



Standard Guide for Training of a Land Search Team Leader (STL)¹

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1. Scope

1.1 This guide establishes the minimum training standard for Land Search Team Leaders as it relates to their general, field, and search-specific knowledge, skills, and experience.

1.2 A Land Search Team Leader searches on the surface of the land only, including urban or disaster areas that may be isolated or have lost supporting infrastructure.

1.3 This guide does not provide the minimum training requirements for searching in partially or fully collapsed structures, in or on water, in confined spaces, or underground (such as in caves, mines, and tunnels).

1.4 No knots, rope, litter, or other rescue skills are required of a Land Search Team Leader.

1.5 A Land Search Team Leader can be utilized as a field team leader, a single resource for sign cutting, a support person for a canine search team, and to establish search area boundaries in the field.

1.6 A Land Search Team Leader is eligible to supervise Type II search teams or crews as defined in Classification **F1993**. Type II teams which may utilize personnel trained to this standard are:

- 1.6.1 Kind A (wilderness);
- 1.6.2 Kind B (urban);
- 1.6.3 Kind C (mountainous);
- 1.6.4 Kind J (evidence/cadaver);
- 1.6.5 Kind K (missing aircraft).

1.7 Further training may be required before a Land Search Team Leader can participate on a particular kind of search team, depending on the AHJ's regulations or policies.

1.8 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory requirements prior to use.*

¹ This guide is under the jurisdiction of ASTM Committee **F32** on Search and Rescue and is the direct responsibility of Subcommittee **F32.03** on Personnel, Training and Education.

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2. Referenced Documents

2.1 *ASTM Standards*:²

- F1583** Practice for Communications Procedures—Phonetics
- F1633** Guide for Techniques in Land Search
- F1767** Guide for Forms Used for Search and Rescue (Withdrawn 2014)³
- F1773** Terminology Relating to Climbing, Mountaineering, Search and Rescue Equipment and Practices
- F1993** Classification System of Human Search and Rescue Resources (Withdrawn 2014)³
- F2209** Guide for Training of Level I Land Search Team Member
- F2890** Guide for Hazard Awareness for Search and Rescue Personnel
- F3068** Guide for Contents and Use of a Position Task Book (PTB)
- F3072** Guide for Intermediate Wilderness GPS/GNSS Use (GPS/GNSS-IIW) Endorsement

2.2 *Other Documents*:

- NWCG PMS 307** Work Capacity Testing for Wildland Firefighters⁴

3. Terminology

3.1 *Definitions of Terms Specific to This Standard*:

3.1.1 *wilderness, n*—a setting in which the delivery of patient care by SAR personnel is adversely affected by logistical complications, such as: an environment that is physically stressful or hazardous to the patient, SAR personnel, or both; remoteness of the patient's location, such that it causes a delay in the delivery of care to the patient; or lack of adequate medical supplies, equipment, or transportation.

3.2 For definitions of other terms used in this guide, see Guide **F1633**, Terminology **F1773**, Classification **F1993**, Guide **F2209**, and other references within this guide.

² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

³ The last approved version of this historical standard is referenced on www.astm.org.

⁴ http://www.nwcg.gov/pms/pubs/newshelt/workcaptest_lo.pdf.

4. Significance and Use

4.1 This guide establishes the minimum knowledge, skills, and abilities that a person must have to perform as a Land Search Team Leader. No other skills are included or implied.

4.2 Every person who is identified as a Land Search Team Leader shall have met the requirements of this guide.

4.3 This guide is to be used by individuals, organizations, and agencies that wish to identify the minimum training required for a Land Search Team Leader.

4.3.1 Determining the requirements and qualifications for team members is the responsibility of the AHJ.

4.3.2 The AHJ shall determine the depth or detail of training required to meet these needs.

4.3.3 Nothing in this standard precludes an AHJ from requiring additional knowledge, skills, or abilities for its members.

4.4 This guide does not stand alone and must be used with the referenced documents to provide specific information needed by an STL or AHJ.

4.5 This guide can be used to evaluate a book or other document to determine if its content meets the necessary topics for training an STL. Likewise, the guide can be used to evaluate an existing training program to see if it meets the requirements in this guide.

