



Standard Practice for Training a Land Search Tracker¹

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1. Scope

1.1 This guide establishes a standard of training to address specific skills required for a searcher who participates as a Tracker in support of a land search effort.

1.1.1 This guide establishes a standard of knowledge for a Tracker as related to general, field, and tracking-specific knowledge and skills.

1.1.2 This guide identifies the performance requirements of a Tracker who performs tracking of humans as it relates primarily to land search events, but might include law enforcement investigation or military situations.

1.2 A Tracker is required to have the knowledge and skill sets pertaining to basic tracking techniques and be familiar with unique tracking terminology and the equipment commonly used.

1.3 A Tracker may be utilized in any of three common tracking environment kinds described in Classification F1993: Kind A (wilderness), Kind B (urban), Kind C (mountainous) or other kinds.

1.4 *This guide 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 guide to establish appropriate safety and health practices and determine the applicability of regulatory requirements prior to use.*

2. Referenced Documents

2.1 *ASTM Standards:*²

F1633 Guide for Techniques in Land Search

F1767 Guide for Forms Used for Search and Rescue

F1993 Classification System of Human Search and Rescue Resources

F2209 Guide for Training of Level I Land Search Team Member

¹ This practice 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 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. Terminology

3.1 *Definitions of Terms Specific to This Standard:*

3.1.1 *Tracker, n*—a person with specialized knowledge and training who can locate, identify, interpret, and systematically follow evidence of passage of a specific person.

3.1.2 *sign, n*—the physical evidence of the presence or passage of a person or persons.

3.1.3 *tracking, v*—the systematic and methodical identification of physical evidence which thereby allows someone to follow a specific person.

3.1.4 *sign cutting, v*—the systematic and regimented procedure utilized by Trackers to locate and identify the physical evidence of the passage of a specific person.

3.1.5 *response organization, n*—a group, be it governmental or nongovernmental, of which the Tracker is a member and under whose auspices the Tracker operates in the field.

4. Significance and Use

4.1 This guide establishes the minimum standard for training a Tracker as it relates to general, field, and tracking-specific knowledge and skills. A person trained to this guide, who demonstrates the knowledge and skills required, may be recognized as a Tracker.

4.1.1 A Tracker shall be adequately trained in the environment in which he or she is expected to work.

4.1.2 Nothing in this guide precludes a response organization or the Authority Having Jurisdiction from adding additional requirements for its own members.

4.2 Being trained as a Tracker is not an indication that a person possesses adequate field skills or knowledge to make mission critical decisions.

4.3 This guide is not a complete training or performance document. It is only an outline of the topics required for training or evaluating a Tracker. It may, however, be used in the development of, or as part of, a complete training document or program.

4.3.1 This guide does not stand alone and must be used with the referenced documents (1-19),³ qualifying tracking training materials, and appropriate field training, under the supervision

³ The boldface numbers in parentheses refer to a list of references at the end of this standard.

of a qualified trainer, to provide the specific skills and knowledge needed by a Tracker.

4.4 Though this guide establishes a basic training standard, it does not imply that a Tracker is a “trainee,” “probationary,” or other similar team member designation of an organization. It is up to the Authority Having Jurisdiction or response organization to determine the requirements and qualifications for member designations.

4.5 Because tracking could be performed in a dangerous area and Trackers may be required to perform rigorous activities in adverse conditions, safety and fitness standards shall be included in a response organization’s policies and procedures. Trackers shall determine if the task can be completed safely with the personnel, equipment, and training at hand.

4.6 This guide may be used in conjunction with other appropriate materials to evaluate training documents to determine if their content meets the necessary topics for training or performance of a Tracker. Likewise, this guide may be used to evaluate an existing training program to see if it meets the requirements of this guide.

4.7 The requirements presented in the following sections are not presented in any particular order and do not represent a training sequence.

