



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

SWIFTWATER/FLOOD SEARCH AND RESCUE TEAM

DESCRIPTION	The Swiftwater/Flood Search and Rescue (SAR) Team conducts search, rescue and recovery operations for humans and animals in swiftwater and swiftwater/flood environments.
RESOURCE CATEGORY	Search and Rescue
RESOURCE KIND	Team
OVERALL FUNCTION	<p>The Swiftwater/Flood SAR Team:</p> <ol style="list-style-type: none"> 1. Searches for and rescues individuals who may be injured or otherwise in need of medical attention 2. Provides emergency medical care, including Basic Life Support (BLS) 3. Provides animal rescue 4. Transports humans and animals to the nearest location for secondary land or air transport 5. Provides shore-based and boat-based water rescue for humans and animals 6. Supports helicopter rescue operations and urban SAR in water environments for humans and animals 7. Operates in environments with or without infrastructure, including environments with compromised access to roadways, utilities, transportation and medical facilities, and with limited access to shelter, food and water
COMPOSITION AND ORDERING SPECIFICATIONS	<ol style="list-style-type: none"> 1. Discuss logistics for deploying this team, such as working conditions, length of deployment, security, lodging, transportation and meals, prior to deployment. 2. Requestor and provider address certain issues and needs prior to deployment, including: <ol style="list-style-type: none"> a. Communications equipment that enables more than intra-team communications, such as programmable interoperable communications equipment with capabilities for command, logistics, military, air and so on b. Type of incident and operational environment, such as weather event, levy or dam breach or risk of hazardous materials (HAZMAT) contamination c. Additional specialized personnel necessary, such as advanced medical staff, animal SAR specialists, logistics specialists, advisors, helicopter support staff or support personnel for unique operating environments d. Additional transportation-related needs, including specific vehicles, boats, trailers, drivers, mechanics, equipment, supplies, fuel and so on e. Additional aviation support, such as helicopter or fixed wing aircraft f. Tools, hardware, software, ropes and survivor evacuation equipment beyond what is specified for this resource g. Any additional equipment, such as thermal imager, litter wheel or night vision goggles h. Potential for contaminated environments and the need for Personal Protective Equipment (PPE), respiratory protection, clothing and related equipment i. Level and duration of self-sufficiency necessary, including food, fuel and shelter 3. To ensure team has appropriate capabilities, requestor specifies whether night operations are necessary. 4. Requestor specifies the type of animal rescue involved, such as livestock, equine, companion, avian, non-domestic or exotic animals. 5. This team has the authority to transport rescued humans and animals using water-based means; requestor acquires secondary land or air transport separately. 6. Operations in SAR environments may be immediately dangerous to life and health (IDLH), per ASTM International (ASTM) F2890: Standard Guide for Hazard Awareness for Search and Rescue Personnel; requestor should consider the need for additional recognized capabilities or endorsements.

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
MINIMUM PERSONNEL PER TEAM	16	12	6	Not Specified



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COMPONENT	TYPE 1	TYPE 2	TYPE 3	NOTES
MANAGEMENT AND OVERSIGHT PERSONNEL PER TEAM	Same as Type 2	Same as Type 3, PLUS: 1 - National Incident Management System (NIMS) Swiftwater/Flood SAR Team Leader	1 - NIMS Swiftwater/Flood SAR Team Leader	Not Specified
SUPPORT PERSONNEL PER TEAM	Same as Type 2, PLUS: 1 - NIMS Swiftwater/Flood SAR Technician - Boat Operator 1 - NIMS Swiftwater/Flood SAR Technician - Boat Bowman 1 - NIMS Swiftwater/Flood SAR Technician with the following skill set: animal rescue specialist 1 - NIMS Swiftwater/Flood SAR Technician with the following skill set: communications specialist	3 - NIMS Swiftwater/Flood SAR Technician - Boat Operator 3 - NIMS Swiftwater/Flood SAR Technician - Boat Bowman 1 - NIMS Swiftwater/Flood SAR Technician with the following skill set: logistics specialist 3 - NIMS Swiftwater/Flood SAR Technician with the following skill set: NIMS Type 1 EMT	2 - NIMS Swiftwater/Flood SAR Technician - Boat Operator 2 - NIMS Swiftwater/Flood SAR Technician - Boat Bowman 1 - NIMS Swiftwater/Flood SAR Technician	1. For Type 3, one team member should also hold a NIMS Type 1 EMT qualification. 2. For Type 3, one team member should also have logistics management knowledge. 3. For Type 2, one team member should also hold a communications specialist qualification.
OPERATIONS CAPABILITIES PER TEAM	Same as Type 2, PLUS: Is capable of supporting and rescuing animals	Same as Type 3, PLUS: 1. Coordinates or operates in a large operations area using multiple swiftwater/flood rescue resources, including: a. Boat-based operations b. High-clearance vehicle operations c. Helicopter-supported operations 2. Performs technical rope rescue using technical rope systems	1. Performs the following water operations in water with a current of 1 knot or greater: a. Paddle and powerboat operations b. Offensive water rescue c. Flood response operations 2. Performs first aid, including cardiopulmonary resuscitation (CPR) and automated external defibrillator (AED) use 3. Requests rope rescue and aviation resources as necessary 4. Operates in HAZMAT-contaminated environments 5. Manages search operations 6. Provides medical care, including BLS 7. Performs low-angle rope rescue 8. Demonstrates self-sufficiency as the operational environment demands	Not Specified
MINIMUM ENVIRONMENT PER MISSION	Same as Type 2	Same as Type 3	Swiftwater/Flood	Not Specified
RECOVERY EQUIPMENT PER RESCUE BOAT	Same as Type 2	Same as Type 3	1. Litter/stokes basket or similar 2. Adjustable bridle 3. Patient harness system 4. Animal restraint devices, such as handling equipment, prods, lead ropes, halters, collars, leashes	Not Specified



