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## Standard Guide for Training of Level I Land Search Team Member<sup>1</sup>

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### 1. Scope

1.1 This guide establishes the minimum training ~~standard requirements~~ for ~~Level I land search team members~~ personnel as it relates to their general, field, and search specific knowledge and skills.

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

1.3 ~~A Level I land search team member searches on the surface of the land only.~~ 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 caves, mines, and tunnels.)

~~1.2.1 A Level I searcher may be used, with the above limitations, in remote areas including urban or disaster areas that may be isolated or have lost their infrastructure.~~

1.4 ~~A Level I land search team member is required to have only an overview level of knowledge of rescue as it pertains to "search and rescue."~~ Personnel trained to this guide are not qualified to perform rescue. No knots, rope, high angle or low angle litter, or other rescue skills are required of a Level I land search team member. Land Search Team Member.

1.4.1 Basic rescue skills and knowledge are found in Guide [F2751](#).

1.5 ~~Level I land search team members must work under direct supervision of Level II searchers (Guide Personnel trained to this guide are not qualified to operate in leadership positions. F2685) or other experienced search personnel.~~

1.6 ~~Level I land search team members~~ Land Search Team Members are eligible to be members of Type II search teams or crews as defined in Classification [F1993](#).

1.6.1 Type II teams which may utilize personnel trained to this guide are Kind A (wilderness), Kind B (urban), and Kind C (mountainous) Kind J (evidence/cadaver) and Kind K (missing aircraft):are:

1.6.1.1 Kind A (wilderness);

1.6.1.2 Kind B (urban);

1.6.1.3 Kind J (evidence/cadaver);

1.6.1.4 Kind K (missing aircraft).

1.6.2 Land Search Team Members are eligible to be members of Kind C (mountainous) teams provided that they are supervised by a Mountain or Alpine endorsed team member.

1.7 Further training may be required before a ~~Level I land search team member can actually~~ Land Search Team Member can participate on a particular kind Kind of search team, depending on ~~authority having jurisdiction regulations or policies.~~ local needs, regulations, or policies of the authority having jurisdiction.

~~1.7 Training and performance standards developed in the F32 committee refer to levels. Level one (I) is the basic or entrance level and numbers increase with increasing skills and knowledge.~~

~~1.7.1 Levels are based on training and do not correspond to Incident Command System typing, which is based on capability.~~

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.*

<sup>1</sup> 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:<sup>2</sup>

~~F1422 Guide for Using the Incident Command System Framework in Managing Search and Rescue Operations~~

~~F1490 Terminology Relating to Search and Rescue (Withdrawn 2011)<sup>3</sup>~~

~~F1591 Practice for Visual Signals Between Persons on the Ground and in Aircraft During Ground Emergencies~~

F1633 Guide for Techniques in Land Search

F1767 Guide for Forms Used for Search and Rescue

F1773 Terminology Relating to Climbing, Mountaineering, Search and Rescue Equipment and Practices

F2047 Practice for Workers' Compensation Coverage of Emergency Services Volunteers

F1993 Classification System of Human Search and Rescue Resources (Withdrawn 2014)<sup>3</sup>

F2047 Practice for Workers' Compensation Coverage of Emergency Services Volunteers

~~F2685 Guide for Training of a Land Search Team Leader (STL)~~

F2751 Guide for Training of Support Level Land Rescue Team Member (LRT-Support) Member

F2890 Guide for Hazard Awareness for Search and Rescue Personnel

F2890 Guide for Hazard Awareness for Search and Rescue Personnel

F3068 Guide for Contents and Use of a Position Task Book (PTB)

F3071 Guide for Basic Wilderness GPS/GNSS Use (GPS/GNSS-IW) Endorsement

### 2.2 Other Documents:

NWCG PMS 307 Work Capacity Testing for Wildland Firefighters<sup>4</sup>

## 3. Terminology

3.1 For definitions of terms used in this guide, see Terminology F1490, Guide F1633, Classification F1993, Practice F2047, and other references within this guide.

### 3.1 Definitions of Terms Specific to This Standard:

3.1.1 *authority having jurisdiction (AHJ)*,  $n$ —~~(1)~~ the team, organization, agency, or other entity which is using this guide; ~~(2)~~ The the team, organization, agency, or other entity to which a person being trained, tested, or evaluated belongs, if the instructor, evaluator, or tester is not a member of the same organization.