4.8 A comprehensive Tracker training program shall include an evaluation process to determine the students’ ability to meet these training standards. Written and oral examinations designed to evaluate knowledge of theory, policy, and the practices required by the response organization, which include the requirements of this guide, may be utilized. However, field or training ground exercises and demonstrations are necessary to determine practical tracking knowledge or a developed skill.

5. General Knowledge and Skills

5.1 *General Requirements:*

5.1.1 As a prerequisite a Tracker is expected to be a member of a response organization and possess some training, certification, or endorsement in the environment in which he or she is expected to work.

5.1.2 For land search personnel, meeting the requirements of Guide [F2209](#) shall be considered sufficient for meeting the requirements of [5.1.1](#).

5.1.3 The response organization shall determine the mental and physical preparedness of the Tracker to serve in the field using such methods as are objective and consistent with direction, if any, from the Authority Having Jurisdiction.

5.2 *Personal Equipment:*

5.2.1 A Tracker shall possess and carry, as a minimum, sufficient personal protective equipment and equipment to maintain personal safety while working at or around the land search assignment. Suitability of equipment shall be verified by the response organization or Authority Having Jurisdiction. A suggested equipment list can be found in [Appendix X1](#).

5.2.2 Additional specific equipment may be necessary for a Tracker to safely participate in assignments with special

circumstances or a variety of conditions, seasons, environments, and terrains.

5.2.3 A Tracker shall be able to explain the reasons to carry, or demonstrate the use of, or both, all personal equipment required by the response organization or Authority Having Jurisdiction.

5.3 *Team Equipment:*

5.3.1 A Tracker shall be familiar with tracking equipment identified and commonly used by the response organization or Authority Having Jurisdiction.

6. Specific Knowledge and Skills for Tracking

6.1 *Tracking Theory:*

6.1.1 A Tracker shall explain the significance, as it relates to any search and rescue mission, of the following examples:

- 6.1.1.1 Verify that evidence supports initial information
- 6.1.1.2 Establish a direction of travel
- 6.1.1.3 Limit search area

6.2 *Tracking Procedure:*

(See Guide [F1633](#))

6.2.1 A Tracker shall know the basic techniques for the “Step by Step” method. It is a process of identifying contiguous tracks or sign or both in succession and acknowledging each one, either as part of the learning process, or as an effective tactic when required or as needed.

6.2.2 A Tracker shall demonstrate the ability to identify and describe a track by:

6.2.2.1 Measuring overall length, width of sole, width of heel, length of heel, or if no heel is present, denote a measurement to a visible feature.

6.2.2.2 Determining the type, shape, and condition of the footwear being worn.

6.2.2.3 Drawing a picture of a track including all unique marks and designs.

6.2.3 A Tracker shall demonstrate the ability to set up a tracking stick:

6.2.3.1 Point of stick on forward heel strike, place marking over rear toe dig, second marking over rear heel strike.

6.2.3.2 Length of foot between marks.

6.2.3.3 Stride interval is the normal walking distance between footfalls shown from the point of stick to the first mark.

6.2.4 A Tracker shall demonstrate the ability to clearly mark tracks and the direction of travel by:

6.2.4.1 Placing indicators, a pin, powder, or other marking material just behind heel mark to mark each track.

6.2.4.2 Placing indicators above ground level occasionally to clearly show the trend of the direction of travel.

6.2.5 A Tracker shall demonstrate the ability to recognize, identify, and describe the following types of sign under actual conditions:

6.2.5.1 *Compressed Areas*—Areas of ground surface that include loose debris and vegetation both living and dead, surface moisture and all types of soil surfaces, compressed in a manner consistent with that of “human footfalls.”

6.2.5.2 *Shine*—The light reflected from within the human footfall damage.

6.2.5.3 *Flagging*—Vegetation turned in a direction of travel.

6.2.5.4 *Bruising*—Footfall damage to vegetation, usually indicated by color variation contrasting with surrounding area of same vegetation.

6.2.5.5 *Weeping*—The natural exudation of vegetation fluids resulting from footfall damage.

