West Virginia Search and Rescue Council
Wilderness Search and Rescue Standards
Search Team Member Level I
Approved 11-14-2010

1. **SCOPE**
   1.1. The field training standards for Wilderness Search and Rescue are intended to define the minimum requirements for individuals to perform the following functions in the general environment of the state of West Virginia.
      1.1.1. Missing person search
      1.1.2. Ground portion of missing aircraft search
      1.1.3. Evacuation of individuals from wilderness environments
   1.2. Individuals seeking Search Team Member Level I accreditation should be capable of performing these functions anytime of the year, day or night, and in all weather conditions experienced in the state of West Virginia
   1.3. Individuals seeking Search Team Member Level I accreditation should hold active membership in a professional search and rescue group, or an established emergency services organization such as a law enforcement agency, rescue squad, or fire department.
   1.4. A Search Team Member Level I accreditation issued by the West Virginia Search and Rescue Council does not constitute a license to practice skills, but signifies only that the individual holding the accreditation has met an established standard of knowledge and performance and should be able to function in a competent manner at the level indicated.
   1.5. Search Team Member Level I accreditation issued by the West Virginia Search and Rescue Council shall be valid for a three year period starting on January 1st of the year following the initial credential unless issued on January 1st of the current year.
   1.6. Search Team Member Level I accreditation may be revoked by the West Virginia Search and Rescue Council at any point in time.

2. **REFERENCED DOCUMENTS**
   2.1. Appalachian Search and Rescue Conference
      2.1.1. Training Standards (v6.3)
   2.2. ASTM Standards
      2.2.1. F1633 Guide for Techniques in Land Search
      2.2.2. F1993 Standard Classification System of Human Search and Rescue Resources
      2.2.3. F2685 Standard Guide for Training of a Level II Land Search Team Member
      2.2.4. F2751 Standard Guide for Training of Support Level Land Rescue Team Member
   2.3. Federal Emergency Management Agency
      2.3.1. Emergency Support Function #9 Search and Rescue
         2.3.1.1. http://www.fema.gov/pdf/emergency/nrf/nrf-esf-09.pdf
      2.3.2. Typed Resource Definitions – Search and Rescue
         2.3.2.1. http://www.fema.gov/pdf/nims/508-8_search_and_rescue_resources.pdf
   2.4. State Search and Rescue Councils
      2.4.1. Pennsylvania (www.psarc.org)
      2.4.2. Virginia (www.vasarco.org)
   2.5. State Emergency Operations Plans
      2.5.1. Maryland Emergency Management Agency
         2.5.1.1. http://www.mema.state.md.us/MEMA/content/pdf/The_State_of_Maryland_Emergency_Operations_Plan_26Aug09.pdf
      2.5.2. Kentucky Emergency Operations Plan
         2.5.2.1. http://kyem.ky.gov/NR/rdonlyres/197CC054-C079-4877-BE2FBAA237CDB07D/0/ANNEXLALL.pdf
      2.5.3. Ohio Emergency Management Agency
         2.5.3.1. http://ema.ohio.gov/Documents/Ohio_EOP/esf_9.pdf
      2.5.4. Pennsylvania Emergency Management Agency
      2.5.5. West Virginia Division of Homeland Security and Emergency Management
         2.5.5.1. http://www.wvdhsem.gov/wveop_1.htm
      2.5.6. Virginia Department of Emergency Management
         2.5.6.1. http://www.vaemergency.com/library/plans/coveop/eopvol2/COVEOP_ESF9_version_12_10_2009.pdf
   2.6. Mountain Rescue Association
      2.6.1. Member Policies 6-24-2007

