

## MOUNTAIN SEARCH AND RESCUE (SAR) TEAM

<b>DESCRIPTION</b>	A Mountain Search and Rescue (SAR) Team conducts search, rescue, and recovery in one or more of the environments of low mountain, mountain, and alpine, in response to natural and human-caused events.
<b>RESOURCE CATEGORY</b>	Search and Rescue
<b>RESOURCE KIND</b>	Team
<b>OVERALL FUNCTION</b>	<p>The Mountain SAR Team:</p> <ol style="list-style-type: none"> <li>1. Conducts search, rescue, and recovery in low mountain, mountain, and alpine SAR environments through use of aircraft and ground vehicles for support, transportation, and evacuation, including technical and non-technical terrain <ol style="list-style-type: none"> <li>a. Low Mountain: Tract of land characterized by steep slopes and moderate variations in elevation, that requires the ability to negotiate routes rated as Yosemite Decimal System (YDS) classes 1-4 and occasionally class 5, where steep to vertical rock, steep forested or brush-covered terrain, talus slopes, boulder fields, and possibly occasional snow and ice obstacles limits travel, which includes city and county (urban or suburban) parks</li> <li>b. Mountain: Tract of land characterized by steep slopes and great variations in elevation, that requires the ability to negotiate routes rated YDS class 2-4, and occasionally class 5, and where steep to vertical rock, steep forested or brush-covered terrain, talus slopes, boulder fields, and occasional snow and ice obstacles limit travel</li> <li>c. Alpine: Mountainous terrain, typically above tree line, that requires the ability to negotiate routes rated YDS class 2-5, and where any combination of altitude, extreme weather, extensive exposure to snow/ice obstacles, avalanche risk, and crevasses affect travel; in general, the alpine environment includes all mountainous terrain above 3,500 meters</li> </ol> </li> <li>2. Provides first aid and Cardiopulmonary Resuscitation (CPR)</li> <li>3. Operates within the Incident Command System (ICS)</li> <li>4. Operates in environments with and without infrastructure, including those affected by disasters and terrorism; with compromised access to roadways, utilities, and transportation; and with limited availability of shelter, food, and water</li> <li>5. Conducts primary rescue of humans and animals and delivers them to safe refuge, but is not intended to perform secondary transport of rescued humans and animals to shelters or other locations</li> </ol>
<b>COMPOSITION AND ORDERING SPECIFICATIONS</b>	<ol style="list-style-type: none"> <li>1. Discuss the following items prior to deployment: <ol style="list-style-type: none"> <li>a. Intra-team communications, such as programmable inter-operable communications with Command, General Staff, and other supporting resources</li> <li>b. Presence of contaminated environments and need for related personal protective equipment (PPE), respiratory protection, clothing, and equipment</li> <li>c. Security and force protection needed upon arrival</li> <li>d. Logistics support, such as lodging, transportation, and meals for sustained operations beyond 72 hours</li> </ol> </li> <li>2. This team works up to 12 hours per shift, is self-sustainable for 72 hours (beyond need for security and force protection), and is deployable for up to 14 days</li> <li>3. The requestor should specify additional specialized equipment, such as hardware, software, ropes, rescue, or evacuation equipment</li> <li>4. The requestor should specify the mission location and operational environment, such as low mountain, mountain, and alpine</li> <li>5. The requestor should specify the type of animal rescue, such as livestock and equine, companion, avian, non-domestic, and exotic animals</li> <li>6. The requestor should acquire additional specialized personnel, such as advanced medical, Emergency Medical Technician (EMT), paramedic, and canine SAR personnel separately</li> <li>7. The requestor should acquire secondary land or air transport of rescues separately</li> <li>8. The requestor should specify or separately acquire additional vehicles, trailers, equipment, or supplies such as fuel</li> <li>9. The requestor should consider the need for additional capabilities needed to address hazards that may be encountered during operations in SAR environments, which may be immediately dangerous to life and health (IDLH), as ASTM F2890 Standard Guide for Hazard Awareness for Search and Rescue Personnel defines</li> <li>10. The Authority Having Jurisdiction (AHJ) may require additional capability-based training or certification, such as those related to cave, mine, water, hazardous material, or higher altitudes</li> </ol>

Each type of resource builds on the qualifications of the type below it. For example, Type 1 qualifications include the qualifications in Type 2, plus an increase in capability. Type 1 is the highest qualification level.