6.2.5.6 Dislodged or embedded objects moved or compressed by a footfall.

6.2.5.7 *Disturbance*—Any disturbance of the natural state of ground surface, including: leaf litter, loose debris, and duff, probably caused by footfall movement.

6.2.5.8 *Scuff*—Mark caused by footfalls contacting firm ground indicating movement in a determinable direction of travel.

6.2.5.9 *Transfer*—Any substance inadvertently collected by footwear in a footfall and deposited by succeeding footfalls.

6.2.6 The Tracker shall demonstrate the ability to observe and explain “simple” sign aging characteristics and estimate the time elapsed since the sign was left. The Tracker shall include all factors of vegetation damage, rain, sun, and other natural effects.

6.2.7 The Tracker shall demonstrate the ability to recognize and explain footprint characteristics related to the manner and movements of the sign maker.

6.3 *Tracking Technique:*

6.3.1 The Tracker shall demonstrate the ability to use a tracking stick to find the next track when using the “Step-by-Step” method.

6.3.1.1 Place observed track between markings and let the point of the stick focus your eyes on the prime sign area of next track

6.3.1.2 Locate track evidence

6.3.1.3 Mark track

6.3.1.4 Move on

6.3.2 The Tracker shall demonstrate the ability to utilize the sun angle or a light source to reveal sign.

6.3.3 The Tracker shall demonstrate the ability to function in any position in a recommended three-person tracking team.

6.3.3.1 Point person using a tracking stick to follow track evidence.

6.3.3.2 Right and left flankers, one step behind the point person, who assist the point person and watch for approaching sign from the sides.

6.3.3.3 Rotate positions often.

6.3.4 The Tracker shall explain the concept and significance of “sign cutting” as follows:

6.3.4.1 Utilizing natural and man-made barriers to locate human sign.

6.3.4.2 Used in conjunction with multiple search or tracking teams to advance prime sign in an organized and regimented manner.

6.3.4.3 Going to another location to detect sign or tracks based on the probable movements of the search subject.

6.4 The Tracker shall be able to complete documents required by the response organization, chain of command, or Authority Having Jurisdiction. If no such documentation is prescribed, the Tracker may prepare an alternative report format as described in [Appendix X2](#).

APPENDIXES

(Nonmandatory Information)

X1. EQUIPMENT RECOMMENDED FOR TRACKING (See Guide [F1767](#))

- Adequate clothing appropriate for weather and terrain
- A broad brimmed hat for protection and to reduce glare
- Tracking stick with two rubber bands or “O” rings
- Measuring device (small tape measure)
- Notebook
- Tracking cards
- Writing instrument
- Flagging material (bio-degradable), pins, powder, or other track identification material
- Handheld flashlight which provides a soft diffuse yellow-tinted light without spots or circles
- Mirror (3” by 5”)
- Compass

X2. DOCUMENTATION OUTLINE

X2.1 A documentation outline where each point becomes a sentence in your narrative report. This documentation is primarily for a Tracker to use to improve the skill set and to communicate with other Trackers.