3. **TERMINOLOGY**
   3.1. The definitions listed here are for the purpose of these standards only. They may or may not reflect the definitions used by other individuals, groups, or agencies.
      3.1.1. AHJ – Agency Having Jurisdiction
      3.1.2. DHS – Department of Homeland Security
      3.1.3. FEMA- Federal Emergency Management Agency
      3.1.4. NASAR – National Association for Search and Rescue
      3.1.5. NIMS – National Incident Management Systems
      3.1.6. PSARC – Pennsylvania Search and Rescue Council
      3.1.7. State SAR Coordinator – The person designated by the Coordinator of Emergency Management to coordinate the Search and Rescue program of the West Virginia Division of Homeland Security and Emergency Management and to coordinate overall state SAR operations.
      3.1.8. SAR Mission Coordinator (SMC) – The person designated by the Legal Responsible Agent to coordinate and manage on-scene operations during a specific SAR incident. Depending upon the management system used and the organizations involved, this person may be called the Mission Coordinator (MC), On-Scene Commander (OSC), or Incident Commander (IC).
      3.1.9. Type I Incident – Largest most complex search incident. Multiple regional, state, local and SAR agencies involved. Could require the use of two or more divisions/branches for one shift or more. Significant external influences present.
      3.1.10. Type II Incident – Multiple SAR resource types required from throughout the state.
      3.1.11. Type III Incident – County level SAR event involving numerous county level agencies.
      3.1.12. Type IV Incident – Local area Single SAR agency/resource type involvement. Very limited

number of resources. Often initial stage of a search incident. Can be a stabilized search.

3.1.13. SM – Search Manager

3.1.14. STM – Search Team Member

3.1.15. STM-CQ – Search Team Member Callout Qualified

3.1.16. STL – Search Team Leader

3.1.17. STS – Search Team Support

3.1.18. VASARCO – Virginia Search and Rescue Council

3.1.19. VDEM – Virginia Department of Emergency Management

3.1.20. WSAR – Wilderness Search and Rescue

3.1.21. WVDHSEM – West Virginia Division of Homeland Security and Emergency Management

3.1.22. WVSARCO – West Virginia Search and Rescue Council

4. **REQUIREMENTS**

4.1. Minimum age for Search Team Member Level I is eighteen.

4.2. Meet all current requirements of WVSARCO Search Team Member Level II.

4.3. Currently credentialed as a WVSARCO Search Team Member Level II.

4.4. Have been a WVSARCO Search Team Member Level II for the previous six months or longer.

4.5. Have participated in two searches or search simulations as a WVSARCO Search Team Member Level II

5. **KNOWLEDGE AND PERFORMANCE EXPECTATIONS**

5.1. The STM-I shall have an understanding of the items listed under each subject. Some items may require the performance of manual skills.

5.2. Search Operations

5.2.1. Discuss the steps that must take place during the initial response to a search and rescue incident including:

5.2.1.1. Logistical setup

5.2.1.2. Investigation and incident command structure

5.2.1.3. Resource deployment

5.2.2. Define the role of the field team for these types of missions.

5.2.2.1. Lost person search

5.2.2.2. Downed aircraft

5.2.2.3. Disaster assistance

5.2.3. List the various types of resources in each of the following categories that may be utilized in a typical SAR event.

5.2.3.1. Ground search

5.2.3.2. Air search

5.2.3.3. Logistics

5.2.3.4. Communications

5.2.3.5. Command

5.2.3.6. Rescue

5.2.4. Describe the basic principles of the Incident Command System and define the major staff functions.

5.2.5. Describe proper searcher conduct as it relates to law enforcement, family of the missing subject(s) and the media.

5.2.6. Describe the general safety considerations in SAR operations, including dealing with critical stress.

5.3. Search Strategy and Tactics.

5.3.1. Describe the responsibilities of the Search Team Member Level I when carrying out a field task.

5.3.2. Explain the execution of these search tactics.

5.3.2.1. Containment

5.3.2.2. Attraction

5.3.2.3. Survey Search

5.3.2.4. Expanding circle search

5.3.2.5. Purposeful wandering

5.3.2.6. Hasty search

5.3.2.7. Sweep search (open grid search)

5.3.2.8. Line search (closed grid search)

5.3.2.9. Sign Cutting

5.3.2.10. Interviewing

5.3.2.11. Area search with air scent dogs

5.3.2.12. Mantracking

5.3.2.13. Electronic search

5.3.3. Describe the tasks that must be completed once the field team returns to base.

5.4. Search Management

5.4.1. Outline search strategy for

5.4.1.1. Downed aircraft

5.4.1.2. Lost person, rural and wilderness

5.4.1.3. Lost person, urban and suburban

5.4.2. Describe the five phases of a search mission and the primary activities that occur during each phase.

5.5. Rescue Operations

5.5.1. Describe how to formulate a rescue plan

5.5.2. List the primary phases of a rescue mission.

5.5.3. Describe the major factors a team leader must consider once a subject is located.

5.5.4. Describe the manpower and equipment requirements and the team organizational structure necessary to accomplish a semi-technical rescue operation.