4.6 This guide by itself is not a training document. It is an outline of the topics required for training or evaluating a Land Search Team Leader.

4.7 The knowledge, skills, and abilities defined in this guide are not presented in any particular order and do not represent a training sequence.

4.8 A Land Search Team Leader shall document his or her training by completion of a position task book, compliant with Guide **F3068**, or by field demonstration under qualified supervision.

4.9 Unless stated otherwise, an ability or proficiency in a skill shall be demonstrated for initial qualification and then as often as required by the AHJ.

4.10 Except where a physical skill or ability must be demonstrated the AHJ shall determine the best way to evaluate a person's knowledge. This may be by written exam, oral exam, demonstration, or by some combination of the three.

5. Personal Fitness and Health

5.1 Land Search Team Leaders shall demonstrate annually that they meet the requirements of a medical fitness standard selected by the AHJ.

5.2 Land Search Team Leaders shall demonstrate annually that they meet the requirements of a physical performance standard determined by the AHJ.

5.2.1 The recommended minimum physical performance requirement for a Land Search Team Leader is the "Moderate" level as defined in NWCG PMS 307 (see **Appendix X1**).

6. Personal and Team Equipment

6.1 A Land Search Team Leader shall demonstrate proficiency in the use and operation of all personal equipment.

6.2 A Land Search Team Leader shall demonstrate proficiency in the use and operation of all team equipment required by the AHJ.

6.3 A Land Search Team Leader shall possess and demonstrate the ability to use all personal protective equipment required by the AHJ.

7. General Knowledge and Skills

7.1 A Land Search Team Leader shall have met all of the qualifications for, and have functioned as a Land Search Team Member (Guide **F2209**) or equivalent for a length of time determined by the AHJ.

7.1.1 It is recommended that this time period shall be no less than one year.

7.2 A Land Search Team Leader shall have successfully completed the National Incident Management System (NIMS) course ICS-200 "ICS for Single Resources and Initial Action Incidents."

7.3 A Land Search Team Leader shall have met all qualifications for Standard Guide for Hazardous Awareness for Search and Rescue Personnel (Guide **F2890**) or equivalent.

7.4 A Land Search Team Leader shall complete the Department of Interior, Office of Aviation Management (DOI OAM), Course A100 – Basic Aviation Safety, or equivalent training.

7.5 A Land Search Team Leader shall earn and maintain certification in adult, child, and two rescuer CPR.

7.6 A Land Search Team Leader shall earn and maintain certification in Wilderness First Aid or a more advanced level of emergency care.

8. Leadership Knowledge and Skills

8.1 A Land Search Team Leader shall demonstrate an understanding of the following in regard to a search team:

8.1.1 Team leader responsibilities;

8.1.2 Recognizing morale problems;

8.1.3 Maintaining or improving team morale;

8.1.4 Handling team deficiencies in the field such as equipment problems (radio, etc.) or personnel problems (discipline, etc.);

8.1.5 Employing a successful leadership style;

8.1.6 The concepts of Situational Awareness and its importance during search operations;

8.1.7 The delegation of tasks within the team.

8.2 A Land Search Team Leader shall have experience in night field search operations in adverse weather conditions in his or her agency's normal area of operations.

8.3 A Land Search Team Leader shall have experience in day or night field search operations in adverse weather conditions in hazardous terrain common to his or her agency's normal area of operations.

8.4 A Land Search Team Leader shall demonstrate an understanding of the skills needed for survival in the normal area of operations.

8.5 A Land Search Team Leader shall demonstrate an understanding of how to effectively deal with safety problems that may confront his or her team or crew due to local environmental hazards.

8.6 A Land Search Team Leader shall know the standard operating procedures, requirements, and protocols of the AHJ in regard to field search operation safety.

8.7 A Land Search Team Leader shall demonstrate the ability to select a helicopter landing zone in:

8.7.1 A populated area;

8.7.2 A remote area.

8.8 A Land Search Team Leader shall demonstrate the ability to safely and effectively lead a search crew using an assigned search technique.

