

Italics - Cady **ASRC Training Guidelines**

Larger font - Ingle
Type (smaller) - Keith Conover MD
Uncertified ASRC Member (Field Qualification)

- 1) To become an uncertified ASRC member, the person who is applying for membership must meet all of the requirements specified in the ASRC Articles of Incorporation and By-Laws.
- 2) To become an uncertified member, the applicant must complete and file an ASRC Application for Membership and submit it to the Group Training Officer (GTO).
- 3) To participate in field activities during a mission with ASRC involvement, an uncertified ASRC member must have met the minimal Personal Equipment requirements as specified in Section 3.1 of the ASRC Operations Manual.
4. *To participate in Incident Management activities during a mission with ASRC involvement, a Trainee must have completed one of the Incident Command System and/or Managing the Search Function courses successfully and be recommended to the IC by the GTO.*

Field Team Member

1. To become a Field Team Member (FTM), the applicant must:
 - a. Be an Active Member of the ASRC, as specified by the ASRC Bylaws;
 - b. Have met all the requirements as an uncertified member;
 - c. Participate satisfactorily in four (4) ASRC or Group training sessions, including at least 32 hours of field training sessions on Personal Wilderness Survival and basic ground search theory, as judged by the GTO;
 - d. Meet the Minimal Personal Equipment as specified in the ASRC Operations Manual;
 - e. Meet the technical standards listed below, as judged by the GTO;
 - f. Be proposed for membership by the GTO at a group business meeting and receive a simple majority of the vote.
2. Field Team Members must meet annual continuing education requirements and maintain skills proficiency by participating in a minimum of six (6) training sessions, including one each on search, rescue, and land navigation, and respond to a minimum of two incidents per year.

FTM Technical Standards: Survival & Wilderness Travel:

1. Applicant exhibits ability and knowledge to travel safely in the wilderness typical of the Middle Atlantic Region, as determined by the GTO (CI).
- 1* The FTM must demonstrate the ability to travel confidently and competently with a full mission pack, on trails or cross-country, in terrain typical of a mid-Atlantic wilderness, in summer, spring and fall conditions. This includes safely and efficiently:
 - a. hiking across rugged terrain;
 - b. crossing small streams;
 - c. finding routes through brush or cliff bands;
 - d. selecting appropriate clothing, pace and rest stops for the situation;
 - e. dealing with common wilderness hiking situations such as potential heel or toe blisters and finding and purifying water;
 - f. selecting a good site and establishing an adequate bivouac (KC).

[Note that the GTO has been removed from this one. KC]
2. The Applicant must understand:
 - a. short-term survival priorities;
 - b. the heat balance of the body;
 - c. signs & symptoms of hypothermia and frostbite;
 - d. signs & symptoms of heat cramps, heat exhaustion and heat stroke;
 - e) the STOP mnemonic (Stop, Think, Observe, Plan).
- 2* The Field Team Member must understand and demonstrate the ability to explain the essential principles of short-term survival. Specific items include:
 - a. short-term vs. long-term survival;
 - b. describing several problems commonly encountered on SAR missions that may lead to a survival situation;
 - c. psychological factors that may affect survival ability;

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- d. short-term survival priorities;
 - e. average and maximal daily food and water requirements;
 - f. the heat balance of the body;
 - g. heat loss and ways to prevent it;
 - h. the physiology of heat loss, including the body's response to both heat and cold stress;
 - i. the concepts of energy reserve/energy level, exhaustion and fatigue;
 - j. hypothermia, immersion foot and frostbite;
 - k. dehydration; heat exhaustion, heat cramps and heat stroke;
 - l. general survival techniques;
 - m. using the STOP mnemonic to develop an action plan given several survival scenarios.
(Next few requirements are bundled into this one and some of the next few are pushed to FTL.)
3. Convincingly explain the important psychological aspects of survival, including:
- a. reactions to fear, pain, discomfort and danger, and their effects on the mind and body;
 - b. the dangers of panic, and the techniques of preventing panic;
 - c. the way artificial goals may interfere with rational judgement;
 - d. the concept of one's pack and equipment as a life support system.
4. Briefly describe the following concepts pertinent to survival:
- a. homeostasis;
 - b. energy level & exhaustion;
 - c. fatigue;
 - d. daily food and water needs of the human body;
 - e. the relative energy content and availability of fat, protein, starch, and sugar, including the effects of different levels of exertion and seasonal differences;
 - f. conditioning for search and rescue, including conditioning for strength, flexibility, and endurance.
5. Explain the "energy budget" concept of body temperature homeostasis, including the following key points:
- a. the routes of heat loss and their relative importance;
 - b. the use of energy stores to produce heat, and the metabolic costs of shivering;
 - c. vasodilation, sweating, and behavior means of increasing heat loss, and the long term consequences of them;
 - d. vasoconstriction and behavior as a means of conserving heat;
 - e. the effects of tobacco and alcohol on normal heat homeostasis;
 - f. the particular danger of hypothermia weather.
6. Explain the major points of wilderness clothing selection, including:
- a. listing the "3 W's" of clothing for wet, cool climates, and explaining their importance;
 - b. the advantages, disadvantages, and uses of waterproof shell garments, and the water penetration resistance of: coated nylon; 60/40 cloth; 65/35 cloth; and waterproof/ breathable fabrics;
 - c. cold weather dressing concepts, including: the layering principle, ventilation, "dressing cold," and the dangers associated with overheating in the winter;
 - d. description of clothing materials, including cotton, down, wool, and synthetic fibers, in terms of dry warmth, wet warmth, wind protection, absorption and retention of water, and wicking of water.
- 3* The FTM must demonstrate the ability to explain the major points of wilderness clothing selection, including:
- a. listing the "3 W's" of clothing priority for wet cold climates, and explaining their importance; they are:
 - (1. wind protection;
 - (2. waterproof clothing; and
 - (3. wool (or other warm-when-wet) clothing;
 - b. The advantages, disadvantages and appropriate uses of waterproof shell garments, and the water penetration resistance of: urethane-coated nylon, "60/40" cloth, "65/35" cloth, and Gore-tex;
 - c. cold weather dressing concepts, including loft, the layer principle, ventilation, "dressing cold," and the dangers associated with overheating in the winter;
 - d. description of clothing materials, including cotton, down, wool, and synthetic fibers, in terms of dry warmth, wet warmth, wind protection, absorption and retention of water, and wicking of water.
7. Be able to distinguish equipment suitable for wilderness search and rescue, including boots, packs, sleeping bags and pads, and stoves.

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- 4* The FTM must demonstrate the ability to explain the major points of personal equipment selection, including:
 - a. boots;
 - b. sleeping bags;
 - c. ground protection and insulation;
 - d. rucksacks and daypacks;
 - e. tents;
 - f. personal safety items;
 - g. fire starting aids;
 - h. stoves;
 - i. items for signalling and navigation;
 - j. light sources and batteries;
 - k. emergency shelters.
8. Describe the basic characteristics (voltage, life, weight, cost, temperature characteristics and dangers) of carbon-zinc, alkaline, lithium, and nickel-cadmium battery cells.
9. Be able to bivouac overnight in dry, warm weather conditions using normal field gear.
- * The FTM must demonstrate the ability to bivouac overnight with normal field pack gear in summer, spring or fall, and carry out incident tasks for a full day following.
- * The FTM must demonstrate the ability to build a functional emergency overnight shelter from local materials, and build a fire using field pack gear.

