

## SWIFTWATER/FLOOD SEARCH AND RESCUE TEAM

<b>DESCRIPTION</b>	The Swiftwater/Flood Search and Rescue (SAR) Team conducts search, rescue and recovery operations for humans and animals in swiftwater and swiftwater/flood environments.
<b>RESOURCE CATEGORY</b>	Search and Rescue
<b>RESOURCE KIND</b>	Team
<b>OVERALL FUNCTION</b>	<p>The Swiftwater/Flood SAR Team:</p> <ol style="list-style-type: none"> <li>1. Searches for and rescues individuals who may be injured or otherwise in need of medical attention</li> <li>2. Provides emergency medical care, including Basic Life Support (BLS)</li> <li>3. Provides animal rescue</li> <li>4. Transports humans and animals to the nearest location for secondary land or air transport</li> <li>5. Provides shore-based and boat-based water rescue for humans and animals</li> <li>6. Supports helicopter rescue operations and urban SAR in water environments for humans and animals</li> <li>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</li> </ol>
<b>COMPOSITION AND ORDERING SPECIFICATIONS</b>	<ol style="list-style-type: none"> <li>1. Discuss logistics for deploying this team, such as working conditions, length of deployment, security, lodging, transportation and meals, prior to deployment.</li> <li>2. Requestor and provider address certain issues and needs prior to deployment, including: <ol style="list-style-type: none"> <li>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</li> <li>b. Type of incident and operational environment, such as weather event, levy or dam breach or risk of hazardous materials (HAZMAT) contamination</li> <li>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</li> <li>d. Additional transportation-related needs, including specific vehicles, boats, trailers, drivers, mechanics, equipment, supplies, fuel and so on</li> <li>e. Additional aviation support, such as helicopter or fixed wing aircraft</li> <li>f. Tools, hardware, software, ropes and survivor evacuation equipment beyond what is specified for this resource</li> <li>g. Any additional equipment, such as thermal imager, litter wheel or night vision goggles</li> <li>h. Potential for contaminated environments and the need for Personal Protective Equipment (PPE), respiratory protection, clothing and related equipment</li> <li>i. Level and duration of self-sufficiency necessary, including food, fuel and shelter</li> </ol> </li> <li>3. To ensure team has appropriate capabilities, requestor specifies whether night operations are necessary.</li> <li>4. Requestor specifies the type of animal rescue involved, such as livestock, equine, companion, avian, non-domestic or exotic animals.</li> <li>5. This team has the authority to transport rescued humans and animals using water-based means; requestor acquires secondary land or air transport separately.</li> <li>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.</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
<b>MINIMUM PERSONNEL PER TEAM</b>	16	12	6	Not Specified

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

COMPONENT	TYPE 1	TYPE 2	TYPE 3	NOTES
<b>MANAGEMENT AND OVERSIGHT PERSONNEL PER TEAM</b>	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
<b>SUPPORT PERSONNEL PER TEAM</b>	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.
<b>OPERATIONS CAPABILITY PER TEAM</b>	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
<b>MINIMUM ENVIRONMENT PER MISSION</b>	Same as Type 2	Same as Type 3	Swiftwater/Flood	Not Specified
<b>RECOVERY EQUIPMENT PER RESCUE BOAT</b>	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

Superseded

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

Superseded

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

COMPONENT	TYPE 1	TYPE 2	TYPE 3	NOTES
<b>PERSONAL PROTECTIVE EQUIPMENT (PPE) EQUIPMENT PER TEAM MEMBER</b>	Same as Type 2	Same as Type 3	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	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.
<b>RESCUE EQUIPMENT PER TEAM</b>	Same as Type 2	Same as Type 3	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
<b>RESCUE BOAT EQUIPMENT PER TEAM</b>	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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## 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 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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