3.1.2 *field*,  $n$ —the location, away from the base or command post, in which a land search team member is searching or performing other tasks.

3.1.3 *field operations*,  $n$ —searches and other tasks being performed away from the base or command post.

3.1.4 *initial planning point (IPP)*,  $n$ —the point that is initially used to plan the search incident. The IPP may be the original point last seen or the last known position. The IPP may also be a point entirely separate based on the best available investigative information. IPP does not move after planning begins.

3.1.5 *land search team*,  $n$ —a group of individuals searching on the surface of the earth.

3.1.6 *land search team member Level I*,  $n$ —~~a member of a land search team who, as a person who, at a minimum, meets the requirements of this guide. These requirements define the basic, entry, awareness, or similar term level of land search knowledge and skills.~~

3.1.7 *normal area of operation*,  $n$ —~~(1) the area(s) where an authority having jurisdiction AHJ performs its search operations on a regular basis; and (2) area(s) of other organizations where the authority having jurisdiction the area(s) where the AHJ is frequently called to assist with search operations.~~ operations managed by others.

3.2 For definitions of terms used in this guide, see Guide F1633, Terminology F1773, Classification F1993, Practice F2047, and other references within this guide.

## 4. Significance and Use

4.1 This guide establishes the minimum standard for training land search team members as it relates to their general, field, and search specific knowledge and skills. A person trained to this guide is a Level I land search team member. knowledge, skills, and abilities that a person must have to perform as a Land Search Team Member. No other skills are included or implied.

4.2 Every person who is identified as a ~~Level I land search team member~~ Land Search Team Member shall have met the requirements of this guide.

<sup>2</sup> 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.

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

<sup>4</sup> National Wildfire Coordinating Group, National Interagency Fire Center, 3833 S. Development Avenue, Boise, ID 83705, <http://training.nwccg.gov/courses/i100.html> [http://www.nwccg.gov/pms/pubs/newshelt/workcapptest\\_lo.pdf](http://www.nwccg.gov/pms/pubs/newshelt/workcapptest_lo.pdf)

~~4.3 This guide is to be used by individuals and agencies having jurisdiction that wish to identify the minimum training standards for Level I land search team members required for a Land Search Team Member.~~

~~4.3.1 The AHJ shall determine the depth or detail of training required to meet these needs.~~

~~4.4 This guide is only the first level of training for land search personnel and as such, only establishes the minimum knowledge and skills required for a person to perform land search. Though this guide establishes the minimum standard of training, it does not imply that a Land Search Team Member is a “trainee,” “probationary,” or other similar term member of a team, organization, or agency.~~

~~4.4.1 Determining the requirements and qualifications for land search team members is the responsibility of the AHJ.~~

~~4.4.2 Nothing in this guide precludes an AHJ from adding additional requirements for its own members.~~

~~4.5 This guide by itself is not a training document. It is only an outline of the topics required for training or evaluating a Level I land search team member, but it can be used to develop a training document or program. can be used to evaluate a document or training program to determine if its content includes the topics necessary for training individuals to operate as a Land Search Team Member.~~

~~4.6 It is up to the AHJ to determine the depth or detail of training to meet its needs.~~

~~4.6 This guide does not stand alone and must be used with the referenced documents to provide the specific information needed by a Level I land search team member Land Search Team Member or AHJ.~~

~~4.7 Though this guide establishes the minimum standards, it does not imply that a Level I land search team member is a “trainee,” “probationary,” or other similar term member of an AHJ. It is up to the AHJ to determine the requirements and qualifications for member ratings. 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 Member.~~

~~4.8 This guide can be used to evaluate a book or other document to determine if its content meets includes the necessary topics information required for training a Level I land search team member Land Search Team Member. Likewise, the guide can be used to evaluate an existing training program to see if it meets the requirements of this guide.~~

~~4.9 The knowledge and skills requirements presented in the following sections knowledge, skills and abilities defined in this guide are not presented in any particular order and do not represent a training sequence.~~

~~4.10 A Land Search Team Member shall document his or her training by completion of a position task book, compliant with Guide F3068, or by field demonstration under qualified supervision.~~