FTM Technical Standards - Land Navigation

1. The Field Team Member must demonstrate the ability to identify and define the following terms or concepts:
 - a. latitude and longitude;
 - b. degrees, minutes and seconds;
 - c. true north and magnetic north;
 - d. declination.
2. The FTM must demonstrate the ability to describe the various parts of the compass and demonstrate the ability to use it to plot a course on a map, including northing and declination correction.
3. The FTM must demonstrate the ability to demonstrate northing techniques by:
 - a. pointing out the North Star;
 - b. using the sun's position, shadow or "sun & stick" method;
 - c. orienting to surrounding terrain using a map ("northing by inspection").
4. The FTM must demonstrate the ability, given a standard 7.5-minute USGS topographic quadrangle map, to identify correctly the following:
 - a. Grades of highways, roads, trails and bridges;
 - b. Power lines and other landmark lines;
 - c. Buildings, schools, churches and cemeteries;
 - d. Storage tanks, wells, mines, caves, picnic areas and campsites;
 - e. Benchmarks (control stations. and spot elevations);
 - f. Boundaries and fence lines;
 - g. Contour lines, depressions, cuts and fills;
 - h. Perennial and intermittent streams, springs, falls and marshes;
 - i. Valleys, ridges, peaks and sags (saddles, cols.;
 - j. Elevations and general land contours.
5. The FTM must demonstrate the ability, given a photocopy of a 7.5-minute series topographic map section with an ASRC grid overprint, the original 7.5-minute quadrangle map, and a Uniform Map System (UMS) gridded aeronautical chart of the area, to identify points via:
 - a. Latitude and longitude;
 - b. LORAN-C coordinates;
 - c. The ASRC grid system;
 - d. The Uniform Map System;
 - e. The azimuth and distance off a VOR;
 - f. The Universal Transverse Mercator System.

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6. The FTM must demonstrate the ability, given only a 7.5-minute topographic quadrangle or an orienteering map with an attack point and a target plotted on it, and a standard orienteering compass, to explain reliably and accurately:
 - a. Calculate the true bearing from the attack point to the target;
 - b. Calculate and set on the compass the magnetic bearing to the target;
 - c. Follow the bearing accurately, including triangulating and boxing around obstacles;
7. The FTM must demonstrate the ability to locate and position correctly on a topographic map given:
 - a. The bearings to two landmarks indicated on the map (resection;);
 - b. The bearing to one landmark located on the map, and the information that the position is on a specified linear feature (modified resection;);
8. The FTM must demonstrate the ability, given bearings from two locations to a target, to locate it correctly on a topographic map (triangulation).
9. The FTM must demonstrate the ability consistently to complete basic-level point-to-point orienteering courses.
10. The FTM must demonstrate the ability to explain briefly and give examples of the use of the following land navigation features:
 - a. Catching features;
 - b. Collecting features;
 - c. Attack points;
 - d. Aiming off;
 - e. Coarse and fine orienteering.

FTM Technical Standards: Search

1. The applicant must be able to:
 - a. Demonstrate clue consciousness;
 - b. function as a member of a grid team, sweep team, and hasty team, and understand his/her role and duties in each type of search pattern;
 - c. Accompany a dog handler on a simple search task;
 - d. Demonstrate the knowledge required to responsibly and effectively handle the media in the capacity of a FTM;
 - e. Work well with people, as determined by the GTO;
 - f. Utilize the ASRC grid system.
2. The applicant must be able to use reliably all group-owned VHF-FM base and hand-held radios, including:
 - a. Adjustment of channel, volume, squelch and PL controls;
 - b. Using the ASRC radio SOP, including proper station identification and observance of FCC regulations, proper use of prowords, and use of the ICAO (ITU) phonetic alphabet;
 - c. Describing various techniques for improving marginal communications encountered while using VHF-FM hand-held radios.
3. Demonstrate knowledge of ASRC status codes.
4. Demonstrate knowledge of alternative communication methods, including whistles and signal mirrors.
- 1* The FTM must demonstrate the ability to outline important points about SAR organization. In particular, the FTM must demonstrate the ability to:
 - .a. Describe areas of responsibility for search and rescue as defined by the National SAR Plan;
 - b. Describe areas of SAR responsibility and authority at the state level for Virginia, West Virginia, Maryland and Pennsylvania;
 - c. List several resources that might be used during a SAR incident;
 - d. List several factors that may result in an aircraft being listed as missing;
 - e. Describe the basic principles of the ICS system and define the major staff positions.
2. The FTM must demonstrate the ability to outline basic legal principles associated with SAR. In particular, the FTM must demonstrate the ability to:
 - a. Outline the provisions of the Good Samaritan Law;
 - b. Define the terms "implied consent," "expressed consent," "informed consent," and "abandonment";
 - c. Describe the four facts necessary to prove negligence;
 - d. describe several methods of reducing liability exposure;
 - e. Describe the circumstances when entry upon private property may be justified, define the problems involved with this action, and suggest possible solutions.

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3. The FTM must demonstrate the ability to identify and define four key points of search theory, the four core elements of tactical operations, the five phases of a SAR event, and the four phases of a rescue operation.
4. The FTM must demonstrate the ability to describe the standard organization of Field Teams for wilderness search and rescue. In particular, the FTM must be able to:
 - a. Define "Field Team";
 - b. Describe at least 5 types of search teams;
 - c. Describe at least four types of rescue teams;
 - d. Define the functions of the field team positions:
 - (1. Field Team Leader;
 - (2. Medic;
 - (3. Rescue Specialist;
 - (4. Radio Operator.
5. The FTM must demonstrate the ability to describe the standard techniques for these search tactics:
 - a. Attraction;
 - b. Containment;
 - c. Survey search;
 - d. Hasty search (scratch search);
 - e. Sweep search (open grid search);
 - f. Line search (closed grid search);
 - g. route search;
 - h. air-scenting search dogs;
 - i. tracking or trailing dogs;
 - j. man-tracking.
6. The FTM must demonstrate the ability to serve as a competent member of a Field Team engaged in any common lost person search task. In particular:
 - a. Define clue-consciousness and demonstrate the ability to pick out basic "man-tracking" sign in the field;
 - b. Describe the duties of a member of a grid team, sweep team, and hasty team, and demonstrate the capacity to participate in each type of task competently;
 - c. Describe the duties when accompanying a dog handler on a simple search task;
 - d. Demonstrate the ability to work well with people, in the field and at base;
 - e. Set up and operate any Group-owned hand-held radio, including the use of the ICAO-ITU phonetic alphabet, standard Status Codes, standard ASRC prowords, and standard ASRC net discipline;
 - f. Reliably use the ASRC grid system to report positions;
 - g. Responsibly and effectively handle the media in the capacity of a field team member.

