



### CAVE SEARCH AND RESCUE (SAR) TECHNICIAN

RESOURCE CATEGORY	Search and Rescue
RESOURCE KIND	Personnel
OVERALL FUNCTION	The Cave Search and Rescue (SAR) Technician performs search, rescue and recovery in caves featuring primarily horizontal cave passage, but may include slopes or vertical segments
COMPOSITION AND ORDERING SPECIFICATIONS	<ol style="list-style-type: none"><li>1. This position can be ordered as a single resource or in conjunction with a NIMS typed team (Cave Search and Rescue (SAR) Team).</li><li>2. Discuss logistics for deploying this position, such as working conditions, length of deployment, security, lodging, transportation, and meals, prior to deployment</li><li>3. The requestor should consider the need for additional recognized capability or endorsement, such as animal rescue</li><li>4. The position typically works 12 hours per shift, is self-sustainable for 72 hours and is deployable up to 14 days</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.

COMPONENT	TYPE 1	TYPE 2	TYPE 3	NOTES
DESCRIPTION	Same as Type 2, PLUS: Performs search, rescue and recovery in caves with swiftwater or other highly complex rigging requirements	Same as Type 3, PLUS: Performs search, rescue and recovery operations in caves that feature segments of tight passage, long or complex vertical challenges and single rope techniques (SRT)	The Cave SAR Technician: <ol style="list-style-type: none"><li>1. Performs rescue operations in vertical cave segments under guidance of Type 2 (or higher) Cave SAR Technician</li><li>2. Reports to a Cave SAR Team Leader, if applicable</li><li>3. Provides first aid or other medical care at level appropriate with rescuer certifications and team protocols</li><li>4. Operates within the Incident Command System (ICS) in an entry level position within a Cave SAR Team</li><li>5. Operates in environments with and without infrastructure</li><li>6. Provides safety of self and team members; medical care of self, team members and patients; and simple decontamination of self, team members and equipment</li></ol>	Not Specified
EDUCATION	Same as Type 2	Same as Type 3	Not Specified	Not Specified



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COMPONENT	TYPE 1	TYPE 2	TYPE 3	NOTES
<b>TRAINING</b>	<p>Same as Type 2, PLUS: AHJ verification of completion of a cave SAR training program that results in the following position-specific awareness and capabilities:</p> <ol style="list-style-type: none"><li>1. Address complex rigging problems in vertical environments</li><li>2. Perform rescues with minimal equipment</li></ol>	<p>Same as Type 3, PLUS: AHJ verification of completion of a cave SAR training program that results in the following position-specific awareness and capabilities:</p> <ol style="list-style-type: none"><li>1. Steep angle evacuation</li><li>2. High angle evacuation</li><li>3. Techniques that facilitate patient movement with limited personnel</li><li>4. Ascending and descending on rope</li></ol>	<ol style="list-style-type: none"><li>1. IS-100: Introduction to the Incident Command System, ICS-100</li><li>2. IS-200: Basic Incident Command System for Initial Response, ICS-200</li><li>3. IS-700: National Incident Management System, An Introduction</li><li>4. IS-800: National Response Framework, An Introduction</li><li>Authority Having Jurisdiction (AHJ) verification of completion of a cave SAR training program that results in the following position-specific awareness and capabilities:<ol style="list-style-type: none"><li>1. Awareness of hazards encountered in caves</li><li>2. Ability to move through horizontal and low-complexity vertical caves efficiently, effectively and safely</li><li>3. Ability to assist with horizontal or slope evacuation</li><li>4. Ability to move competently in vertical environment using SRT for personal movement, both down and up, including ability to down climb on fixed rope and perform change-overs from climb to descend and descend to climb</li><li>5. Use, care, inspection and maintenance of all related personal protective equipment (PPE), tools, devices and equipment specific to this position and sub-specialties</li><li>6. General travel, exploration, route finding, marking and mapping</li><li>7. Use of surface and underground communications equipment, and establishment of underground communications systems</li><li>8. Incident initial response, including Go/No-go processes</li><li>9. Personnel accountability and</li></ol></li></ol> <p>(Continued)</p>	<ol style="list-style-type: none"><li>1. The AHJ may require additional training, capabilities and endorsements for unique working environments</li><li>2. For Type 3, National Cave Rescue Commission (NCRC) Level 1 is an example of a Cave SAR training program</li><li>3. For Type 2, NCRC Level 2 is an example of a Cave SAR training program</li><li>4. For Type 1, NCRC Level 3 is an example of a Cave SAR training program</li><li>5. National Fire Protection Association (NFPA) 1670: Standard on Operations and Training for Technical Search and Rescue Incidents (Chapter 13 Cave Search and Rescue) discusses Cave SAR training</li></ol>