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COMPONENT	TYPE 1	TYPE 2	TYPE 3	NOTES
WATER RESCUE EQUIPMENT PER RESCUE BOAT	Same as Type 2	Same as Type 3	<ol style="list-style-type: none"> 1. 3 - Throw bag 2. Throwable flotation device 3. Vessel support kit 4. Paddles 5. Swimmer rescue board 	Not Specified
DECONTAMINATION EQUIPMENT PER TEAM	Same as Type 2	Same as Type 3	<ol style="list-style-type: none"> 1. 2 - 25-foot garden hose 2. Garden hose wye valve 3. Decontamination equipment kit including, for example: <ol style="list-style-type: none"> a. 2.5-gallon pressure sprayer b. 5-gallon bucket c. Soap and bleach solution d. 40-gallon plastic work box e. 110-volt submersible pump f. 110-volt power washer 	Not Specified
GAS DETECTION EQUIPMENT PER TEAM	Same as Type 2	Multi-gas detector	Not Specified	Not Specified
GROUND TRANSPORTATION EQUIPMENT PER TEAM	Same as Type 2	Same as Type 3	<ol style="list-style-type: none"> 1. Vehicle(s) and trailer(s) capable of hauling personnel, equipment and boats 2. Tie-downs and strapping 	Not Specified
COMMUNICATIONS EQUIPMENT PER TEAM MEMBER	Same as Type 2	Same as Type 3	<ol style="list-style-type: none"> 1. Two-way handheld radio 2. Mobile phone (waterproof) 3. Chargers for devices 	<ol style="list-style-type: none"> 1. Keep communications within and among teams 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.
COMMUNICATIONS EQUIPMENT PER BOAT CREW	Same as Type 2	Same as Type 3	<ol style="list-style-type: none"> 1. Marine band radio (portable/waterproof) 2. Portable radio with ground-to-air capability 3. Handheld GPS unit 	Keep communications within and among teams consistent with NIFOG.



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COMPONENT	TYPE 1	TYPE 2	TYPE 3	NOTES
PERSONAL PROTECTIVE EQUIPMENT (PPE) EQUIPMENT PER TEAM MEMBER	Same as Type 2	Same as Type 3	<ol style="list-style-type: none"> 1. Swiftwater/flood SAR helmet 2. Headlamp and batteries 3. Eye and hearing protection 4. Respiratory protection 5. Uniform/protective clothing 6. Gloves 7. Footwear 8. Dry suit 9. Appropriate Personal Flotation Device (PFD) 10. Deployment/travel pack 11. Personal medical kit 12. Survival kit 13. Other necessary field packs or gear 	<ol style="list-style-type: none"> 1. The following regulation addresses PPE: Occupational Safety and Health Administration (OSHA) 29 Code of Federal Regulations (CFR) Part 1910.146: Permit-Required Confined Spaces. 2. Recommended rating for PFDs for swiftwater environments is 22 pounds of buoyancy or higher.
RESCUE EQUIPMENT PER TEAM	Same as Type 2	Same as Type 3	<ol style="list-style-type: none"> 1. Powered saw and appropriate fuel 2. Rope rescue kit 3. Pole for reaching (pike or equivalent) 4. Assorted hand tools, including Halligan bar, 8-lb. flathead ax, 10-lb. sledgehammer, hammers, drills and saws 	Not Specified
RESCUE BOAT EQUIPMENT PER TEAM	Same as Type 2, PLUS: 2 - Inflatable rescue boat or watercraft appropriate for type of water, equipped with supplies and fuel	Same as Type 3, PLUS: 1 - Inflatable rescue boat or watercraft appropriate for type of water, equipped with supplies and fuel	1 - Inflatable rescue boat or watercraft appropriate for type of water, equipped with supplies and fuel	Appropriate watercraft depends on mission needs and may include rafts in addition to powerboats.