{KC note: some of these items are worded to make it easy to create a written test, others are aimed more at field performance evaluation.}

FTM Technical Standards: Rescue

1. Be able to coach and supervise an untrained litter team in a non-technical evacuation, including the proper use of toenailing, laddering, and rotation of litter bearers.
2. Be able to be a litter team member on a semi-technical evacuation and describe the personal equipment required for the rescuer's safety.
3. Be able to tie and contour properly:
 - a. The ASRC seat harness;
 - b. Figure-eight knot on a bight
 - c. Bowline knot;
 - d. Square knot;
 - e. Barrel knot and bend;
 - f. Girth hitch;
 - g. Taut-line hitch;
 - h. Figure-eight follow-through knot.
- 1* The FTM must demonstrate the ability to outline proper management of an aircraft crash site, possible crime scene, or other incident scene. Specific items include:

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- a. Describe several hazards commonly associated with an aircraft crash site, including additional hazards that may be present if the crash involves a military aircraft;
 - b. Describe the proper approach to an aircraft crash site;
 - c. Explain the importance of the accurate documentation of events at an incident site;
 - d. Describe the proper methods to use to secure an incident site adequately;
 - e. Explain the importance of clue preservation at both an aircraft crash site and a possible crime scene.
2. The FTM must demonstrate the ability to care properly for ropes and technical rescue equipment.
 3. The FTM must demonstrate the ability to describe the several types of rope commonly used in wilderness rescue work, and their construction, use, and care.
 4. The FTM must demonstrate the ability to describe the use and care of the carabiner, the Figure-8 descender and the brake-bar rack.
 5. The FTM must demonstrate the ability to properly use the following improvised evacuation methods:
 - a. 2-person linked-arms "chair" carry;
 - b. 2-person packstrap-and-pole carry;
 - c. Both split coil and sling "piggyback" carries;
 - d. Improvised stretchers, rope stretcher, rope and pole stretcher, parka and pole stretcher, and blanket and pole stretcher.
 6. The FTM must demonstrate the ability to belay competently, including:
 - a. Proper anchorage, tie-in, stance and aim for hip belays;
 - b. Call usage, "up rope" technique, "slack" technique, smooth tree-belay lowering and fall catching.
 7. The FTM must demonstrate the ability correctly to tie, contour and back-up the following:
 - a. The ASRC seat harness;
 - b. Overhand bend (water knot, ring bend);
 - c. Figure-of-eight on a bight and figure-of-eight knot;
 - d. Bowline knot;
 - e. Square knot;
 - f. Barrel knot and bend (grapevine knot, double fisherman's knot);
 - g. Girth hitch;
 - h. Taut-line hitch.
 8. The FTM must demonstrate the ability correctly to coach and supervise an untrained litter team in a non-technical evacuation including loading and packaging the patient, toenailing and laddering, rotation of the litter bearers, and proper use of standard calls.
 9. The FTM must demonstrate the ability competently to brake litters with tree wrap belays and with figure-eight descenders.
 10. The FTM must demonstrate the ability to serve competently in all positions on a semi-technical evacuation team, including:
 - a. Serving as rope team member with tree wrap brakes and with figure-eight descender brakes;
 - b. Rigging and directing a brute-force hauling system and z-haul system, with and without directional pulleys;
 - c. Serving as rope team member with either hauling system;
 - d. Serving as litter captain;
 - e. Selecting suitable anchor points.
 11. The FTM must demonstrate the ability properly to load and tie a patient into a Stokes litter, and to rig it for semi-technical evacuation.
 12. The FTM must demonstrate the ability to serve efficiently and competently as a litter team member on a semi-technical evacuation.

FTM Technical Standards: Wilderness Medicine

1. The FTM must carry a current 2-rescuer American Heart Association CPR card.
2. The FTM must carry a current ASRC Fundamentals of Wilderness First Aid card.

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{KC Notes: At some point, we must set standards for wilderness first aid/medicine training for our members. Saying that members must have ASRC wilderness first aid certification only postpones things, but perhaps this is best. We can "grandfather" our members into the new categories pending establishment of the new ASRC Wilderness First Aid standard.}

{Personally, I think that CPR is virtually useless in the wilderness. However, it might be handy if someone codes at Base. Is that sufficient to include it as a requirement? I think not.}

{GSAR requires that FTL's have Advanced First Aid or equivalent. One option is for us to set up both basic and advanced wilderness first aid classes. Comments?}

Field Team Leader

1. To become a Field Team Leader (FTL), the applicant must:
 - a. Meet all standards established for Field Team Member;
 - b. Have attended eight (8) training sessions or searches as an FTM, including two (2) sessions on search, and one each on rescue and land navigation and orienteering;
 - c. Meet the technical standards set below, as determined by the GTO;
 - d. Be proposed for FTL membership by the GTO at a group business meeting and receive a simple majority of the vote.
 - e. Be at least 18 years old.
 - a. Hold current FTM certification;
 - b. Complete 10 ASRC or Group training sessions as an FTM, including 2 on search and 2 on rescue;
 - c. As a FTM, have responded to 2 incidents within the previous year;
 - d. Possess all gear required, as specified in the ASRC Operations Manual;
 - e. Meet the technical standards listed below, as judged by the GTO;
 - f. Receive a favorable subjective evaluation by the GTO regarding the applicant's overall competence to perform the duties expected of a Field Team Leader;
 - g. Be proposed for FTL certification by the GTO at a Group business meeting, and receive a favorable vote in accordance with procedures specified in the ASRC Bylaws.
2. FTL must meet annual continuing education requirements and maintain skill proficiency by participating in a minimum of six (6) training sessions, including two (2) sessions on search, and one each on rescue and land navigation and orienteering, and respond to a minimum of two (2) missions a year.

FTL Technical Standards: Wilderness Survival & Travel

1. Briefly describe pertinent local weather patterns, including the signs of arriving cyclonic winter storms, cold fronts, warm fronts, and local storms.
2. Be able to bivouac on a winter night using only normal field gear.
3. Travel competently in a middle-Appalachian wilderness area during any time of year, including:
 - a. Large stream crossings;
 - b. Fourth-class rock climbing;
 - c. Proper pace and rest stop use.
1. The FTL must demonstrate the ability to explain convincingly the important psychological aspects of survival, including:
 - a. reactions to fear, pain, discomfort and danger, and their effects on the mind and body;
 - b. the dangers of panic, and the techniques of preventing panic;
 - c. evaluating and acknowledging the limits of oneself and others;
 - d. the way artificial goals may interfere with rational judgement;
 - e. the concept of one's pack and equipment as a life support system.
2. The FTL must demonstrate the ability to describe briefly the following physiological concepts pertinent to survival:
 - a. homeostasis;
 - b. energy level & exhaustion;
 - c. fatigue;
 - d. daily caloric (food) and water needs of the human body;
 - e. the relative energy content and availability of fat, protein, starch, and sugar, including the effects of different levels of exertion and seasonal differences;
 - f. conditioning for search and rescue, including conditioning for strength, flexibility, and endurance.

