. EVALUATOR INSTRUCTIONS

- A. Ensure that all equipment and supplies are available.
- B. Introduce yourself to the Candidate. Enter Candidates name on the station evaluation sheet.
- C. Read the scenario to each Candidate and answer any questions for each part of the station. Ensure each Candidate understands the requirement for each objective.
- D. Ensure each Candidate is read the same scenario.

- E. Place an "x" in the appropriate column on the station evaluation sheet if a Candidate fails to perform the skill properly. If the Candidate partially performs a skill, the Candidate has not performed the skill properly and should receive an "x". Failure to perform any skill properly will result in an automatic failure. There are no cumulative skills for this station.
- F. Place a "P" or "F" in the appropriate past-fail column to indicate the Candidates final grade for the station.
- G. The water knot used to join the two ends of the webbing must have two opposing running ends. The knot shall be dressed with all bends parallel and be backed up with an overhand safety knot in each running end.
- H. Carabiner gates must be locked after attachment.
- I. The single point anchor using webbing may be doubled and wrapped around the anchor point. The webbing sling may be joined with a Carabiner or a Carabiner attached in the end of the bight. It will also be acceptable for the Candidate to make one round turn around the anchor point with the webbing, if long enough, and join the two ends with a water knot and safeties. The Carabiner must not load on the water knot.
- J. The Munter Hitch will be tied into the single point webbing anchor using the 75ft. section of rope. The Evaluator will serve as the person being belayed by holding the standing part of the rope. The Candidate must demonstrate the proper belay technique while the Evaluator loads the standing part of the rope simulating a controlled traverse.
- K. The Candidate will tie a Figure 8 on a bight in the running end of the 75ft. section of rope. Two or more round turns are made around the anchor point with the running end of the rope. The Figure 8 on a bight will be attached to the standing part of the rope with a Carabiner.
- L. When the Double Fisherman's knot is tied correctly, the tail of each rope should end up on the side of the knot opposite from the side it entered. The two turns from each half of the knot should lie flat against one another on one face of the knot and appear as a double "X" on the other face.

- M. When tied properly a two wrap or two coil Prusik should have four loops around the belay rope with two parallel ropes extending from the center of the knot forming a loop.
- N. The Prusik is attached to the Candidates improvised harness with a Carabiner. The Candidate must hold the Prusik knot in their hand as they traverse the hazard area. The Candidate must release the knot and demonstrate how it locks in the event of a slip or fall. The Candidate must show how to release the Prusik knot after it has been locked.
- O. Thank the Candidate for their participation and have them return to the Staging Area. Make sure they retrieve their personnel equipment used at this station. DO NOT indicate to the Candidate that he/she has passed or failed the station.
- P. Under no circumstances should the Evaluator leave the examination area or be distracted while evaluating a Candidate.
- Q. The maximum number of Candidates to be evaluated at one time by one Evaluator is one Candidate.

TEST LOCATION _____

STATION #2 - HAZARDOUS TERRAIN

EVALUATOR _____

SKILLS

* = AUTOMATIC FAILURE

Please indicate final grade with a "P" or "F"

Final Grade	Name	P	F	Last	First	Please indicate final grade with a "P" or "F"														
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STATION #3 - PATIENT TRANSPORT

I. EQUIPMENT AND SUPPLIES

- A. The Candidate will use the contents of their SAR TECH™ I "24 hour ready pack" for this practical evaluation.
- B. The Evaluator shall provide four tracking sticks or equivalent
- C. A training mannequin or similar object having a minimum weight of one hundred and fifty (150) pounds and not exceeding one hundred and seventy-five (175) pounds.
- D. Station evaluation sheets.

II. SITUATION

- A. The Candidate shall remove the materials from their pack that they will need to construct an improvised stretcher.
- B. The Evaluator will assist the Candidate in load testing the improvised stretcher upon completion.

III. SCENARIO

- A. You are the Crewleader of a four person Type II search crew. You have located the victim and find that they need to be evacuated as soon as possible. It will take over one hour for an evacuation crew to reach you. The victim has no obvious injuries but complains of fatigue. You will be evaluated on your ability to construct an improvised stretcher and secure the victim for transport.