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REFERENCES

1. FEMA, NIMS 509: Emergency Medical Technician
2. FEMA, NIMS 509: Swiftwater/Flood Search and Rescue Team Leader
3. FEMA, NIMS 509: Swiftwater/Flood Search and Rescue Technician
4. FEMA, NIMS 509: Swiftwater/Flood Search and Rescue Technician – Boat Operator
5. FEMA, NIMS 509: Swiftwater/Flood Search and Rescue Technician – Boat Bowman
6. FEMA, National Incident Management System (NIMS), October 2017
7. FEMA, National Response Framework, October 2019
8. ASTM International (ASTM) F2890: Standard Guide for Hazard Awareness for Search and Rescue Personnel, latest edition adopted
9. National Search and Rescue Committee (NSARC), Catastrophic Incident Search and Rescue (CISAR) Addendum to the National Search and Rescue Supplement to the International Aeronautical and Maritime Search and Rescue Manual, latest edition adopted
10. Occupational Safety and Health Administration (OSHA) 29 Code of Federal Regulations (CFR) Part 1910.146: Permit-Required Confined Spaces, latest edition adopted
11. U.S. Department of Homeland Security, Office of Emergency Communications (OEC), National Interoperability Field Operations Guide (NIFOG), latest edition adopted



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SWIFTWATER/FLOOD SEARCH AND RESCUE TEAM LEADER

RESOURCE CATEGORY	Search and Rescue
RESOURCE KIND	Personnel
OVERALL FUNCTION	The Swiftwater/Flood Search and Rescue (SAR) Team Leader provides direct supervision of the Swiftwater/Flood SAR Team.
COMPOSITION AND ORDERING SPECIFICATIONS	<ol style="list-style-type: none"> 1. This position can be ordered as a single resource or in conjunction with a NIMS typed team (Swiftwater/Flood SAR Team). 2. Discuss logistics for deploying this position, such as working conditions, length of deployment, security, lodging, transportation and meals, prior to deployment.

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	SINGLE TYPE	NOTES
DESCRIPTION	<p>The Swiftwater/Flood SAR Team Leader:</p> <ol style="list-style-type: none"> 1. Provides direct supervision of the Swiftwater/Flood SAR Team 2. Performs search, rescue and recovery activities in the following settings: <ol style="list-style-type: none"> a. Water environments including swiftwater and swiftwater/flood b. Shore, water and boat-based rescue operations c. Situations involving human or animal rescue 3. Provides medical care for self, team members and survivors, including Basic Life Support (BLS) for others 4. Operates within the Incident Command System (ICS), in a specialized position within a Swiftwater/Flood SAR Team 5. Provides assistance with logistics and planning at the leadership level 6. Ensures safety of self and team members 7. Coordinates with ground vehicles, watercraft and aircraft for support, transportation and evacuation 8. Operates in environments with and without infrastructure, including environments: <ol style="list-style-type: none"> a. Affected by disasters and terrorism b. With disrupted access to roadways, utilities and transportation c. With limited access to shelter, food and water 	Not Specified
EDUCATION	Not Specified	Not Specified