5. The FTM must demonstrate the ability to explain the "energy budget" concept of body temperature homeostasis, including the following key points:

- a. the routes of heat loss and their relative importance;
- (1. temperature (conduction and radiation);
- (2. windchill (convection);
- (3. wetchill (conduction and evaporation);
- b. the use of energy stores to produce heat, and the metabolic costs of shivering;
- c. vasodilation, sweating, and behavior means of increasing heat loss, and the long term consequences of them;
- d. vasoconstriction and behavior as a means of conserving heat;
- e. the effects of tobacco and alcohol on normal heat homeostasis;
- f. the particular danger of "hypothermia weather," that is, temperatures near freezing with wind and rain.

4. The FTM must demonstrate the ability to list the basic characteristics (voltage, life, weight, cost, temperature characteristics and dangers) of carbon-zinc, alkaline, lithium, and nickel-cadmium battery cells.

5. The FTM must be able to demonstrate the ability to describe pertinent local weather patterns, including the signs of arriving cyclonic winter storms, cold fronts, warm fronts, and local storms.

3. The FTM must be able to demonstrate the ability to travel cross-country competently in a middle-appalachian wilderness area during any time of year, including:

- a. winter stream and ice crossing;
 - b. traveling deep powder or snow;
 - c. using instep crampons or creepers on steep snow and icy areas;
 - d. fourth class rock climbing, including route selection, competent use of climbing techniques including balance and counterforce, choice of belay stances and anchors, and proper use of standing and sitting hip belays.
2. The FTM must be able to demonstrate the ability to bivouac on a winter night with normal field gear, and carry out incident tasks for the following full day.

FTL Technical Standards: Land Navigation

1. Given a standard 7.5 minute USGS topographic quadrangle map, correctly identify the following:

- a. Grades of highways, roads, trails and bridges;
- b. Power lines and other landmark lines;
- c. Buildings, schools, churches and cemeteries;
- d. Storage tanks, wells, mines, caves, picnic areas and campsites;
- e. Benchmarks (control stations) and spot elevations;
- f. Boundaries and fence lines;
- g. Contour lines, depressions, cuts and fills;
- h. Perennial and intermittent streams, springs, falls and marshes;
- i. Valleys, ridges, peaks and sags (saddles, cols);
- j. Elevations and general land contours.

2. Given a photocopy of a 7.5-minute series topographic map with an ASRC grid overprint, the original 7.5-minute quadrangle map, and a Uniform Map System (UMS) gridded aeronautical chart of the area, identify points via:

- a. Latitude and longitude;
- b. The ASRC grid system;
- c. The Uniform Map System;
- d. The azimuth and distance off a VOR;
- e. The Universal Transverse Mercator System.

3. Demonstrate northing techniques by:

- a. Pointing out the North Star;
- b. Using the "sun & stick" method;

4. Briefly explain and give examples of the use of the following land navigation concepts:

- a. Catching features;
- b. Collecting features;
- c. Attack points;
- d. Aiming off;
- e. Coarse and fine orienteering.

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5. Given only a 7.5-minute topographic quadrangle or an orienteering map with an attack point and a target plotted on it, and a standard orienteering compass, reliably and accurately:
 - a. Calculate the true bearing from the attack point to the target;
 - b. Calculate and set on the compass the magnetic bearing to the target;
 - c. Follow the bearing accurately, including triangulating and boxing around obstacles;
6. Correctly locate and position on a topographic map given:
 - a. The bearings to landmarks indicated on the map (resection);
 - b. The bearing to one landmark located on the map, and the information that the position is on a specified linear feature (modified resection);
7. Given bearings from two locations to a target, correctly locate it on a topographic map (triangulation).
8. Consistently complete point-to-point orienteering courses.
9. Demonstrate the ability to navigate at night.
10. Demonstrate proficiency in photocopying grid overlays onto maps.
1. The FTL must demonstrate the ability consistently to complete point-to-point intermediate-level orienteering courses of approximately a 6-hour duration or 5-mile length in rugged terrain, at night.

FTL Technical Standards: Search

1. Briefly explain the following search concepts:
 - a. Passive and active search methods;
 - b. Clue finders and subject finders;
 - c. Containment;
 - d. Binary search and cutting for sign;
 - e. hasty search;
 - f. The "Bastard Search";
 - g. Sweep search;
 - h. Survey search;
 - i. Grid search;
 - j. Attraction.
2. Demonstrate the ability to lead a field team competently on:
 - a. Scratch, survey, perimeter cut, sweep and saturation search tasks;
 - b. Interrogation and visual search tasks.
3. Demonstrate the ability to track a person for twenty (20) feet over various terrain types, with knowledge of:
 - a. Tracking sticks;
 - b. The effects of the sun and how to use them;
 - c. How to identify shoe type and provide measurement;
 - d. How to find stride length and width.
4. Demonstrate the ability to brief properly a field team before a task, including:
 - a. Subject information and history, subject's equipment and medical history;
 - b. Weather;
 - c. Terrain;
 - d. The search task, how to perform it, what its objectives are;
 - e. Information from the team members, such as medical difficulties and other input.
5. Demonstrate the ability to debrief properly a field team after a task, including:
 - a. POD;
 - b. Following proper procedure once team has returned to base;
 - c. Acquiring team member input.
6. Explain the use and operation of Direction-Finding instruments for locating downed aircraft.
7. Be able to set up commonly used ASRC radio equipment, including:
 - a. Mobile and base radios;
 - b. Antennas and masts;
 - c. Power supplies;
 - e. Linear amplifiers.
8. Outline the delegation of authority and responsibility for search and rescue in states where ASRC is located.
9. Briefly explain how the following legal concepts apply to search and rescue operations:
 - a. Good Samaritan Laws;
 - b. Civil suites and criminal actions;
 - c. Standards of care;
 - d. the right to emergency assistance and duties to provide emergency assistance;
 - e. Abandonment;

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- f. Implied consent;
 - g. Entry, during incidents; on property posted "No Trespassing";
 - h. Crime scene protection;
 - i. Declaration of death and confirmation of death;
 - j. Confidentiality.
10. Be able to describe how to approach an aircraft crash scene, how to secure the scene, and list the conditions that one may enter the crash scene.
- 1. The FTL must demonstrate the ability to lead a Field Team competently on:
 - a. Scratch, survey, perimeter cut, sweep, and saturation search tasks for a lost person;
 - b. Interrogation, visual and electronic direction-finding search tasks for a downed aircraft.
 - 2. The FTL must demonstrate the ability to explain the major factors involved in scene management when a victim is found.
 - 3. The FTL must demonstrate the ability properly to brief and debrief a field team, and to manage a team on return to Base.
 - 4. The FTL must demonstrate the ability to explain the general strategy and the role of the field team in lost person search (wilderness, rural and downed aircraft search, and natural disasters), and briefly explain the the following search concepts:
 - a. Passive and active search methods;
 - b. Clue finders and subject finders;
 - c. Containment;
 - d. Binary search and cutting for sign;
 - e. hasty search;
 - f. the "Bastard Search";
 - g. sweep search;
 - h. Survey search;
 - i. Grid search;
 - j. Attraction.
 - 5. The FTL must demonstrate the ability to explain the use and operation of direction-finding instruments for locating downed aircraft, and the ability competently to lead a team on an ELT search task.
 - 6. The FTL must demonstrate the ability to outline the delegation of authority and responsibility for search and rescue in states where ASRC Groups are located.
 - 7. The FTL must demonstrate the ability briefly to explain how the following legal concepts apply to search and rescue operations;
 - a. Good Samaritan Laws;
 - b. Civil suites and criminal actions;
 - c. Standards of care;
 - d. the right to emergency assistance and duties to provide emergency assistance;
 - e. Abandonment;
 - f. Implied consent;
 - g. Entry, during incidents; on property posted "No Trespassing";
 - h. Crime scene protection;
 - i. Declaration of death and confirmation of death;
 - j. Confidentiality.
 - 7. The FTL must be able to demonstrate the ability to use reliably the VHF-FM mobile and hand-held radios to communicate incident information including:
 - a. adjustment of channel, volume, squelch and PL (CTCSS) controls;
 - b. using the ASRC radio SOP, including proper station identification and observance of FCC regulations, proper use of prowords, and use of the ICAO (ITU) phonetic alphabet;
 - c. describing various techniques for improving marginal communications encountered while using VHF-FM hand-held radios.
 - 3. The FTL must demonstrate the ability to track a person for twenty (20) feet over various terrain types, with knowledge of:
 - a. Tracking sticks;
 - b. The effects of the sun and how to use them;
 - c. How to identify shoe type and provide measurement;
 - d. How to find stride length and width.