~~4.11 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.~~

~~4.12 Except where a physical skill needs to be shown, it is up to the AHJ, instructor, evaluator, or tester to or ability must be demonstrated, the AHJ shall determine the best way to evaluate a person’s person’s knowledge. This may be by written exam, oral exam, demonstration, or by some combination of the three.~~

## **5. Personal Fitness**

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

~~5.2 Land Search Team Members 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 Land Search Team Members is the "Moderate" level as defined in NWCG PMS 307 (see Appendix X2).~~

## **6. General Knowledge and Skills**

~~6.1 Land Search Team Members shall complete National Incident Management System (NIMS) ICS-100, “Introduction to Incident Command System.”~~

~~6.2 A Land Search Team Member shall complete the Department of Interior, Office of Aviation Management (DOI OAM), Course A100 – Basic Aviation Safety, or equivalent training.~~

~~6.3 A Land Search Team Member shall maintain certification in professional rescuer/health care provider CPR.~~

~~6.4 A Land Search Team Member shall maintain certification in basic first aid, or a more advanced level of emergency care. At a minimum the medical or first aid training for certification shall include the following:~~

~~6.4.1 Basic treatment for common injuries experienced in the field.~~

~~6.4.2 Basic treatment for the conditions listed in 7.11.~~

~~6.5 Land Search Team Members shall know the regulations, policies, procedures, and guidelines of the AHJ with regard to the following:~~

- 6.5.1 Land Search Team callout or dispatch to an incident,
- 6.5.2 Incident check in,
- 6.5.3 Land search team mission briefing,
- 6.5.4 Land search team mission debriefing,
- 6.5.5 Demobilization and departing from an incident,
- 6.5.6 Land search team member communications with the media,
- 6.5.7 Working with other agencies or organizations,
- 6.5.8 Insurance coverage, and
- 6.5.9 Safe driving procedures and safety.

6.6 Land search team members shall demonstrate an understanding of the legal aspects of SAR with respect to the AHJ for the following:

- 6.6.1 Entering private property,
- 6.6.2 Emergency response,
- 6.6.3 Finding deceased individuals,
- 6.6.4 Crime scenes,
- 6.6.5 Subject, victim, witness, or patient confidentiality requirements, including, but not limited to, the Health Insurance Portability and Accountability Act (HIPAA),
- 6.6.6 Negligence and abandonment, and
- 6.6.7 Confidentiality of mission information.

6.7 Land Search Team Members shall be trained to operate within the Incident Command System (ICS).

## 7. General Knowledge and Skills Personal Health, Safety, and Survival

*A Level I land search team member shall:*

- 5.1 Explain AHJ regulations, policies, procedures, guidelines, and so forth, with regards to:
  - 5.1.1 Callout or dispatch to an incident.
  - 5.1.2 Checking in at an incident.
  - 5.1.3 Team mission briefing.
  - 5.1.4 Team mission debriefing.
  - 5.1.5 Demobilization and departing the incident.
  - 5.1.6 Member interface with the media.
  - 5.1.7 Working with other agencies or organizations.
  - 5.1.8 Insurance coverage.
  - 5.1.9 Driving procedures and safety.
- 5.2 Explain the legal aspects of SAR with respect to the AHJ for:
  - 5.2.1 Entering private property.
  - 5.2.2 Emergency response.
  - 5.2.3 Finding deceased individuals.
  - 5.2.4 Crime scenes.
  - 5.2.5 Subject, victim, witness, or patient confidentiality requirements, including, but not limited to, the Health Insurance Portability and Accountability Act (HIPAA) Privacy Rule.
- 5.3 Describe the purposes of critical incident stress management and debriefing.
- 5.4 *Incident Command System:*
  - 5.4.1 The Incident Command System (ICS) is used for managing non-emergency and emergency incidents; Guide F1422 recommends the use of ICS for managing SAR operations.
  - 5.4.2 Level I land search team members shall complete National Incident Management System (NIMS) compliant introductory training in ICS such as the National Wildfire Coordinating Group (NWCG) I-100 Introduction to ICS,<sup>4</sup> United States Fire Administration—National Fire Academy (NFA) Q-462/ICS-100 Introduction to ICS for Operational First Responders,<sup>5</sup> or Federal Emergency Management Agency (FEMA) Emergency Management Institute (EMI) IS-100—Introduction to the Incident Command System.<sup>6</sup>