5.5.5. Describe the principles of safe interactions with aircraft commonly used in SAR operations.

5.6. Equipment

5.6.1. Describe basic team equipment, other than required personal gear, for a wilderness SAR team.

5.7. Mission Performance

5.7.1. Demonstrate the ability to manage a mixed team traveling cross country on foot, in any weather conditions, navigating by map and compass, all without compromising the task.

5.7.2. Demonstrate the ability to organize and execute common search tactics.

5.7.2.1. Containment

5.7.2.2. Attraction

5.7.2.3. Survey search

5.7.2.4. Hasty search

5.7.2.5. Sweep search (open grid search)

5.7.2.6. Line search (closed grid search)

5.7.3. Demonstrate a general knowledge of clue awareness including the following:

5.7.4. Define the roles and responsibilities of the STM-I as they apply to clues, sign, the identification and collection thereof.

5.7.5. Define the protocols available through mission base with regards to possible clue handling and disposition.

5.7.6. Demonstrate the ability to brief and debrief a team.

5.7.7. Define the STM-I's responsibility with regards to team personnel and conflict resolution.

5.7.8. Demonstrate the ability to secure a scene properly, extricate and treat a patient, and evacuate a patient using the method most appropriate for a given situation.

5.7.9. Briefly describe pertinent local weather patterns.

5.7.10. Given only a 7.5 minute topographic quadrangle with an attack point and a target plotted on it, and a standard orienteering compass, reliably and accurately:

    5.7.10.1. Calculate the true bearing from the attack point to the target

    5.7.10.2. Calculate and set on the compass the magnetic bearing to the target

    5.7.10.3. Follow the bearing accurately, including triangulating and boxing around obstacles.

5.7.11. Correctly locate and position a point on a topographic map given:

    5.7.11.1. The bearings to landmarks indicated on the map

    5.7.11.2. The bearing to one landmark located on the map, and the information that the position is on a specified linear feature (modified resection)