## Resource Typing Definition for Mass Search and Rescue Operations Search and Rescue

COMPONENT	TYPE 1	TYPE 2	TYPE 3	NOTES
<b>CAPABILITY PER TEAM ENVIRONMENT</b>	Alpine	Mountain	Low Mountain	Not Specified
<b>CAPABILITY PER TEAM OPERATIONS</b>	Same as Type 2, PLUS: Performs search, rescue, and recovery in alpine environments	Same as Type 3, PLUS: Performs search, rescue, and recovery in mountain environments	Performs search, rescue, and recovery in low mountain terrain	YDS of classifying walking, hiking, and climbing terrain: 1. Class 1: Walking with a low chance of injury. 2. Class 2: Simple scrambling, with the possibility of occasional hand use and little potential danger. 3. Class 3: Scrambling on an increased angle with increased exposure and necessary handholds. Falls could easily be fatal. 4. Class 4: Simple climbing, with exposure and rope use. Falls may well be fatal. 5. Class 5: Technical rock climbing using a rope, specialized equipment and training to protect against a fall. Un-roped falls can result in severe injury or death. 6. Class 6: Rock/Ice so sheer and smooth that it is unclimbable without the use of aid, such as artificial and other devices: bolts, wedges, rope ladders, etc.
<b>EQUIPMENT PER TEAM GENERAL</b>	Same as Type 2, PLUS: Equipment consistent with this resource's capabilities and needs, that meet or exceed ASTM 3028	Same as Type 3, PLUS: Equipment consistent with this resource's capabilities and needs, that meet or exceed ASTM 3027	Equipment consistent with this resource's capabilities and needs, that meet or exceed ASTM F2209, ASTM 2751, ASTM 2752, and Mountain Rescue Association (MRA) 105.1	Each response or mission may require additional specialized equipment. Requestor and provider should discuss this prior to team's arrival.
<b>EQUIPMENT PER TEAM MEMBER COMMUNICATIONS</b>	Not Applicable	Not Applicable	1. Portable and mobile intra-team communications 2. Portable radio with ground to air capability 3. Charger for devices 4. Handheld Global Positioning System (GPS) unit 5. Two-way handheld radio 6. Mobile phone	1. Intra-team and inter-team communications should be consistent with National Interoperability Field Operations Guide (NIFOG). 2. Consider alternate forms of communication, such as satellite phones, based on the mission assignment and team needs.
<b>EQUIPMENT PER TEAM MEMBER PPE</b>	Same as Type 2, PLUS: PPE as required that meets or exceeds ASTM 3028	Same as Type 3, PLUS: PPE as required that meets or exceeds ASTM 3027	Minimum PPE consistent with this resource's capabilities and needs, that meets or exceeds ASTM 2209, ASTM 2751, and ASTM 2752	Not Specified

Superseded

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COMPONENT	TYPE 1	TYPE 2	TYPE 3	NOTES
<b>EQUIPMENT PER TEAM VICTIM EXTRICATION SYSTEM</b>	Same as Type 2	Same as Type 3, PLUS: Patient hypothermia packaging	1. Litter basket or similar 2. Patient tie in system 3. Litter wheel 4. Adjustable bridle	Hypothermia packaging may include blankets or more technical equipment, such as specially designed sleeping bags.
<b>PERSONNEL PER TEAM MANAGEMENT AND OVERSIGHT</b>	1 - NIMS Type 1 Mountain SAR Strike Team/Task Force Leader 2 - NIMS Type 1 Mountain SAR Team Leader	1 - NIMS Type 2 Mountain SAR Strike Team/Task Force Leader 2 - NIMS Type 2 Mountain SAR Team Leader	1 - National Incident Management System (NIMS) Type 3 Mountain SAR Strike Team/Task Force Leader 2 - NIMS Type 3 Mountain SAR Team Leader	NIMS Mountain SAR Strike Team/Task Force Leader should have experience in the deployment area's environment.
<b>PERSONNEL PER TEAM MINIMUM</b>	11	11	11	Not Specified
<b>PERSONNEL PER TEAM OPERATIONS AND SUPPORT</b>	8 - NIMS Type 13 Mountain SAR Technician	8 - NIMS Type 2 Mountain SAR Technician	8 - NIMS Type 3 Mountain SAR Technician	Requestor may need to order a NIMS Type 1 EMT or Paramedic as a separate resource to supplement the team based on the incident need.

Superseded

## NOTES

Nationally typed resources represent the minimum criteria for the associated component and capability.

## REFERENCES

1. FEMA, NIMS 509: Emergency Medical Technician
2. FEMA, NIMS 509: Paramedic
3. FEMA, NIMS 509: Mountain Search and Rescue Team Leader
4. FEMA, NIMS 509: Mountain Search and Rescue Technician
5. FEMA, NIMS 509: Mountain Search and Rescue Strike Team/Task Force Leader
6. ASTM International (ASTM) F2209-2014: Standard Guide for Training of Level I Land Search Team Member, 2014
7. ASTM F2751-2009: Standard Guide for Training of Support Level Land Rescue Team Member (LRT-Support) Member, 2009
8. ASTM F2752-2009: Standard Guide for Training for Level I Rope Rescue (R1) Rescuer Endorsement, 2014
9. ASTM F2890-2012: Standard Guide for Hazard Awareness for Search and Rescue Personnel, 2012
10. ASTM WK45629: Training of Non-Wilderness Land Search Team Member
11. ASTM F3027-2013: Standard Guide for Training of Personnel Operating in Mountainous Terrain (Mountain Endorsement), 2013
12. ASTM F3028-2013: Standard Guide for Training of Search and Rescue Personnel Operating in the Alpine Environment (Alpine Endorsement), 2013
13. Mountain Rescue Association (MRA), Policy 105.1: National Compliancy Guideline, 2006
14. U.S. Department of Homeland Security, Office of Emergency Communications (OEC), National Interoperability Field Operations Guide (NIFOG), v. 1.5, 2014
15. Yosemite Decimal System (YDS), Classifications for Terrain
16. Occupational Safety and Health Administration (OSHA) 29 Code of Federal Regulations (CFR) Part 1910.120: Hazardous Waste Operations and Emergency Response, latest edition adopted
17. OSHA 29 CFR Part 1910.134: Respiratory Protection, latest edition adopted
18. OSHA 29 CFR Part 1910.146: Permit-Required Confined Spaces, latest edition adopted

Superseded