FTL Technical Standards: Rescue

1. Correctly tie, contour and back-up the following:
 - a. Water knot;
 - b. Prusik knot;
 - c. Headden knot;
 - d. Clove hitch;
 - e. Load-releasing hitch;
 - f. Cross-chest harness.
 2. Demonstrate the following rope handling techniques:
 - a. Coiling and uncoiling a mountaineer's coil;
 - b. Coiling and uncoiling an inverted loop coil;
 - c. Stacking and inspecting the rope;
 - d. Rigging to an anchor using:
 - i. Bowline;
 - ii. Tree-wrap and tie-off;
 - iii. Using webbing sling loops;
 - e. Casting, padding and rigging static lines.
 3. Belay competently, including:
 - a. Proper anchoring, stance, tie-in and aim for hip belays;
 - b. Correct use of calls and fall catching;
 - c. Prusik belays.
 4. Demonstrate competence in braking litters with tree wrap belays and Figure-8 descenders.
 5. Serve competently in all positions on a semi-technical rescue, including:
 - a. Serving as rope team member with tree-wrap brakes and Figure-8 brakes;
 - b. Rigging and directing a brute-force hauling system and z-hauling system, with or without directional pulleys;
 - c. Serving as rope team member;
 - d. Serving as litter captain;
 - e. Selecting a suitable anchor point.
 6. Properly load and tie a patient into a Stokes litter, and rig it for semi-technical evacuations..
 7. Demonstrate competence in route selection for a semi-technical evacuation.
 8. Demonstrate the knowledge of and ability to care properly for ropes and technical rescue equipment.
1. The FTL must demonstrate the ability to:
 - a. describe basic wilderness SAR team equipment;
 - b. describe various team plans for insuring immediate availability of such equipment;
 - c. define equipment inspection and maintenance programs for team equipment, for vehicles used by the team, and for personal equipment.
 2. The FTL must demonstrate the ability to describe the following:
 - a. ground-to-air panel, paulin, and hand signals, and aerial flares, smoke and signal mirrors;
 - b. air-to-ground aircraft signals;
 - c. ground procedures for working with a helicopter hoist;
 - d. helicopter landing zone preparation and marking;
 - e. hazards to ground personnel working around a helicopter, and the rules for approaching a helicopter.
 3. The FTL must demonstrate the ability to tie, contour, and back up correctly the following:
 - a. water knot (overhand bend, ring bend);
 - b. Prusik knot;
 - c. Headden knot;
 - d. clove hitch;
 - e. butterfly knot;
 - f. one-way knot;
 - g. sheet bend;
 - h. Frost (etrier) knot;
 - i. load-releasing hitch;
 - j. cross-chest harness.
 4. The FTL must demonstrate the ability to use the following rope handling techniques:
 - a. coiling and uncoiling a mountaineering coil;
 - b. coiling and uncoiling an inverted-loop coil;

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- c. stacking and inspecting the rope;
 - d. rigging to an anchor using:
 - (1. a bowline;
 - (2. a tree-wrap and tie off;
 - (3. loop webbing and slings;
 - e. casting, padding and rigging static lines.
- 5. The FTL must demonstrate the ability to select competently the routes for a semi-technical evacuation, and must be able to describe the manpower and equipment requirements and organizational structure needed to manage a lengthy and difficult semi-technical evacuation.
 - 6. The FTL must demonstrate the ability to rappel properly with:
 - a. the arm rappel (French arm rappel, back rappel);
 - b. a figure-eight descender (single and double-wrap);
 - c. a Munter (Italian) hitch;
 - d. a carabiner wrap;
 - e. a long rappel rack.
 - 7. The FTL must demonstrate the ability to switch from rappel to ascend, and back to rappel.
 - 8. The FTL must demonstrate the ability to ascend sixty (60) feet using only Prusik knots.
 - 9. The FTL must demonstrate the ability to direct a semi-technical evacuation team up and down a 45-degree slope; uphill motions of at least 100 feet must include:
 - a. a brute-force hauling system
 - b. a Z-haul;
 - c. a simple 4:1 hauling system;
 - d. simple belays with toenailing by the litter team.

FTL Technical Standards: Emergency Medicine

- 1. Complete an ASRC "Fundamentals of Wilderness First Aid" course, or an appropriate equivalent course.
- 2. Possess a valid American National Red Cross or American Heart Association 2-rescuer Basic Cardiac Life Support card (Cardio-Pulmonary Resuscitation).

{This is taken care of in the FTM certification.}

Rescue Specialist

- 1. To become a Rescue Specialist, the applicant must:
 - a. Meet all standards established for Field Team Member;
 - b. Have attended twelve (12) training sessions or searches as an FTM, including two (2) sessions on search, at least one training session on land navigation and orienteering, and at least three sessions on technical rescue skills;
 - c. Meet the technical standards set below, as determined by the GTO;
 - d. Be proposed for Rescue Specialist certification by the GTO at a group business meeting and receive a simple majority of the vote.
- 2. FTL must meet annual continuing education requirements and maintain skill proficiency by participating in a minimum of eight (8) training sessions, including two (2) sessions on search, at least one on land navigation and orienteering, and at least three (3) sessions on technical rescue, and respond to a minimum of two (2) missions a year.

To become a Rescue Specialist a person must:

- 1. hold current FTL certification
- 2. complete 10 ASRC or Group training sessions as a FTL, including 2 on search and 2 on rescue;
- 3. have responded to 2 incidents within the previous year as a FTL;
- 4. posses all required gear, as specified in the ASRC Operations Manual;
- 5. meet the technical standards listed below, as judged by the GTO;
- 6. receive a favorable subjective evaluation by the GTO regarding the applicant's overall competence to perform the duties expected of a Rescue Specialist;
- 7. be proposed for Rescue Specialist certification by the training officer at a Group business meeting and receive a favorable vote.

