



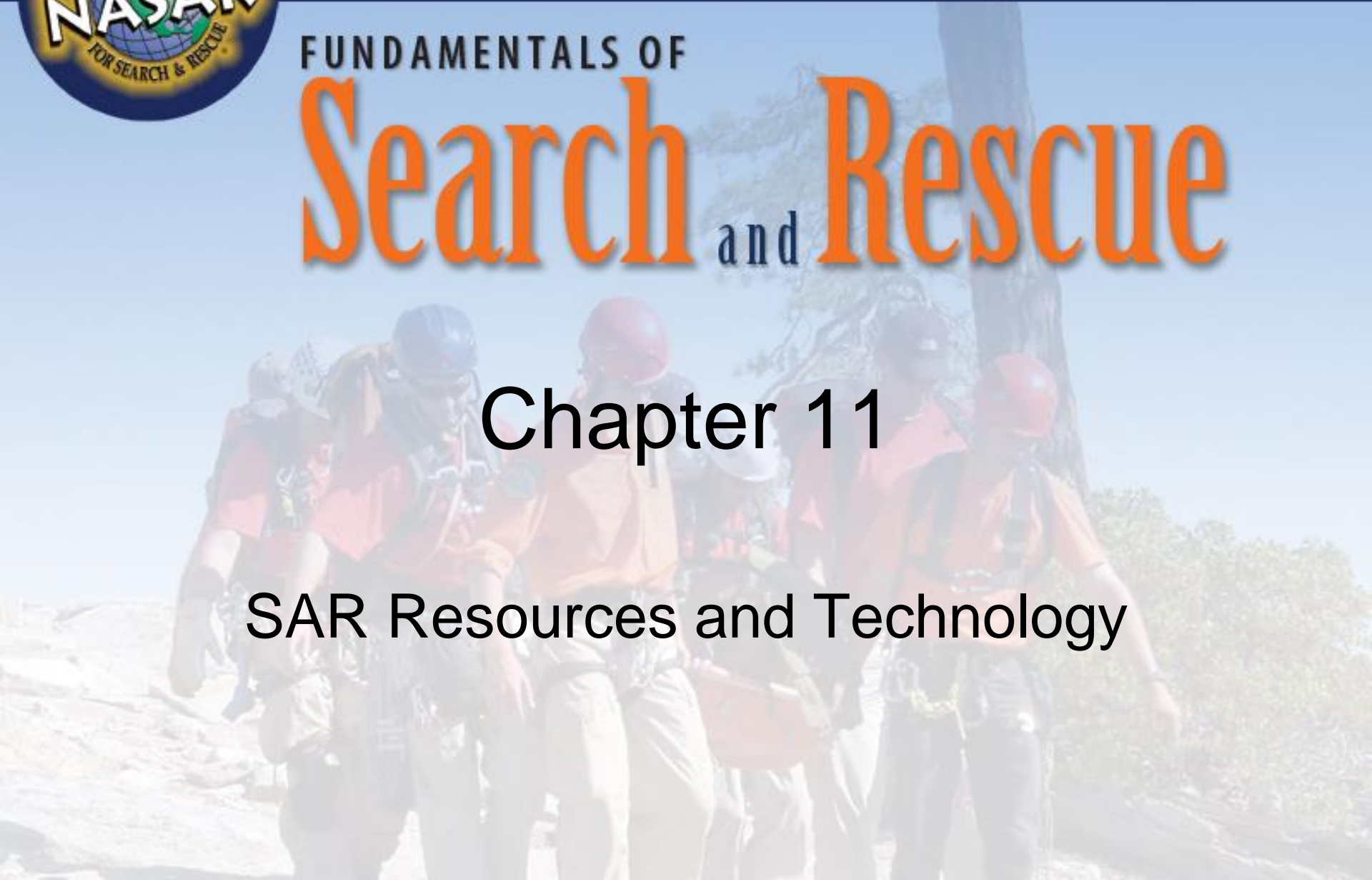
National Association for Search and Rescue

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Search and Rescue

Chapter 11

SAR Resources and Technology





Objectives

- List at least three advantages and three disadvantages for five types of operational resources that may be used for SAR.
- List three ways to categorize SAR resources.
- List five human and animal resources.
- Describe differences between tracking/training and air-scenting canines.
- List at least two uses for aircraft in SAR operations.