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COMPONENT	SINGLE TYPE	NOTES
TRAINING	Completion of the following: 1. Training outlined for the NIMS Swiftwater/Flood SAR Technician 2. ICS-300: Intermediate Incident Command System for Expanding Incidents 3. IS-703: National Incident Management System Resource Management 4. E0984: NIMS ICS All-Hazards Task Force/Strike Team Leader, or equivalent 5. National Weather Service (NWS), United States Geological Survey (USGS) and related warning and notification systems training specific to discipline, such as training on storms and flooding 6. National Fire Protection Association (NFPA), ASTM International (ASTM) or equivalent swiftwater SAR training program that the Authority Having Jurisdiction (AHJ) has verified and that covers the following position-specific skills and aptitudes: a. Operational leadership b. Awareness of canine search capabilities c. Managing active and passive search activities d. Managing incidents with multiple victims or animals e. Managing teams during emergency operations	Not Specified
EXPERIENCE	All knowledge, skills and abilities specified for the NIMS Swiftwater/Flood SAR Technician and the NIMS Swiftwater/Flood SAR Technician - Boat Operator, PLUS: Completion of Swiftwater/Flood SAR Team Leader Position Task Book (PTB), or equivalent AHJ documentation	NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications and NFPA 1670: Standard on Operations and Training for Technical Search and Rescue Incidents address additional knowledge, skills and abilities that apply to this position.
PHYSICAL/MEDICAL FITNESS	1. Arduous 2. Meets minimum physical fitness and swimming standards, in accordance with the AHJ's job-related physical ability test (JRPAT) 3. Maintains AHJ-determined physical fitness standards suitable for the environment and typing; NFPA 1582: Standard on Comprehensive Occupational Medical Program for Fire Departments meets or exceeds this physical fitness standard 4. Maintains immunizations in accordance with the U.S. Department of Health and Human Services Centers for Disease Control and Prevention's (CDC) immunization recommendations	The NIMS Guideline for the National Qualification System (NQS) defines physical/medical fitness levels for NIMS positions.
CURRENCY	1. Annual refresher of related SAR skills and abilities in water environments 2. Functions in this position during an operational incident, planned event, exercise, drill or simulation at least once every three years 3. Background checks as applicable law permits or requires 4. Keeps immunizations up to date and commensurate with mission assignment	Provider must carry out and use any background checks as applicable law specifies. This may include a background check completed within the past 12 months; a sex-offender registry check; and a local, state and national driving and criminal history.
PROFESSIONAL AND TECHNICAL LICENSES AND CERTIFICATIONS	AHJ-required BLS-level medical care certification or recertification	AHJ determines which emergency medical certifications meet the minimum criteria, which can include first aid, cardiopulmonary resuscitation (CPR) and BLS.



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REFERENCES

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2. FEMA, NIMS 509: Swiftwater/Flood Search and Rescue Technician
3. FEMA, NIMS 509: Swiftwater/Flood Search and Rescue Technician - Boat Operator
4. FEMA, National Incident Management System (NIMS), October 2017
5. FEMA, NIMS Guideline for the National Qualification System, November 2017
6. FEMA, National Response Framework, October 2019
7. ASTM International, ASTM F2890: Standard Guide for Hazard Awareness for Search and Rescue Personnel, latest edition adopted
8. National Fire Protection Association (NFPA) 1006: Standard for Technical Rescue Personnel Professional Qualifications, latest edition adopted
9. NFPA 1582: Standard on Comprehensive Occupational Medical Program for Fire Departments, latest edition adopted
10. NFPA 1670: Standard on Operations and Training for Technical Search and Rescue Incidents, latest edition adopted
11. NFPA 1983: Standard on Life Safety Rope and Equipment for Emergency Services, latest edition adopted
12. National Search and Rescue Committee (NSARC), Catastrophic Incident Search and Rescue (CISAR) Addendum to the National Search and Rescue Supplement to the International Aeronautical and Maritime Search and Rescue Manual, latest edition adopted
13. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention (CDC), Immunization Recommendations for Disaster Responders, United States, latest edition adopted



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SWIFTWATER/FLOOD SEARCH AND RESCUE TECHNICIAN - BOAT OPERATOR

RESOURCE CATEGORY	Search and Rescue
RESOURCE KIND	Personnel
OVERALL FUNCTION	The Swiftwater/Flood Search and Rescue (SAR) Technician - Boat Operator operates the boat, provides direction to the Swiftwater/Flood SAR Technician - Boat Bowman and is ultimately responsible for all aspects of boat operations.
COMPOSITION AND ORDERING SPECIFICATIONS	<ol style="list-style-type: none"> 1. This position can be ordered as a single resource or in conjunction with a NIMS typed team (Swiftwater/Flood SAR Team). 2. Discuss logistics for deploying this position, such as working conditions, length of deployment, security, lodging, transportation and meals, prior to deployment.