RS Technical Standards: Survival and Wilderness Travel

- 1. Demonstrate the ability to travel cross-country competently in a middle-Appalachian wilderness area in the winter, including:

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- a. Winter stream and ice crossing;
 - b. Traveling deep powder snow;
 - c. Using ice-axe and crampons on steep snow;
 - d. Belaying in snow with an ice axe;
 - e. Competency in self-belay with an ice axe..
2. Demonstrate the ability to bivouac overnight in winter with normal SAR pack gear and to carry out mission tasks for a full day following the bivouac.
 3. Demonstrate the ability to use the techniques of free lead climbing safely and properly, and the ability to lead 5.0 (Sierra Club Scale) rock routes in summer, spring or fall.

(These are taken care of in the FTL requirements.)

RS Technical Standards: Search

1. Define and explain the important implications of the following search concepts:
 - a. Passive search;
 - b. Active search;
 - c. Subject finders;
 - d. Clue finders;
 - e. Cutting for sign;
 - f. Binary search;
 - g. Repeated non-thorough grid search methods;
 - h. POD, LKP, PLS.
2. Given a lost person search scenario, a topographic map of the area and an ASRC OP's Kit, be able to set up the initial search priorities using standard ICS Map symbols. Describe the application of each of the following to the search problem:
 - a. The statistical approach;
 - b. The historical approach;
 - c. The simple containment approach;
 - d. The Mattson consensus method for establishing search area priorities.
3. Demonstrate the ability to lead a team on an ELT search task.
4. List and explain the actions to be taken upon entering the scene of an aircraft crash.
5. List and describe the priorities, methods, and phases of extrication from light aircraft, using field-portable extrication tools.
6. Demonstrate the ability to employ the tools described in (5) safely and properly.
7. Describe the characteristics of HF, ASRC VHF-FM, Public Service VHF-High and VHF-Low, CB and amateur 2-meter radio communications that are relevant to search communications planning.

(Taken care of in the FTL requirements, for the most part.)

RS Technical Standards: Ropework

1. The RS must demonstrate the ability correctly to tie, contour and back-up the following:
 - a. Water knot;
 - b. Prusik knot;
 - c. Headden knot;
 - d. Clove hitch;
 - e. Load-releasing hitch;
 - f. Cross-chest harness;
 - g. Butterfly knot;
 - h. Bowline, bowline-on-a-coil, bowline-on-a-bight;
 - a. bowline
 - b. double-strength bowline;
 - c. bowline-on-a-coil;
 - d. bowline-on-a-coil around anchors;
 - e. bowline-on-a-bight;
 - f. three-loop bowline
 - g. overhand knot and overhand bend (water knot, ring bend);
 - h. figure-eight knot, bend and loop;
 - i. barrel knot and barrel bend (double fisherman's knot, grapevine knot);
 - j. sheet bend and double sheet bend;
 - k. square knot;
 - l. butterfly knot;
 - m. anchor hitch;

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- n. clove hitch;
 - o. taut-line hitch;
 - p. ASRC seat harness;
 - q. Parisian baudrier chest harness;
 - r. crossed-loop chest harness.
- {Note: many of these are already covered elsewhere -- we should cut down here. CAS}*
2. The RS must have the ability to demonstrate the following rope handling techniques:
 - a. Coiling and uncoiling a mountaineer's coil;
 - b. Coiling and uncoiling an inverted loop coil;
 - c. Stacking and inspecting the rope;
 - d. Rigging to an anchor using:
 - i. Bowline;
 - ii. Tree-wrap and tie-off;
 - iii. Using webbing sling loops;
 - e. Casting, padding and rigging static lines.
 3. Be able to belay competently, including:
 - a. Proper anchoring, stance, tie-in and aim for hip belays;
 - b. Correct use of calls and fall catching;
 - c. Prusik belays.
 - * The RS must demonstrate the ability correctly to belay confidently and competently with:
 - a. the sitting hip belay;
 - b. the standing hip belay in the context of tree-belaying a litter;
 - c. the Munter (Italian friction) hitch belay;
 - d. the belay plate.
 4. The RS must be able to demonstrate competence in braking litters with tree wrap belays and Figure-8 descenders.
 5. Properly load and tie a patient into a Stokes litter, and rig it for semi-technical evacuations..
 6. The RS must be able to explain and demonstrate the knowledge of and ability to care properly for ropes and technical rescue equipment.
 7. The RS must demonstrate the ability correctly to rappel properly with:
 - a. The arm rappel (French arm rappel, back rappel);
 - b. Dulfersitz (hotseat) body rappel;
 - c. A Figure-8 descender (single and double wrap);
 - d. double carabiner-brake bar rappel;
 - e. carabiner wrap rappel;
 - f. six carabiner wrap rappel;
 - g. A Munter hitch;
 - h. A rappel rack.
 8. The RS must demonstrate the ability correctly to rig and use multiple step (pull-down) rappels.
 9. The RS must demonstrate the ability correctly to assemble and ascend properly with the following devices and describe each device in terms of strength, security, holding strength, special hazards and appropriate uses:
 - a. Prusik knots, 3-wrap Prusik knots;
 - b. Bachman knots;
 - c. RBS and Headden knots, formed both with rope and with webbing;
 - d. Gibbs ascenders;
 - e. Jumar and similar ascenders (e.g. Petzl, Clog).
 10. The RS must demonstrate the ability correctly to construct and ascend with the following rigs:
 - a. Texas (inchworm) rig;
 - b. Classic 3-knot rig;
 - c. 3-cam ropewalker rig;
 - d. modified climber's Jumar-etrier rig;
 - e. Mitchell system.
 11. The RS must demonstrate the ability correctly to rig static lines in diverse situations, including:
 - a. Casting lines through brush or past obstructions;
 - b. Defouling lines;
 - c. Assessing abrasion hazards, padding and rigging offset lines with directional anchors;
 - d. Rigging horizontal traverse lines;
 - e. rigging diagonal lines.

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12. The RS must demonstrate the ability correctly to select, place and rig anchors for individual use and for evacuations (both technical and semi-technical), including:
 - a. The evaluation and use of trees and natural rock formations;
 - b. The use, placement and evaluation of mechanical climbing aids as anchors, such as chocks, pitons, expansion bolts, etc.
 - c. Tree wrap rigging (the "tensionless" rig);
 - d. The proper self-equalizing of several anchors using loops of webbing, and using the rope itself;
 - e. The proper use of pickets and snow pickets for anchors;
 - f. The proper use of "deadmen" for anchors.
13. The RS must be able to demonstrate the ability to use the applicant's favorite method and equipment for rappelling and ascending to do the following:
 - a. Rappel and ascend past overhangs and breakovers;
 - b. Rappel and ascend through narrow chimneys;
 - c. Rappel and ascend on steep slopes;
 - d. Tie off, rest and invert (both rappel and ascent.
 - e. rappel without the use of hand control;
 - f. Rappel and ascend past knots;
 - g. Change from rappel to ascend and back while on the rope;
 - h. use rappel and ascent techniques to traverse slack horizontal and diagonal lines.
14. The RS must demonstrate the ability correctly to tie and discuss the appropriate uses of the following "escape ascenders";
 - a. the French Prusik knot ("Barnett system");
 - b. the end-of-rope self Prusik.
15. The RS must demonstrate the ability to coil and tie off ropes in:
 - a. a mountaineer's (knee-foot) coil;
 - b. a lap coil;
 - c. a multiple-strand chain coil;
 - d. a quick-release "rescue" coil;
 - e. a skein "backpack" coil.