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TRAINING			<p>(Continued) tracking systems for surface and entry and exit, including use of entry and exit checklists</p> <p>10.      Underground search techniques</p> <p>11.      Patient medical care and evacuation</p> <p>12.      Self-help and self-rescue</p> <p>13.      Response to team members in a hazard zone</p> <p>AHJ verification of completion of training specific to technical rope rescue for this resulting in the following knowledge and capabilities:</p> <p>1.      Rope rescue equipment, including characteristics of rope and webbing</p> <p>2.      Knots</p> <p>3.      Anchors</p> <p>4.      Belays, progress capture systems and rope assist systems</p> <p>5.      Short distance ascending and descending on rope, including ability to perform change-overs</p> <p>6.      Patient packaging and litter handling</p> <p>7.      Rigging and operation of raising and lowering systems</p> <p>8.      Low-angle/slope rescue</p> <p>9.      Improvised rescue techniques</p>	



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COMPONENT	TYPE 1	TYPE 2	TYPE 3	NOTES
<b>EXPERIENCE</b>	Same as Type 2	Same as Type 3	Knowledge, Skills and Abilities: 1. Knowledge of cave rescue and associated hazards 2. Knowledge of use, care, inspection and maintenance of all PPE, tools, devices and equipment specific to this position 3. Ability to carry out technical rescue operations; rope rescue and Cave SAR AHJ-validated experience demonstrating the following: 1. Scene management and dynamic assessment of risk 2. Cave SAR techniques 3. Identification of hazards, including potential operating environments 4. Completion of a Cave SAR Technician Position Task Book (PTB) or equivalent AHJ documentation	NFPA 1006: Standard for Technical Rescuer Professional Qualifications (specifically Chapter 13 Cave Search and Rescue) and NFPA 1670: Standard on Operations and Training for Technical Search and Rescue Incidents (specifically Chapter 13 Cave Search and Rescue) address knowledge, skills and abilities standards that may apply to Cave SAR
<b>PHYSICAL/MEDICAL FITNESS</b>	Same as Type 2, PLUS: Physically capable of performing search, rescue and recovery in cave swiftwater while utilizing appropriate PPE	Same as Type 3, PLUS: Physically capable of performing search, rescue and recovery in long and short vertical caves	1. Arduous 2. Meets minimum physical fitness standards in accordance with the AHJ's Job Related Physical Ability Test (JRPAT) 3. Maintains immunizations in accordance with current AHJ requirements 4. Is able to work while wearing appropriate PPE	1. The NIMS Guideline for the National Qualification System (NQS) defines Physical/Medical Fitness levels for NIMS positions 2. PPE is mission specific and may vary by working environment and it includes protective footwear, protective clothing for skin exposure, eye and ear protection, respirators, gloves and masks
<b>CURRENCY</b>	Same as Type 2	Same as Type 3	1. Annual refresher of related SAR skills and abilities in cave environments 2. Functions in this position during an operational incident, planned event, exercise, drill or simulation at least once every five years 3. Background checks as applicable law permits or requires	Provider must carry out and use any background checks as applicable law specifies. This may include: 1. A background check completed within past 12 months 2. A sex-offender registry check 3. A local, state and national criminal history



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PROFESSIONAL AND TECHNICAL LICENSES AND CERTIFICATIONS	Same as Type 2	Same as Type 3	1. Certification or completion of cave SAR training that relates to the job standards 2. AHJ-required Basic Life Support (BLS)-level medical care certification or recertification	The AHJ determines the emergency medical certifications the technician needs to meet the minimum criteria, which can include first aid, cardiopulmonary resuscitation (CPR) and BLS



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### NOTES

Nationally typed resources represent the minimum criteria for the associated category.

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### REFERENCES

1. FEMA, NIMS 508: Cave Search and Rescue (SAR) Team
2. FEMA, NIMS 509: Cave Search and Rescue (SAR) Team Leader
3. FEMA, National Incident Management System (NIMS), October 2017
4. FEMA, NIMS Guideline for the National Qualification System, November 2017
5. FEMA, National Response Framework, October 2019
6. ASTM International F2890-12: Standard Guide for Hazard Awareness for Search and Rescue Personnel, 2012
7. NFPA 1006: Standard for Technical Rescuer Professional Qualifications, 2021 (Chapter 13 Cave Search and Rescue)
8. NFPA 1670: Standard on Operations and Training for Technical Search and Rescue Incidents, 2017 (Chapter 13 Cave Search and Rescue)
9. NCRC, Student Preparation Guides, 2018