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	SINGLE TYPE	NOTES
DESCRIPTION	<p>The Swiftwater/Flood SAR Technician - Boat Operator:</p> <ol style="list-style-type: none"> 1. Operates the boat, provides direction to the Swiftwater/Flood SAR Technician - Boat Bowman and is ultimately responsible for all aspects of boat operations 2. Performs search, rescue and recovery activities in the following settings: <ol style="list-style-type: none"> a. Water environments including swiftwater and swiftwater/flood b. Shore, water and boat-based rescue operations c. Situations involving human or companion animal rescue 3. Provides medical care for self, team members and survivors, including Basic Life Support (BLS) for others 4. Operates within the Incident Command System (ICS), in a specialized position within the Swiftwater/Flood SAR Team 5. Ensures safety of self and team members 6. Coordinates with ground vehicles, watercraft and aircraft for support, transportation and evacuation 7. Operates in environments with and without infrastructure, including environments: <ol style="list-style-type: none"> a. Affected by disasters and terrorism b. With disrupted access to roadways, utilities and transportation c. With limited access to shelter, food and water 	Not Specified
EDUCATION	Not Specified	Not Specified



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COMPONENT	SINGLE TYPE	NOTES
TRAINING	<p>Completion of the following:</p> <ol style="list-style-type: none"> 1. Training outlined for the NIMS Swiftwater/Flood SAR Technician - Boat Bowman 2. National Fire Protection Association (NFPA), ASTM International (ASTM) or equivalent swiftwater SAR training program that the Authority Having Jurisdiction (AHJ) has verified and that covers the following position-specific skills and aptitudes: <ol style="list-style-type: none"> a. Job performance guidelines as outlined in NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications, or equivalent b. Night operations c. Use, care, inspection and maintenance of Personal Protective Equipment (PPE) tools, devices and equipment specific to this position d. Use of GPS, maps and compass; navigation on water e. Low-head dam rescue operations f. Boat handling skills in swiftwater/flood situations g. Maneuvering skills in swiftwater, including running with the flow, moving aft over ground, making power turns and closing/bearing away h. SAR operations from powered craft i. AHJ-approved boater safety course 	Not Specified
EXPERIENCE	Completion of Swiftwater/Flood SAR Technician - Boat Operator Position Task Book (PTB), or equivalent AHJ documentation	NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications and NFPA 1670: Standard on Operations and Training for Technical Search and Rescue Incidents address additional knowledge, skills and abilities that apply to this position.
PHYSICAL/MEDICAL FITNESS	<ol style="list-style-type: none"> 1. Arduous 2. Meets minimum physical fitness and swimming standards, in accordance with the AHJ's job-related physical ability test (JRPAT) 3. Maintains AHJ-determined physical fitness standards suitable for the environment and typing; NFPA 1582: Standard on Comprehensive Occupational Medical Program for Fire Departments meets or exceeds this physical fitness standard 4. Maintains immunizations in accordance with the U.S. Department of Health and Human Services Centers for Disease Control and Prevention's (CDC) immunization recommendations 	The NIMS Guideline for the National Qualification System (NQS) defines physical/medical fitness levels for NIMS positions.
CURRENCY	<ol style="list-style-type: none"> 1. Annual refresher of related SAR skills and abilities in water environments 2. Functions in this position during an operational incident, planned event, exercise, drill or simulation at least once every three years 3. Background checks as applicable law permits or requires 4. Keeps immunizations up to date and commensurate with mission assignment 	Provider must carry out and use any background checks as applicable law specifies. This may include a background check completed within the past 12 months; a sex-offender registry check; and a local, state and national driving and criminal history.
PROFESSIONAL AND TECHNICAL LICENSES AND CERTIFICATIONS	AHJ-required BLS-level medical care certification or recertification	AHJ determines which emergency medical certifications meet the minimum criteria, which can include first aid, cardiopulmonary resuscitation (CPR) and BLS.



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SWIFTWATER/FLOOD SEARCH AND RESCUE TECHNICIAN - BOAT BOWMAN

RESOURCE CATEGORY	Search and Rescue
RESOURCE KIND	Personnel
OVERALL FUNCTION	The Swiftwater/Flood Search and Rescue (SAR) Technician - Boat Bowman performs search, rescue and recovery operations in various water environments.
COMPOSITION AND ORDERING SPECIFICATIONS	<ol style="list-style-type: none"> 1. This position can be ordered as a single resource or in conjunction with a NIMS typed team (Swiftwater/Flood SAR Team). 2. Discuss logistics for deploying this position, such as working conditions, length of deployment, security, lodging, transportation and meals, prior to deployment.