RS Technical Standards: Mountain Rescue

1. The RS must demonstrate the ability to use the techniques of free lead climbing, and lead fifth class rock (i.e. 5.0 or harder by the Yosemite decimal system) in summer, spring or fall.
2. The RS must demonstrate the ability to use a Stokes litter and its rigging harness, to assemble the litter, load and secure a patient properly into the litter, and rig the litter properly for:
 - a. Semi-technical evacuation;
 - b. Vertical evacuation with one rope (top brake., both horizontal and vertical);
 - c. vertical evacuation with one rope, with traveling brakes;
 - d. Vertical evacuation with two ropes and attendant, horizontal;
 - e. hoisting to a helicopter in a hover.
2. The RS must be able to demonstrate for all the types of rigging listed above, a safe harness using only improvised rigging (carabiners, webbing, etc.).
3. The RS must demonstrate the ability to properly load a patient onto a D-ring ("Army") stretcher, to secure the patient, and to rig the litter for a semi-technical evacuation.
4. The RS must demonstrate the ability to rig and demonstrate the use of the following haul systems:
 - a. Yosemite haul (offset vertical counterweight haul) and 2:1 and 4:1 variants;
 - b. simple and piggyback Z hauls;
 - c. simple and piggyback 4:1 (theoretically) Z hauls.
5. The RS must demonstrate the ability to rig, tighten and use horizontal and diagonal high tension (Tyrolean) traverse lines for personnel, equipment and patients in litters.
- 5* The RS must demonstrate the ability to explain all equipment used and why, and to be the team leader to rig and use a suitable method for safe transfer of personnel, equipment and packaged patients for:
 - a. Large stream crossing;
 - b. Cliff ascent and descent;
 - c. Steep slope ascent and descent.
6. The RS must demonstrate the ability to use and pass knots through the following braking systems:
 - a. Tree wrap;
 - b. Figure-8 descender;
 - c. Rappel rack brake.

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7. The RS must demonstrate the ability to do a solo rescue and lowering of a person who is:
 - a. Incapacitated while ascending on a static line, using the same static line, ascenders and a rappel device;
 - b. On the end of a top-belay line, using a separate static line for access and lowering;
 - c. stuck in the middle of a rappel on a static line with a jammed rappel device, using a separate static line.
8. The RS must demonstrate the ability to use standard third-man techniques to load a patient into a litter on a vertical wall.
9. The RS must demonstrate the ability, given a conscious victim without severe injuries or illness and only the end of a hauling line, tie the victim into the end of the line securely for a vertical lift.
10. The RS must demonstrate the ability to list and explain the actions to be taken upon entering the scene of an aircraft crash.
11. The RS must demonstrate the ability to list and describe the phases of extrication, list and describe the standard field-portable forcible-entry and extrication tools, and describe the use of these tools in extrication of persons from light civil aircraft.
12. The RS must demonstrate the ability to employ the tools and techniques described above safely and effectively.
13. The RS must demonstrate the ability in aircraft-assisted rescues, to:
 - a. Set up and mark a rural landing zone and a wilderness helicopter landing zone;
 - b. Guide a helicopter in with standard body signals;
 - c. Load a patient into a helicopter;
 - d. Serve as ground crew leader for a helicopter hoist operation.

RS Technical Standards: Rescue Level Emergency Medicine

1. Complete an ASRC "Wilderness-EMT" course, or appropriate equivalent courses.
2. Possess a valid current American National Red Cross or American Heart Association 2-rescuer Basic Cardiac Life Support card (Cardio-Pulmonary Resuscitation).

Incident Staff

1. To become Incident Staff certified, the applicant must:
 - a. Meet all standards established for Trainee (FTL);
 - b. Have attended eight (8) training sessions or searches, including two (2) sessions on search, and one each on rescue and land navigation and orienteering;
 - c. Meet the technical standards set below, as determined by the Training Officer selected by the ASRC Board of Directors;
 - d. Be proposed for Incident Staff qualification by a GTO at an ASRC Board of Director's business meeting and receive a simple majority of the vote.
 - e. Complete the Incident Command System and Managing the Search Function courses successfully;
 - f. Serve as a member of the General Staff on one incident.
2. Incident Staff qualified members must meet annual continuing education requirements and maintain skill proficiency by participating in a minimum of six (6) training sessions, including two (2) sessions on search, and one each on rescue and land navigation and orienteering, and respond to a minimum of two (2) missions a year.

IS Technical Standards: Search Management

1. The IS member must demonstrate the ability to have a working knowledge of the ICS concepts presented in an I-220 course.

IS Technical Standards: Wilderness Survival & Travel

1. The IS member must demonstrate the ability to describe briefly pertinent local weather patterns, including the signs of arriving cyclonic winter storms, cold fronts, warm fronts, and local storms.
2. The IS member must demonstrate the ability to understand the general aspects of terrain from looking at a topographic map for purposes of safety and competently assigning teams to the field.
3. The IS member must demonstrate the ability to produce photocopy maps with an ASRC grid overlay.
4. The IS member must demonstrate the ability to produce legible color-enhanced copies of gridded maps.

IS Technical Standards: Land Navigation

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1. Given a standard 7.5 minute USGS topographic quadrangle map, the IS member must demonstrate the ability to identify the following:
 - a. Grades of highways, roads, trails and bridges;
 - b. Power lines and other landmark lines;
 - c. Buildings, schools, churches and cemeteries;
 - d. Storage tanks, wells, mines, caves, picnic areas and campsites;
 - e. Benchmarks (control stations) and spot elevations;
 - f. Boundaries and fence lines;
 - g. Contour lines, depressions, cuts and fills;
 - h. Perennial and intermittent streams, springs, falls and marshes;
 - i. Valleys, ridges, peaks and sags (saddles, cols);
 - j. Elevations and general land contours.
2. Given a photocopy of a 7.5-minute series topographic map with an ASRC grid overprint, the original 7.5-minute quadrangle map, and a Uniform Map System (UMS) gridded aeronautical chart of the area, identify points via:
 - a. Latitude and longitude;
 - b. The ASRC grid system;
 - c. The Uniform Map System;
 - d. The azimuth and distance off a VOR;
 - e. The Universal Transverse Mercator System.
3. Briefly explain and give examples of the use of the following land navigation concepts:
 - a. Catching features;
 - b. Collecting features;
 - c. Attack points;
 - d. Aiming off;
 - e. Coarse and fine orienteering.
4. Given only a 7.5-minute topographic quadrangle or an orienteering map with an attack point and a target plotted on it, and a standard orienteering compass, the IS member must demonstrate the ability reliably and accurately to:
 - a. Calculate the true bearing from the attack point to the target;
 - b. Calculate and set on the compass the magnetic bearing to the target;
 - c. Follow the bearing accurately, including triangulating and boxing around obstacles;
5. The IS member must demonstrate the ability to locate and position on a topographic map given:
 - a. The bearings to landmarks indicated on the map (resection);
 - b. The bearing to one landmark located on the map, and the information that the position is on a specified linear feature (modified resection);
6. Given bearings from two locations to a target, the IS member must demonstrate the ability correctly to locate it on a topographic map (triangulation).
7. The IS member must demonstrate the ability to demonstrate proficiency in photocopying grid overlays onto maps.