9. Land Navigation Knowledge and Skills

9.1 A Land Search Team Leader shall demonstrate the following land navigation skills:

9.1.1 Proficiency in the use of a topographic map;

9.1.2 Proficiency in compass use;

9.1.3 Locate a search segment in the field;

9.1.4 Locate and mark a search boundary using a compass bearing, heading, or azimuth;

9.1.5 Use of a compass to navigate for a search team in the field.

9.2 A Land Search Team Leader shall have a Level II Wilderness GPS Use Wilderness Navigator (GPS-IIW) Endorsement (Guide F3072).

9.2.1 A Land Search Team Leader shall demonstrate the ability to use a GPS receiver to navigate for a search team in the field.

10. Communications

10.1 A Land Search Team Leader shall demonstrate the ability to conduct a team briefing to land search team members on the following subjects:

10.1.1 Subject information;

10.1.2 Terrain;

10.1.3 Tactics;

10.1.4 Clues;

10.1.5 Weather;

10.1.6 Safety and hazards;

10.1.7 Assignment objectives;

10.1.8 Attitude.

10.2 A Land Search Team Leader shall demonstrate the ability to use the debriefing forms or equivalent documentation used by the AHJ (see Guide F1767 for an example of a debriefing form).

10.3 A Land Search Team Leader shall demonstrate the ability to clearly and effectively provide the following information when debriefed by search management:

10.3.1 Safety issues;

10.3.2 Coverage of search area (POD);

10.3.3 Clues found;

10.3.4 Search difficulties, problems, or both in assigned area.

10.4 A Land Search Team Leader shall demonstrate the ability to utilize ICS forms to document mission-specific information required for search operations in the field.

10.5 A Land Search Team Leader shall demonstrate clear and effective radio communications within the ICS framework.

10.6 A Land Search Team Leader shall demonstrate the ability to spell words and pronounce numbers in accordance with the phonetic alphabet (see Practice F1583).

11. Search Operations

11.1 A Land Search Team Leader shall demonstrate an understanding of the purpose(s) of the standard search method(s) used by the AHJ in the normal area of operations.

11.2 A Land Search Team Leader shall demonstrate the ability to select a field strategy for searching an area that achieves the goals assigned by search management.

11.3 A Land Search Team Leader shall demonstrate the ability to plan a ground search, including:

11.3.1 Locating and marking search area boundaries on a map or GPS receiver;

11.3.2 Determining the distances and bearings to corners or area boundary intersections;

11.3.3 Selecting a practical means of approaching and moving through the search assignment;

11.3.4 Selecting a suitable spacing interval for team members based on the search area's vegetation, atmospheric visibility (for example, fog, haze, etc.), the time of day, and the season;

11.3.5 Calculating the time required to complete the assignment.

11.4 A Land Search Team Leader shall demonstrate the ability to lead a search team using a search method used by the AHJ.

12. Keywords

12.1 experience; leadership; search; wilderness

APPENDIX

(Nonmandatory Information)

X1. WORK CAPACITY TESTS⁵

X1.1 The United States Forest Service (USFS) has defined the work levels for wildland firefighters. The three levels are defined as follows:

X1.1.1 Arduous work involves above average endurance (aerobic fitness), lifting more than 50 pounds (muscular fitness), and occasional demands for extraordinarily strenuous activities. All wildland firefighters perform arduous duty.

X1.1.2 Moderate work involves lifting 25 to 50 pounds, and occasional demand for moderately strenuous activity. Safety officers and fire behavior officers perform moderate duty.

X1.1.3 Light work involves mainly office-type work with occasional field activity.

X1.2 The work capacity test for each level is defined in the following table:

Work Level	Test	Description
Arduous	Pack Test	3-mile hike with 45-pound pack in 45 minutes
Moderate	Field Test	2-mile hike with 25-pound pack in 30 minutes
Light	Walk Test	1-mile hike with no pack in 16 minutes

X1.3 All tests are to be conducted on level ground.

X1.4 Test times shall be adjusted for altitude, as shown in the following table:

Altitude (feet)	Pack Test (seconds)	Field Test (seconds)	Walk Test (seconds)
4000 to 5000	30	20	10
5000 to 6000	45	30	15
6000 to 7000	60	40	20
7000 to 8000	75	50	25
8000 to 9000	90	60	30

⁵ http://www.fs.fed.us/fire/safety/wct/wct_index.html.

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