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	SINGLE TYPE	NOTES
DESCRIPTION	<p>The Swiftwater/Flood SAR Technician - Boat Bowman:</p> <ol style="list-style-type: none"> 1. Performs in-water, paddle and powered boat operations under the Swiftwater/Flood SAR Technician - Boat Operator's direction 2. Performs search, rescue and recovery activities in the following settings: <ol style="list-style-type: none"> a. Water environments including swiftwater and swiftwater/flood b. Shore, water and boat-based rescue operations c. Situations involving human or companion animal rescue 3. Provides medical care for self, team members and survivors, including Basic Life Support (BLS) for others 4. Reports to the Swiftwater/Flood SAR Technician - Boat Operator 5. Operates within the Incident Command System (ICS), in a specialized position within the Swiftwater/Flood SAR Team 6. Ensures safety of self and team members 7. Coordinates with ground vehicles, watercraft and aircraft for support, transportation and evacuation 8. Operates in environments with and without infrastructure, including environments: <ol style="list-style-type: none"> a. Affected by disasters and terrorism b. With disrupted access to roadways, utilities and transportation c. With limited access to shelter, food and water 	Not Specified
EDUCATION	Not Specified	Not Specified



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<p>TRAINING</p>	<p>Completion of the following:</p> <ol style="list-style-type: none"> 1. Training outlined for the NIMS Swiftwater/Flood SAR Technician 2. Authority Having Jurisdiction (AHJ)-verified GPS land navigation course 3. Training in watercraft operations in water with a current of 1 knot or greater 4. Training in power and paddle craft use in aquatic environments 5. Training in boat support, such as maintenance, trailering and repair <p>Completion of a National Fire Protection Association (NFPA), ASTM International (ASTM) or equivalent swiftwater SAR training program that the AHJ has verified and that covers the following position-specific skills and aptitudes:</p> <ol style="list-style-type: none"> 1. Assisting the Swiftwater/Flood SAR Technician - Boat Operator with boat handling in swiftwater/flood situations: <ol style="list-style-type: none"> a. Identifying safe launching sites, escape routes and recovery sites b. Executing launch and recovery in swiftwater/flood settings c. Recognizing moving water characteristics and hazards d. Recognizing vessel limitations, hull damage and watertight integrity e. Anchoring f. Holding station and ferry gliding g. Using water features, including eddy currents and wave troughs h. Identifying hazards and operating in shallow water i. Maneuvering in swiftwater/flood situations, including running with the flow j. Making over ground, power turns k. Closing/bearing away l. Coming alongside moving vessels; understanding suction effects m. Demobilization/restoration procedures, including returning equipment and reporting faults and problems 2. Assisting the Swiftwater/Flood SAR Technician - Boat Operator with paddle boat handling: <ol style="list-style-type: none"> a. Using paddles to maneuver and control the craft in both still and moving water b. Capsize avoidance and recovery 3. Assisting the Swiftwater/Flood SAR Technician - Boat Operator with SAR operations from powered craft: <ol style="list-style-type: none"> a. Using safety equipment; communicating with team and other agencies b. Search techniques and incident management c. Methods of recovering personnel from water and techniques for lifting d. Extended-reach rescues e. Swimmer operations f. Use of loaded lines g. In-tandem boat operations—side by side, moving a line, survivor/crew/equipment transfer h. Towing and being towed, including length of tow lines, positioning, passing a <p>(Continued)</p>	<p>Not Specified</p>



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TRAINING	(Continued) tow line, using a bridle, towing alongside and casting off a tow line i. Approaching, righting and dealing with entrapments from capsized vessels j. Awareness of rescue from vehicles k. Rescues from shore l. Mass evacuation m. Helicopter rescue procedures n. Use of GPS, maps and compass o. Use of other specialized equipment; boat and motor support, such as maintenance, trailering and repair 4. Assisting the Swiftwater/Flood SAR Technician - Boat Operator with boat handling and SAR during darkness and reduced-visibility conditions: a. Applying skills in darkness and poor light b. Demonstrating ability to keep a proper lookout, and identifying lit and unlit hazards at night c. Conducting night SAR training operations	
EXPERIENCE	Completion of Swiftwater/Flood SAR Technician - Boat Bowman Position Task Book (PTB), or equivalent AHJ documentation	NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications and NFPA 1670: Standard on Operations and Training for Technical Search and Rescue Incidents address additional knowledge, skills and abilities that apply to this position.
PHYSICAL/MEDICAL FITNESS	1. Arduous 2. Meets minimum physical fitness and swimming standards, in accordance with the AHJ's job-related physical ability test (JRPAT) 3. Maintains AHJ-determined physical fitness standards suitable for the environment and typing; NFPA 1582: Standard on Comprehensive Occupational Medical Program for Fire Departments meets or exceeds this physical fitness standard 4. Maintains immunizations in accordance with the U.S. Department of Health and Human Services Centers for Disease Control and Prevention's (CDC) immunization recommendations	The NIMS Guideline for the National Qualification System (NQS) defines physical/medical fitness levels for NIMS positions.
CURRENCY	1. Annual refresher of related SAR skills and abilities in water environments 2. Functions in this position during an operational incident, planned event, exercise, drill or simulation at least once every three years 3. Background checks as applicable law permits or requires 4. Keeps immunizations up to date and commensurate with mission assignment	Provider must carry out and use any background checks as applicable law specifies. This may include a background check completed within the past 12 months; a sex-offender registry check; and a local, state and national driving and criminal history.
PROFESSIONAL AND TECHNICAL LICENSES AND CERTIFICATIONS	AHJ-required BLS-level medical care certification or recertification	AHJ determines which emergency medical certifications meet the minimum criteria, which can include first aid, cardiopulmonary resuscitation (CPR) and BLS.