Resources (1 of 3)

- Refers to a person, group, or piece of equipment that has the ability to contribute to an operation or organization
- A single person is termed an “individual resource.”
- A collection of individuals and their equipment are called “group resources.”



Resources (2 of 3)

- Categorizing SAR resources consist of three basic subdivisions:
 - Human and animal
 - Informational
 - Equipment and technology



Resources (3 of 3)

- Three types of human search resources
 - Hasty teams
 - Grid search crews
 - Human trackers
- Each has its own uses, benefits, and limitations.



Hasty Teams (1 of 2)

- Hasty teams are:
 - Small (usually 3 members)
 - Well-trained
 - Highly mobile
 - Self-sufficient
 - Clue conscious
- Utilize fast, non-thorough search tactics in areas most likely to produce clues or the subject



Hasty Teams (2 of 2)

- Should include individuals who are track aware, clue and subject oriented, and familiar with local terrain and dangers
- Usually operate under standard operating procedures
- Carry equipment to remain self-sufficient for 24 hours



Grid Search Crews (1 of 3)

- Use vision to search well-defined, usually small, segment of land or water
- Several individuals stand in a line and then walk together through the area.
- Tight grid search teams
 - Perform either tight grid searches or evidence searches.
 - Objective is to search a segment to a high POD.



Grid Search Crews (2 of 3)

- The objective in evidence search is to search in a very small area for inanimate objects.
 - Requires many searchers, often making it difficult to coordinate and manage
 - At least half of the team needs to be trained.
 - Any clues not discovered will likely be destroyed.



Grid Search Crews (3 of 3)

- Loose grid teams
 - Similar to tight grid teams except may not maintain visual contact with adjacent searchers
 - Must have more skilled members
 - More independent than tight grid teams
 - Mix sound into their visual searches
 - Need to be self-reliant and skilled



Human Trackers (1 of 3)

- Use their visual senses to search for evidence left by a person's passing
- Cut or look for sign by examining the area where the subject would likely have passed
- Following the subsequent chain or chronology of sign is called tracking.



Human Trackers (2 of 3)

- Process of looking for the first piece of evidence from which to track is called sign cutting.
 - Step-by-step method
 - Simple, methodical, and emphasizes finding every piece of possible evidence
- Tracking is a very visual skill and requires a great deal of practice and experience



Human Trackers (3 of 3)





Technical Rope Rescuers

- “Technical” = Very specialized techniques are applied
- Rope rescue is a complex tool used in the rescue function to achieve a goal that cannot otherwise be achieved.
- Considered both hazardous and exciting



Management (1 of 3)

- Specific functions required to effectively plan and manage a search:
 - Incident Commander
 - Investigation Unit Leader
 - Communications Unit Leader
 - Information Officer
 - Operations Chief
 - Logistics Chief
 - Plans Chief



Management (2 of 3)

- Logistical support consists of:
 - Food
 - Shelter
 - Other logistical concerns
- Can make a substantial difference in comfort and safety of all human resources.



Management (3 of 3)

- Other management resources:
 - Investigators/interviewers
 - Communications support
 - Facilities
 - Critical Stress Debriefing Teams
 - Environment-specific personnel



Animal Resources

- Dogs
- Horses





Dogs (1 of 3)

- Dog teams consist of a dog and a handler.
- Two types of dogs used in SAR:
 - Tracking/trailing
 - Air scent
- Each type differs in its approach to searching and its value depends on varying factors.



Dogs (2 of 3)

- Humans give off a constant stream of scent, like invisible smoke, made up mostly of skin cells.
- The cells, associated bacteria, and body secretions are detectable by a dog.
 - Air scenting dogs detect the scent as it floats through the air.
 - Tracking/trailing dogs detect the scent as it comes to rest on the ground.



Dogs (3 of 3)

- Tracking/trailing dogs
 - Frequently work on lead
 - Require a scent article to establish the scent
- The ability of a handler to know when the dog is on the trail or has “alerted” to scent is acquired through many years of practice.



Horses

- Primarily a means for transportation for equipment
- Can search remote or rough terrain
- Equestrian units can be damaging to terrain and evidence.
- In the right circumstances, horses can be a valuable asset.



Equipment and Technology

(1 of 2)

- Aircraft
 - Can search from a greater distance, at a greater speed, over a larger area
 - Both a tactical tool and a mode of transportation





Equipment and Technology

(2 of 2)

- Specialized vehicles
 - Over-snow
 - Four-wheel drive
 - All-terrain
 - Mountain bikes