7.1 *Personal Safety and Survival:* Land Search Team Members shall know how to protect themselves from the effects of the environment in the field, including the following:

- 5.5.1 Explain what the basic needs for survival are and prioritize them.
  - 7.1.1 Describe the The five ways in which the body loses heat, the concerns with these losses, and positive and negative effects of this heat loss, and the ways to assist or prevent them.
  - 7.1.2 Describe the principles of The reasons for wearing layered clothing, the function of each layer, and the advantages and disadvantages of materials used in each layer.

- ~~7.1.3 Describe considerations for The factors to be considered when choosing socks and footwear.~~
- ~~5.5.5 Explain the basic considerations for emergency shelter.~~
  - ~~5.5.5.1 Build an emergency shelter using only personal field equipment and materials found in the field.~~
  - ~~5.5.6 Build a sustainable fire using only personal field equipment and materials found in the field.~~
  - ~~5.5.7 Describe two methods of water purification.~~
  - ~~5.5.8 Discuss the considerations for types and quantity of food to be carried in the field.~~
  - ~~5.5.9 Describe personal hygiene and sanitation considerations and techniques used in the field.~~
  - ~~5.5.10 Describe types of emergency signaling devices and the advantages and disadvantages of each.~~
    - ~~5.5.10.1 Air-to-ground and ground-to-air signals are shown in Practice F1591.~~
  - ~~5.5.11 Describe the safety precautions for working around helicopters.~~
    - ~~5.5.11.1 Describe AHJ required safety procedures for flying as a passenger or crew member on helicopters and other aircraft.~~
  - ~~5.5.12 Describe the safety precautions and procedures for hazardous materials, including illegal drug labs, that may be encountered during a search.~~
  - ~~5.5.13 Describe safety precautions and procedures when working around still and swift water in the normal area of operations.~~
  - ~~5.5.14 The AHJ shall determine what physical performance requirements are required for Level I land search team members and develop appropriate performance measurements.~~
- ~~7.2 Land Search Team Members shall know a minimum of three methods for avoiding getting lost.~~
- ~~7.3 Land Search Team Members shall have training in how to survive if lost in the field, including the following:~~
  - ~~7.3.1 The survival situation plan: STOP - Stay, Think, Observe, and Plan.~~
  - ~~7.3.2 Maintaining a positive mental attitude.~~
  - ~~7.3.3 The basic needs for survival, and their order of priority.~~
  - ~~7.3.4 Differentiating between the requirements for short term survival versus long term survival.~~
  - ~~7.3.5 Two methods of water purification for use in the field.~~
  - ~~7.3.6 The functional requirements of an emergency shelter.~~
- ~~7.4 Land Search Team Members shall demonstrate the ability to build an emergency shelter using only personal field equipment and materials found in the field.~~
- ~~7.5 Land Search Team Members shall demonstrate the ability to build a sustainable fire using only personal field equipment and materials found in the field.~~
- ~~7.6 Land Search Team Members shall know the types and quantity of food to be carried in the field during a search mission.~~
- ~~7.7 Land Search Team Members shall know the personal hygiene and sanitation requirements and techniques used in the field.~~
- ~~7.8 Land Search Team Members shall know at least two types of emergency signaling devices, their advantages and disadvantages, and how to use each device.~~
- ~~7.9 Land Search Team Members shall meet the requirements of Guide F2890 for hazardous materials training.~~
- ~~7.10 Land Search Team Members shall know the safety precautions and procedures to be employed when working around still and swift water in the normal area of operations.~~
  - ~~7.10.1 Land Search Team Members are not qualified to participate in swift water operations.~~
- ~~7.11 Land Search Team Members shall know the signs, symptoms, and preventive measures for the following:~~
  - ~~7.11.1 Cold related problems.~~
  - ~~7.11.2 Heat related problems.~~
  - ~~7.11.3 Dehydration.~~
  - ~~7.11.4 Fatigue and exhaustion.~~
  - ~~7.11.5 Blisters.~~
  - ~~7.11.6 Sunburn.~~
- ~~7.12 Environmental Concerns: Land Search Team Members shall know the hazards in the normal area of operations, including, but not limited to, the following:~~
  - ~~7.12.1 Plants.~~
  - ~~7.12.2 Wild and domestic animals.~~
  - ~~7.12.3 Terrain.~~
  - ~~7.12.4 Weather patterns and conditions.~~
  - ~~7.12.5 Lightning.~~
  - ~~7.12.6 Describe the signs, symptoms, and preventative measures for the following: Other (for example, snow blindness, altitude related problems, etc.).~~
- ~~5.6.1.1 Cold related problems.~~
- ~~5.6.1.2 Heat related problems.~~
- ~~5.6.1.3 Dehydration.~~