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4. FEMA, National Incident Management System (NIMS), October 2017
5. FEMA, NIMS Guideline for the National Qualification System, November 2017
6. FEMA, National Response Framework, October 2019
7. ASTM International (ASTM) F2890: Standard Guide for Hazard Awareness for Search and Rescue Personnel, latest edition adopted
8. National Fire Protection Association (NFPA) 1006: Standard for Technical Rescue Personnel Professional Qualifications, latest edition adopted
9. NFPA 1582: Standard on Comprehensive Occupational Medical Program for Fire Departments, latest edition adopted
10. NFPA 1670: Standard on Operations and Training for Technical Search and Rescue Incidents, latest edition adopted
11. NFPA 1983: Standard on Life Safety Rope and Equipment for Emergency Services, latest edition adopted
12. National Search and Rescue Committee (NSARC), Catastrophic Incident Search and Rescue (CISAR) Addendum to the National Search and Rescue Supplement to the International Aeronautical and Maritime Search and Rescue Manual, latest edition adopted
13. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention (CDC), Immunization Recommendations for Disaster Responders, United States, latest edition adopted



SWIFTWATER/FLOOD SEARCH AND RESCUE TECHNICIAN

RESOURCE CATEGORY	Search and Rescue
RESOURCE KIND	Personnel
OVERALL FUNCTION	The Swiftwater/Flood Search and Rescue (SAR) Technician performs search, rescue and recovery operations in various water environments.
COMPOSITION AND ORDERING SPECIFICATIONS	<ol style="list-style-type: none"> 1. This position can be ordered as a single resource or in conjunction with a NIMS typed team (Swiftwater/Flood Search and Rescue Team). 2. Discuss logistics for deploying this position, such as working conditions, length of deployment, security, lodging, transportation and meals, prior to deployment.

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	SINGLE TYPE	NOTES
DESCRIPTION	<p>The Swiftwater/Flood SAR Technician:</p> <ol style="list-style-type: none"> 1. Performs search, rescue and recovery activities in the following settings: <ol style="list-style-type: none"> a. Water environments including swiftwater and swiftwater/flood b. Shore, water and boat-based rescue operations c. Situations involving human or animal rescue 2. Provides medical care for self, team members and survivors, including Basic Life Support (BLS) for others 3. Reports to a Swiftwater/Flood SAR Team Leader 4. Operates within the Incident Command System (ICS), in an entry-level position within the Swiftwater/Flood SAR Team 5. Ensures safety of self and team members 6. Provides basic ground support for helicopter operations 7. Coordinates with ground vehicles, watercraft and aircraft for support, transportation and evacuation 8. Operates in environments with and without infrastructure, including environments: <ol style="list-style-type: none"> a. Affected by disasters and terrorism b. With disrupted access to roadways, utilities and transportation c. With limited access to shelter, food and water 	Basic ground support for helicopter operations includes safety awareness and Landing Zone (LZ) knowledge.
EDUCATION	Not Specified	Not Specified