IV. EVALUATION OBJECTIVES

- A. The Candidate will lash the four poles creating a stretcher
- B. The Candidate will use materials from their pack to create a mattress for the stretcher.
- C. The Candidate, with assistance from the Evaluator, will load test the stretcher by lifting it to transport height.

V. EVALUATOR INSTRUCTIONS

- A. Ensure that all equipment and supplies are available.
- B. Introduce yourself to the Candidate. Enter the Candidates name on the station evaluation sheet.
- C. Read the scenario to each Candidate and answer any questions for each part of the station. Ensure each Candidate understands the requirement for each objective.
- D. Ensure each Candidate is read the same scenario.
- E. Place an "X" in the appropriate column on the station evaluation sheet if the Candidate fails to perform the skill properly. If the Candidate partially performs a skill, the Candidate has not performed the skill properly and should receive an "X". There are no cumulative skills for this station. Failure to complete any object will result in an automatic station failure.
- F. Place a "P" or "F" in the appropriate past-fail column to indicate the Candidates final grade for the station.
- G. The knots used to construct the stretcher must be secure and capable of supporting the load of a victim.
- H. The distance between the stretcher poles when lashed parallel should be no more than eighteen (18) inches at each end.
- I. Thank the Candidate for their participation and have them to return to the Staging Area. Make sure the Candidate retrieves their personal equipment used at this station. DO NOT indicate to the Candidate that he/she has passed or failed this station.
- J. Under no circumstances should the Evaluator leave the area or be distracted while evaluating a Candidate.
- K. The maximum number of Candidates to be evaluated at one time by one Evaluator is one Candidate.

STATION #4: LAND NAVIGATION

I. EQUIPMENT AND SUPPLIES

- A. CRITERIA USGS 7.5 minute topographical maps of the testing area with UTM gridlines applied to the map.
- B. Letters that are six (6) inches tall and highly reflective, on 12 x 18 inch rigid material such as cardboard, plastic, etc. with reflective material attached to the background material, to mark all points. Letters marking points should be assigned at random.
- C. Course sheets that give the Candidates the UTM coordinates for each navigation point on an assigned course.
- D. Station evaluation sheets.
- E. Vehicles and drivers for transporting Candidates back to staging area if necessary.

II. SITUATION

- A. The terrain shall be consistent with the terrain normally found in the region the test is being given.
- B. Navigation skills testing will be conducted after dark.
- C. A navigation course shall be established by the test coordinator using the following criteria:
 - 1. The total distance for each course assignment shall be between fifteen hundred (1500) and two thousand (2000) meters.
 - 2. Each course assignment shall contain five (5) points, excluding the starting point.
 - 3. Navigation points on the course shall be reasonably prominent features that can be located at night with relative certainty.
 - 4. No single leg of a course assignment shall exceed five hundred (500) meters.

5. Each waypoint (navigation point) shall be identified with one highly reflective (for 360 degrees) 12 x 18 inch sign placed above the ground, to be visible no greater than thirty (30) meters distance at night.
6. Different azimuths shall be required for each leg of a course assignment.
7. All course waypoints (navigation points) shall be described with accurate UTM coordinates to the nearest ten (10) meters. [Eight (8) digit coordinates]
8. It is recommended that one leg of each course assignment include an obstacle that the Candidate must navigate around (pond, lake, etc.).
9. It is recommended that the final waypoint of each course assignment be at or near a location accessible by vehicles. It is also recommended that transportation back to the staging area be provided for Candidates completing the navigation course.
10. No course assignments shall take the Candidate through extremely hazardous terrain (i.e.: vertical drops, swift water, etc.).
11. There shall be one course assignment for each three (3) Candidates.
12. Each Candidate shall successfully complete the SAR TECH™ I / CREWLEADER III written examination and SAR TECH™ I / CREWLEADER III 24 hour ready pack practical station prior to beginning the land navigation station.
13. Any Candidate failing any of the first sections (see A., B., C., D., below) of this station prior to beginning the land navigation course, will be asked to return to staging. All sections of this station are automatic failures and require the station to be retaken.