5.6.1.4 Fatigue and exhaustion:

5.6.1.5 Blisters:

5.6.1.6 Sunburn:

5.6.1.7 Hazards in the normal area of operations:

- (1) Plants (for example, adverse reactions to, encounters with):
- (2) Wild and domestic animals (for example, bites, stings, encounters with):
- (3) Other (for example, snow blindness, altitude related problems):

5.6.2 Describe terrain hazards in the normal area of operation.

5.6.3 Discuss the additional hazards of searching at night.

5.6.4 Describe weather patterns and conditions that may affect a search in the normal area of operations.

5.6.5 Describe the safety rules for lightning protection.

7.12.7 Describe general and AHJ specific Land Search Team Members shall know the procedures to be followed when searching in hazardous areas and conditions.

*5.7 First Aid and Medical:*

5.7.1 Explain blood-borne pathogens and body substance isolation procedures.

5.7.2 A Level I land search team member shall have medical or first aid training.

5.7.2.1 The AHJ shall determine the required level of medical or first aid training.

5.7.2.2 As a minimum, the medical or first aid training shall include:

- (1) Basic treatment for compromised airway, breathing, and circulation.
- (2) Basic treatment for common injuries experienced in the field.
- (3) Basic treatment for the conditions listed in **5.6.1**.

*5.8 Personal Equipment:*

5.8.1 Personal equipment necessary for a Level I land search team member to safely participate on a search varies by type of search, team assignment, season, environment, and terrain. A Level I land search team member shall:

5.8.1.1 Have appropriate clothing, outerwear, footwear, and personal field equipment based on these factors and AHJ requirements:

5.8.1.2 Have a durable, hands-free method of carrying personal and team equipment into the field.

5.8.1.3 Explain the reasons to carry, and explain or demonstrate the use of, all equipment the AHJ requires.

5.8.2 To assist the AHJ or Level I land search team member with personal equipment decisions, Appendix 1 contains equipment lists:

5.8.2.1 **Table X1.1** is a list of items to be considered for personal equipment.

5.8.2.2 **Table X1.2** is a list of suggested items for a personal first aid kit.

5.8.2.3 **Table X1.3** is a list of suggested items for a personal base camp kit.

*5.9 Map, Compass, and Land Navigation:*

5.9.1 Explain the advantages and disadvantages between using a large scale topographic map and a highway or street map which does not show topographic features:

5.9.2 Identify and describe the meaning of five topographic map symbols:

5.9.3 Describe legend information and its use.

5.9.4 Explain the significance of the following:

5.9.4.1 Contour lines and their spacing:

5.9.4.2 True north, magnetic North, and declination.

5.9.5 Explain the advantages and disadvantages of the following when used to determine a position:

5.9.5.1 Latitude/Longitude:

5.9.5.2 Universal Transverse Mercator (UTM) Grid System:

5.9.5.3 United States National Grid (USNG)

5.9.5.4 References to features on a map.

5.9.5.5 Any AHJ specified methods.

5.9.6 Demonstrate the following navigational skills:

5.9.6.1 Orient a map to North using terrain or a compass:

5.9.6.2 Follow a compass heading (azimuth, bearing):

5.9.6.3 Ability to estimate distance traveled in the field.

5.9.6.4 Obtain an azimuth (bearing) in the field and plot it correctly on a map.

5.9.6.5 Obtain a azimuth (bearing) from a map and transfer it correctly to the field.

5.9.6.6 Determine and correctly give the coordinates of a point on a map in:

- (1) Latitude/Longitude:
- (2) Universal Transverse Mercator (UTM):
- (3) United States National Grid (USNG)