5.7.12. Given bearings from two locations to a target, correctly locate it on a topographic map (triangulation)

5.7.13. Demonstrate the ability to lead a field team on:

    5.7.13.1. Containment, attraction, survey, hasty, sweep, and grid tasks

    5.7.13.2. Cutting for sign

    5.7.13.3. Simple tracking

    5.7.13.4. Interrogation and visual search tasks

    5.7.13.5. Non-technical and semi-technical evacuation

    5.7.13.6. Direction finding

5.7.14. Demonstrate the use of the following basic man-tracking skills and techniques

    5.7.14.1. Tracking sticks

    5.7.14.2. The effects of the sun and how to use them

    5.7.14.3. How to identify shoe type and provide measurement

    5.7.14.4. How to find stride length and width

5.7.15. Demonstrate the ability to properly brief a field team before a task, including

    5.7.15.1. Giving appropriate information on:

        5.7.15.1.1. Subject information and history, subject's equipment and medical history

        5.7.15.1.2. Weather

        5.7.15.1.3. Terrain

        5.7.15.1.4. The search task, its objectives, and how to perform it

        5.7.15.1.5. Time available for the task and the limitations it may impose upon the task

        5.7.15.1.6. Team equipment and personal gear needed

    5.7.15.2. Obtaining information from the team members, such as team medical problems, and other relevant input

    5.7.15.3. Adequately evaluating team members' abilities to do the task

    5.7.15.4. Demonstrate the ability to debrief properly field team after a task

    5.7.15.5. Instructing the team to follow proper procedure when the team returns to base

    5.7.15.6. Acquiring team member input (POD, clues, hazards, and other pertinent information).

5.8. Ropes and Technical Hardware

    5.8.1. Demonstrate the ability to correctly tie these knots (in addition to those listed in the STM-II standards):

        5.8.1.1. Butterfly

        5.8.1.2. Munter Hitch

        5.8.1.3. Frost knot

        5.8.1.4. Load releasing hitch

    5.8.2. Demonstrate the ability to safely direct a litter team moving a litter up and down a slope, using a belay system.

    5.8.3. Demonstrate the ability to build a mechanical lower and basic 3:1 haul system.

    5.8.4. Assemble and use a single line rappel system that includes a belay.

    5.8.5. Demonstrate competence in route selection for a semi-technical evacuation

    5.8.6. Demonstrate the knowledge of and ability to care properly for ropes and technical rescue equipment.

    5.8.7. Serve competently in all positions on a semi-technical rescue, including:

        5.8.7.1. Serving as rope member with tree-wrap brakes and Figure '8' brakes

        5.8.7.2. Selecting suitable anchor points.

    5.8.8. Demonstrate the ability to safely load and tie a patient into a Stokes litter, and rig it for semi-technical evacuation.

5.9. Belaying

    5.9.1. Demonstrate proper belay techniques including:

        5.9.1.1. Anchors and anchor systems

        5.9.1.2. Stance

        5.9.1.3. Calls

        5.9.1.4. Uphill and downhill travel

        5.9.1.5. Tree wrap, munter hitch, and mechanical brakes.

5.10. Electronic Search

    5.10.1. Demonstrate an understanding of the operational principles of the use of Global Position Devices (GPS)

    5.10.2. Demonstrate an understanding of the operational principles of the ELT and PLB, and of the SAR system that exists to locate activated ELT's and PLB's

    5.10.3. Describe the basic principles of DF search

    5.10.4. Define the problems associated with DF search

     5.10.5. 'Demonstrate the ability to do simple ELT or PLB search using DF'ing equipment.

6. **TEST METHODS**

  6.1. Written Test

    6.1.1. The test consists of at least 100 questions representative of the material presented in the WVSARCO Search Team Member Level I Standard.

    6.1.2. Passing score is 80 percent.

  6.2. Practical Test

    6.2.1. The practical test consists of several stations that test certain skills presented in the standard. Students are requested to perform these skills in the presence of an examiner.

    6.2.2. A student who fails a practical station(s) may repeat that station(s) once on the same day. Failure of a second attempt constitutes failure of the course.

  6.3. Retesting

    6.3.1. Students who complete the required training, but fail either the written or practical test, are eligible for retesting.

    6.3.2. Each student is responsible for making arrangements for retesting with an examiner on an individual basis.

    6.3.3. If a student fails any portion of a retest, the record reverts to inactive and the course must be repeated or challenged.

  6.4. Equivalent Training and/or Experience

    6.4.1. Those individuals who, by virtue of past training and experience, possess the necessary knowledge and skills may petition for an exemption for the written and practical skill tests for the initial credential of Search Team Member Level I.

  6.5. Recertification Procedures

    6.5.1. Individuals applying for recertification must meet or exceed the following continuing education credits (CEUs). CEUs will be a combination of training, missions and demonstration of practical skills to recertify.

      6.5.1.1. Presentation of a copy of his/her log book documenting the following continuing education credits (one hour per credit) documenting a minimum of 24 hours of training over a three year period, signed off by an organization's training officer.

      6.5.1.2. Demonstration of participation in a minimum of nine (9) real or simulated missions) over the three year period. Mission records should be signed off by Mission Operations or Training Officer; the mission sign in sheets will also be recognized.

    6.5.2. Procedure

      6.5.2.1. The Search Team Member Level I credential may be renewed by successfully completing the written and practical tests, and meeting any other requirements for certification for Field Team Member that exist at the time of recertification.

      6.5.2.2. Each person is responsible for making individual arrangements for recertification testing with WVSARCO

7. **EXEMPTIONS**

  7.1. Due to the field response requirements for Search Team Member Level I there are no exemptions allowed to the standard.