III. SCENARIO

- A. You will need to carry your 24 hour ready pack, as well as your course sheet, topographic map(s) and a pencil as you go through this land navigation station. You will need to dress appropriately for the climate and surrounding terrain. No electronic location finding devices such as GPS or Loran are permitted while participating in this station. Do you have any questions?
- B. As a reminder, you need to compensate for declination between grid north and magnetic north for this region
- C. You have been given a topographic map of the area and a course assignment sheet containing five UTM coordinate destinations, as well as coordinates for your starting point. I would like you to show me the location of your starting coordinates and initial direction of travel on your map. Do you have any questions?
- D. Now that you have determined the location of your starting coordinates on your map, I would like you to show me this location on the surrounding terrain. Do you have any questions?
- E. On your course sheet you have been given UTM coordinates for five (5) destinations or “waypoints”. You are to proceed to each of these points in the order given. It is your responsibility to determine the best route to your first destination and each subsequent destination. When you reach these waypoints, you need to record your time of arrival and the letter or number of the waypoint on your course sheet. You have 2 hours to complete the course *. Do you have any questions?

* Coordinators may adjust this time to be consistent with the environment of an individual exam.

IV. EVALUATION OBJECTIVES

- A. The Candidate will correctly determine his / her assigned starting point and initial direction of travel on the map through proper use of a grid reader and orienteering compass (or similar devices).
- B. The Candidate will correctly identify the actual geographic location of his / her starting point.
- C. The Candidate must correctly identify each of the assigned points on his / her course assignment. This must be confirmed by the Candidate’s course sheet.

- D. The Candidate must complete the assigned course within the time allotted.

V. EVALUATOR INSTRUCTIONS

- A. Ensure that all equipment and supplies are available.
- B. Establish course navigation points per instructions (one per three Candidates).
- C. Introduce yourself to the Candidate. Record Candidate's name on station evaluation sheet. Have each Candidate fill out required information on course evaluation sheet. Give each Candidate a course assignment and control number.
- D. Read the scenario to each Candidate individually prior to evaluating him / her and answer any questions for each part of the station. Ensure each Candidate understands the requirements for each objective.
- E. Ensure the same scenario is read to each Candidate.
- F. Place an "x" in the appropriate column on the station evaluation sheet if a Candidate fails to perform a skill properly. If the Candidate only partially performs a skill, the Candidate has not properly performed the skill and should receive an "x".
- G. Place a "P" or an "F" in the appropriate pass-fail column to indicate the Candidate's final grade for the station. A Candidate with an "x" on any skill receives an automatic station failure. Provide a written explanation indicating the Candidate's name and specific reason(s) for failure of the station on the back of the station evaluation sheet.
- H. Thank the Candidate for his / her participation and have them return to the staging area. **DO NOT** indicate to the Candidate whether he / she has passed or failed the station.
- I. Under no circumstances should the Evaluator leave the examination area or be distracted while evaluating a Candidate.
- J. The maximum number of Candidates to be evaluated at a time by one Evaluator is one Candidate per skill, except on the navigation course, which will be one Candidate per course.

- K. Ensure vehicles and drivers are at the final navigation points of assigned courses to transport Candidates back to the staging area, if needed.

VII. COURSE SHEET

Test Location: _____

Candidates Name: _____

Candidate Control Number: _____

Course Number: _____

Date: _____

Evaluator's Name: _____

There is no leg of the course longer than 500 meters. All points are given as **UTM** coordinates.

1. Your starting point is _____/_____.
Your initial compass heading is ? _____
Time of departure: _____
2. Your first destination is: _____/_____, which is point _____.
Time of arrival: _____
3. Your second destination is: _____/_____, which is point _____.
Time of arrival: _____
4. Your third destination is: _____/_____, which is point _____.
Time of arrival: _____
5. Your fourth destination is: _____/_____, which is point _____.
Time of arrival: _____
6. Your fifth destination is: _____/_____, which is point _____.
Time of arrival: _____.

Time of pickup by Evaluator: _____ Evaluator's Signature _____

Time returned to staging area: _____