1. Heading Section:
 - (a) Report writer's name, address, telephone number, email
 - (b) Date and time report is written
 - (c) Incident or mission name or reference number
 - (d) Date and time of incident
 - (e) Incident subject name or names
2. Preliminary Information Section:
 - (a) Who made the call that initiated your response: name, position, and contact telephone number
 - (b) Brief narrative of information that generated the call out, include dates, places, and times
 - (c) Description of incident given
 - (d) Where and when you are requested to meet and with whom
 - (e) Why they are requesting your assistance and your objective as a Tracker resource
 - (f) Any other preliminary contributing information
3. Incident Arrival Section:
 - (a) Time, date, and location of your arrival
 - (b) To whom you reported to upon arrival
 - (c) Confirm preliminary information for call out
 - (d) Additional information, provided at the scene, and by whom, to insure you are fully informed and understand all available facts of the incident
 - (e) Witness names and/or statements
 - (f) Weather, soil, and other factors affecting tracking
 - (g) Your objectives
4. Narrative Description of Actions Taken and Decisions Made:
 - (a) Actions taken should correspond to previously included information
 - (b) This section should include tracking definitions and a complete description of sign evidence using terms and references related to tracking factors
 - (c) Does physical evidence found support information provided
 - (d) Was PLS or LKP located, direction of travel, and explain with description
 - (e) Times, places, descriptions, who saw, who did, where it happened, why, conclusions, based on what you and fellow team members saw and did
 - (f) List actions, locations, team member or assignment changes
 - (g) Descriptive narrative should be a culmination of team member personal notes
 - (h) Writer's inclusive narrative description should be in agreement with all contributing team members, but not compromised if they differ
5. Summary Section:
 - (a) Brief summation of actions taken, conclusions reached
 - (b) Did evidence support information as provided
 - (c) Distribution list of report
 - (d) Sign and date
6. Map and Graphics:
 - (a) Attach footprint card, maps, photos, and drawings described in the report
- (h) Description of all sign evidence relative to this incident

REFERENCES

- (1) Abbott, John Reginald. *Footwear Evidence*, Charles C. Thomas, Springfield, IL, 1956.
- (2) Bodziak, William. *Footwear Impression Evidence Detection, Recovery, and Examination*, CRC Press, LLC, Boca Raton, FL, 2000.
- (3) Brown, Tom, Jr. with Morgan, Brandt, *Tom Brown's Field Guide to Nature Observation and Tracking*, Berkley Books, New York, 1983.
- (4) Butler, Barbara, *Wilderness Tracks: How to Sleuth Out Wild Creatures and Wayward Humans*, Hancock House, Blaine, WA, 1997.
- (5) Carss, Bob, *The SAS Guide to Tracking*, The Lyons Press, Guilford, CT, 2000.
- (6) Cassidy, Michael J., *Footwear Identification*, Canadian Government Printing Centre, Quebec, Canada, 1980.
- (7) Department of Army, *Field Manual 7-42 Combat Tracker and Tracker Dog Training and Employment*, Government Printing Office, Washington, DC, 1973.
- (8) Department of Army, *Field Manual 21-75 Combat Skills of the Soldier*, Government Printing Office, Washington, D.C.
- (9) Diaz, David with McCann, V.L., *Tracking—Signs of Man, Signs of Hope*, The Lyons Press, Guilford, CT, 2005.
- (10) Hanratty, Tom, *The Art and Science of Tracking Man and Beast*, Medicine Hawk Publications, Inc, Milwaukee, WI, 1997.
- (11) Hardin, Joel with Condon, Matt, *Tracker—Case Files and Adventures of a Professional Tracker*, Self-published, 2004.
- (12) Hilderbrand, Dwayne S., *Footwear, The Missing Evidence*, Staggs Publishing, Temecula, CA, 1999.
- (13) Kearney, Jack, *Tracking: A Blueprint for Learning How*, Pathways Press, El Cajon, CA, 1978.
- (14) Liebenberg, Louis, *The Art of Tracking: Origin of Science*, Clyson Printers, Capetown, South Africa, 1990.
- (15) Robbins, Roland, *Mantracking—Introduction to the Step-by-Step Method*, Search and Rescue Magazine, Montrose, CA, 1977.
- (16) Scott-Donelan, David, *Tactical Tracking Operations—The Essential Guide for Military and Police Trackers*, Paladin Press, Boulder, CO, 1998.
- (17) Speiden, Robert, *Foundations for Awareness, Signcutting, and Tracking*, Natural Awareness Tracking School, LLC, Christiansburg, VA, 2009.
- (18) Taylor, Albert 'Ab' and Cooper, Donald, *Fundamentals of Mantracking: The Step-by-Step Method*, Second Edition, Emergency Response Institute, Inc., Olympia, WA, 1990.
- (19) Science Channel, *Mantracking with Terry Grant*, television series, 2008.

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