Position Qualification for Mass Search and Rescue Operations
Search and Rescue

COMPONENT	SINGLE TYPE	NOTES
<p>TRAINING</p>	<p>Completion of the following:</p> <ol style="list-style-type: none"> 1. Training outlined for the NIMS Type 2 Land SAR Technician 2. Training in water operations in water with a current of 1 knot or greater 3. National Fire Protection Association (NFPA), ASTM International (ASTM) or equivalent swiftwater SAR training program that the Authority Having Jurisdiction (AHJ) has verified and that covers the following position-specific skills and aptitudes: <ol style="list-style-type: none"> a. Nighttime water SAR operations b. Search methods in swiftwater and swiftwater/flood environments c. Water rescue scene management and dynamic risk assessment d. Basic boat handling with paddle and rope systems e. Specialized rescue equipment f. Extrication techniques g. Animal hazards and safety protocols h. Use, care, inspection and maintenance of related Personal Protective Equipment (PPE) tools, devices and equipment specific to this position 	<p>Not Specified</p>
<p>EXPERIENCE</p>	<ol style="list-style-type: none"> 1. Completion of Swiftwater/Flood SAR Technician Position Task Book (PTB), or equivalent AHJ documentation, including the following tasks: <ol style="list-style-type: none"> a. Demonstrate a working knowledge of hydrology and associated hazards, including the recognition of water features and their impact b. Understand search procedures in the water environment c. Demonstrate swimming and maneuvering skills d. Understand ferry angle concepts e. Understand and apply relevant rescue techniques, including Talk, Reach, Throw, Row, Go/Tow and Helicopter f. Demonstrate rigging and operating of rope systems g. Demonstrate awareness of flooding and associated hazards and their impact on medical problems associated with water h. Identify and explain the hazards and implications of entrapment i. Understand characteristics, medical issues, extrication techniques and contamination issues for locks, sluices, irrigation ditches and low-head dams j. Understand characteristics, design/hydrology and specific rescue techniques for vehicles and objects (strainers) in water k. Demonstrate knowledge of behavior, hydrology, access and stabilization techniques related to helicopters l. Identify and explain the hazards and difficulties of working in darkness and reduced-visibility conditions, and explain how to apply suitable control measures 2. Ability to carry out the following: <ol style="list-style-type: none"> a. Rescue procedures in a swiftwater and swiftwater/flood environment during day and night operations b. Rope rescue c. Water rescue 	<p>NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications and NFPA 1670: Standard on Operations and Training for Technical Search and Rescue Incidents address additional knowledge, skills and abilities that apply to this position.</p>



Position Qualification for Mass Search and Rescue Operations
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COMPONENT	SINGLE TYPE	NOTES
PHYSICAL/MEDICAL FITNESS	<ol style="list-style-type: none"> 1. Arduous 2. Meets minimum physical fitness and swimming standards, in accordance with the AHJ's job-related physical ability test (JRPAT) 3. Maintains AHJ-determined physical fitness standards suitable for the environment and typing; NFPA 1582: Standard on Comprehensive Occupational Medical Program for Fire Departments meets or exceeds this physical fitness standard 4. Maintains immunizations in accordance with the U.S. Department of Health and Human Services Centers for Disease Control and Prevention's (CDC) immunization recommendations 	The NIMS Guideline for the National Qualification System (NQS) defines physical/medical fitness levels for NIMS positions.
CURRENCY	<ol style="list-style-type: none"> 1. Annual refresher of related SAR skills and abilities in water environments 2. Functions in this position during an operational incident, planned event, exercise, drill or simulation at least once every three years 3. Background checks as applicable law permits or requires 4. Keeps immunizations up to date and commensurate with mission assignment 	Provider must carry out and use any background checks as applicable law specifies. This may include a background check completed within the past 12 months; a sex-offender registry check; and a local, state and national driving and criminal history.
PROFESSIONAL AND TECHNICAL LICENSES AND CERTIFICATIONS	AHJ-required BLS-level medical care certification or recertification	AHJ determines which emergency medical certifications meet the minimum criteria, which could include first aid, cardiopulmonary resuscitation (CPR) and BLS.



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NOTES

1. Nationally typed resources represent the minimum criteria for the associated component and capability.
2. This document contains references to non-federal resources and materials. Such references do not constitute an endorsement by the U.S. government, or any of its employees, of the information or content which a non-federal resource or material provides.

REFERENCES

1. FEMA, NIMS 508: Swiftwater/Flood Search and Rescue Team
2. FEMA, NIMS 509: Land Search and Rescue Technician
3. FEMA, NIMS 509: Swiftwater/Flood Search and Rescue Team Leader
4. FEMA, National Incident Management System (NIMS), October 2017
5. FEMA, NIMS Guideline for the National Qualification System, November 2017
6. FEMA, National Response Framework, October 2019
7. ASTM International (ASTM) F2890: Standard Guide for Hazard Awareness for Search and Rescue Personnel, latest edition adopted
8. National Fire Protection Association (NFPA) 1006: Standard for Technical Rescue Personnel Professional Qualifications, latest edition adopted
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