Technical Standards: Search

1. The IS member must demonstrate the ability to explain the following search concepts briefly, but intelligently. The IS must also be able to use these concepts to discuss the uses and limitations of search resources, such as trained and untrained foot searcher, man-trackers, air-scenting dogs, and tracking dogs. The concepts are:
 - a. Passive and active search methods;
 - b. Clue finders and subject finders;
 - c. Containment;
 - d. Binary search and cutting for sign;
 - e. hasty search;
 - f. The "Bastard Search";
 - g. Sweep search;
 - h. Survey search;
 - i. Grid search;
 - j. Attraction.
 - k. POD, POA, LKP, PLS;
 - l. shifting probabilities;
 - m. compatible and incompatible search resources;
 - n. the relative efficiency of close-spaced line searches vs. repeated wide-spaced line searches.
2. The IS member must demonstrate the ability to brief a field team properly before a task, including:
 - a. Subject information and history, subject's equipment and medical history;

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- b. Weather;
- c. Terrain;
- d. The search task, how to perform it, what its objectives are;
- e. Information from the team members, such as medical difficulties and other input.
3. The IS member must demonstrate the ability to debrief a field team properly after a task, including:
 - a. POD;
 - b. Following proper procedure once team has returned to base;
 - c. Acquiring team member input.
4. The IS member must demonstrate the ability to set up commonly used ASRC radio equipment, including:
 - a. Mobile and base radios;
 - b. Antennas and masts;
 - c. Power supplies;
 - e. Linear amplifiers.
5. The IS member must demonstrate the ability to fill out the ASRC radio log on an active mission.
6. The IS member must demonstrate the ability to describe the characteristics of HF, ASRC VHF-FM, Public Service VHF-High and VHF-Low, CB and amateur 2-meter radio communications that are relevant to search communications planning.
7. The IS member must demonstrate the ability to outline the delegation of authority and responsibility for search and rescue in states where ASRC is located.
8. The IS member must demonstrate the ability to explain how the following legal concepts apply to search and rescue operations:
 - a. Good Samaritan Laws;
 - b. Civil suites and criminal actions;
 - c. Standards of care;
 - d. the right to emergency assistance and duties to provide emergency assistance;
 - e. Abandonment;
 - f. Implied consent;
 - g. Entry, during incidents; on property posted "No Trespassing";
 - h. Crime scene protection;
 - i. Declaration of death and confirmation of death;
 - j. Confidentiality.
9. The IS member must demonstrate the ability to explain the use and operation of Direction-Finding instruments for locating downed aircraft.
10. The IS member must demonstrate the ability to describe how to approach an aircraft crash scene, how to secure the scene, and list the conditions that one may enter the crash scene for purposes of briefing a field team.
11. The IS member must demonstrate the ability to handle the media in a manner appropriate to Incident Staff.
12. Given a lost person search scenario, a topographic map of the area and an ASRC OP's Kit, the IS member must be able to set up the initial search priorities using standard ICS Map symbols. The IS member must also be able to describe the application of each of the following to the search problem:
 - a. The statistical approach;
 - b. The historical approach;
 - c. The simple containment approach;
 - d. The Mattson consensus method for establishing search area priorities.
13. The IS member must demonstrate the ability, given a search scenario, an ASRC OPs Kit, and a completed Strategy Map, to:
 - a. use the Task Assignment Procedure to generate a set of appropriate tasks to complete the initial strategy with the given resources;
 - b. fill out a Task Assignment Form properly for each task;
 - c. Start a Status Map using the standard ASRC symbols.
14. The IS member must demonstrate the ability, given a matrix of search areas with Probability of Area (POA) for each, and a set of search resources with POD and a search rate for each, to assign resources to tasks and calculate overall Probability of Success (POS).
15. The IS member must demonstrate the ability, given a search scenario and an ASRC OPs Kit, to calculate the Time Frame for Survival (TFFS) and explain its significance and use.
16. The IS member must demonstrate the ability to describe in outline the standard procedure for a search for a missing light civil aircraft, including the role and structure of the Civil Air Patrol (CAP) and the appropriate role to the ASRC in aiding the CAP.
17. The IS member must demonstrate the ability to use the standard ASRC logging procedure and message forms to update a Communications Systems Chart.

Incident Command

1. To become a Incident Command qualified, the applicant must:
 - a. Be an Incident Staff member for at least 6 months;
 - b. Have participated in at least three (3) active missions as an Incident Staff member, as a part of the decision-making effort for the missions, including:
 - i. Once as Planning Section Chief;
 - ii. Once as Operations Section Chief or Division Supervisor.
 - c. Meet the technical standards set below, as determined by the ASRC Training Officer;
 - d. Be proposed for Incident Command certification by an ASRC Incident Commander at an ASRC Board of Director's business meeting;
 - e. Receive a favorable written performance evaluation from the Incident Commander on each of the three incidents in item b) above;
 - f. Receive a simple majority of the vote of the member's group;
 - g. Receive a favorable vote by two-thirds of the entire ASRC Board of Directors;
 - e. Be at least 18 years old.
2. Incident Command qualified members must meet annual continuing education requirements and maintain skill proficiency by participating in a minimum of six (6) training sessions, including two (2) sessions on search, and one each on rescue, and land navigation and orienteering, and respond to a minimum of two (2) missions a year.

IC Technical Standards: Search

1. Given a downed aircraft search scenario that has been active for 2 days, a topographic map of the area with completed search tasks, and an ASRC OP's Kit, the IC member must be able to set up the search priorities and a list of requested resources for the next two shifts. The IC member must be sure to include important items for field team briefing (weather, aircraft approach, downed aircraft information required, scene control, etc.).
3. The IC member must be able to describe the ideal transition from a small, hasty team search for a lost person to a large, full-scale medium-term search. Include all assigned Incident Staff positions and requested resources.

Communications Specialist

1. To become a Communications Specialist, the applicant must:
 - a. Meet all standards established for Field Team Member;
 - b. Have attended eight (8) training sessions or searches as an FTM, including two (2) sessions on search, and one each on rescue and land navigation and orienteering;
 - c. Meet the technical standards set below, as determined by the GTO;
 - d. Be proposed for Communications Specialist by the group Communications Officer and GTO at a regular group business meeting and receive a simple majority of the vote.
2. Communications Specialist members must meet annual continuing education requirements and maintain skill proficiency by participating in a minimum of six (6) training sessions, including two (2) sessions on search, and one each on rescue and land navigation and orienteering, and respond to a minimum of two (2) missions a year.

CS Technical Standards: Technical Communications Skills

- 1.

SUGGESTIONS

"Training tracks"



Goal: To field competent people under a competent staff

Q: Do these standards address that?

Functional requirements only, in Training Guidelines or Standards
Specifics in testing document

What is minimum for any member going on mission? 10 ess.?
FTM?

If we specialize, don't lose sight of the need for FTL's.