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	The Swiftwater/Flood SAR team: 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	1. Requestor and provider address certain issues and needs prior to deployment, including:
	    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, 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. Potential for contaminated environments and the need for Personal Protective Equipment (PPE), respiratory protection, clothing, and related equipment
	    h. Logistics support needs for this resource, such as security and force protection, lodging, transportation, meals, and so on
	    i. Level and duration of self-sufficiency necessary, including food, fuel, and shelter
	 2. Requestor specifies whether night operations are necessary to ensure team has appropriate capabilities
	 3. Requestor identifies any additional equipment (such as thermal imager, litter wheel, night vision goggles) and makes arrangements with provider
	 4. Requestor specifies the type of animal rescue, such as livestock, equine, companion, avian, non-domestic, or exotic animals
	 5. Requestor specifies additional specialized equipment, such as hardware, software, ropes, and survivor evacuation devices
	 6. This team has the authority to transport rescued humans and animals using water-based means; requestor acquires secondary land or air transport separately
	 7. 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	NO TYPE 4	NOTES
MINIMUM PERSONNEL PER TEAM	16	12	6	No Type 4	Not Specified
MANAGEMENT AND OVERSIGHT PERSONNEL PER TEAM	2 – National Incident Management System (NIMS) Swiftwater/Flood SAR Team Leader	2 – NIMS Swiftwater/Flood SAR Team Leader	1 – NIMS Swiftwater/Flood SAR Team Leader	No Type 4	Not Specified
SUPPORT PERSONNEL PER TEAM	4 – NIMS Swiftwater/Flood SAR Technician – Boat Operator 4 – 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: Logistics Specialist 1 – NIMS Swiftwater/Flood SAR Technician with the following skill set: Communications Specialist 3 – NIMS Swiftwater/Flood SAR Technician with the following skill set: NIMS Type 1 Emergency Medical Technician (EMT)	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	No Type 4	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 CAPABILITY 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-based operations
			1. Performs the following water operations in water with a current greater than 1 knot:
			  a. Paddle and powerboat operations
			  b. Offensive water rescue
			  c. Flood response operations
			2. Performs first aid, including cardiopulmonary resuscitation (CPR) and
				No Type 4	Not Specified

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COMPONENT	TYPE 1	TYPE 2	TYPE 3	NO TYPE 4	NOTES
		2. Performs technical rope rescue using technical rope systems, including high line	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		
MINIMUM ENVIRONMENT PER MISSION	Same as Type 2	Same as Type 3	Swiftwater/flood	No Type 4	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	No Type 4	Not Specified
WATER RESCUE EQUIPMENT PER RESCUE BOAT	Same as Type 2	Same as Type 3	1. 3 – Throw bag 2. Throwable flotation device 3. Vessel support kit 4. Paddles 5. Swimmer rescue board	No Type 4	Not Specified

DECONTAMINATION EQUIPMENT PER TEAM	Same as Type 2	Same as Type 3	1. 2 – 25-foot garden hose
			2. Garden hose wye valve
			3. Decontamination equipment kit including, for example:
			   a. 2.5-gallon pressure sprayer
			   b. 5-gallon bucket
				No Type 4	Not Specified

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COMPONENT	TYPE 1	TYPE 2	TYPE 3	NO TYPE 4	NOTES
			c. Soap and bleach solution d. 40-gallon plastic work box e. 110-volt submersible pump f. 110-volt power washer		
GAS DETECTION EQUIPMENT PER TEAM	Same as Type 2	Multi-gas detector	Not Specified	No Type 4	Not Specified
GROUND TRANSPORTATION EQUIPMENT PER TEAM	Same as Type 2	Same as Type 3	1. Vehicle(s) and trailer(s) capable of hauling personnel, equipment, and boats 2. Tie downs and strapping	No Type 4	Not Specified
COMMUNICATIONS EQUIPMENT PER TEAM MEMBER	Same as Type 2	Same as Type 3	1. Two-way handheld radio 2. Mobile phone (waterproof) 3. Chargers for devices	No Type 4	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	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.
PERSONAL PROTECTIVE EQUIPMENT (PPE) PER TEAM MEMBER	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	No Type 4	1. The following standards address PPE: American National Standards Institute (ANSI) Z359: Fall Protection Code; National Fire Protection Association (NFPA) 1983: Standard on Life Safety Rope and

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COMPONENT	TYPE 1	TYPE 2	TYPE 3	NO TYPE 4	NOTES
			9. Appropriate Personal Flotation Device (PFD) 10. Deployment/travel pack 11. Personal medical kit 12. Survival kit 13. Other necessary field packs or gear		Equipment for Emergency Services. 2. The following regulation addresses PPE: Occupational Safety and Health Administration (OSHA) 29 Code of Federal Regulations (CFR) Part 1910.146: Permit-Required Confined Spaces. 3. 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	1. Gasoline-powered saw and 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	No Type 4	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	No Type 4	Not Specified

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, NIMS 509: Swiftwater/Flood Search and Rescue Technician – Animal Rescue Specialist

7. FEMA, NIMS 509: Swiftwater/Flood Search and Rescue Technician – Logistics Specialist

8. FEMA, NIMS 509: Swiftwater/Flood Search and Rescue Technician – Medical Specialist

9. American National Standards Institute/American Society of Safety Professionals (ANSI/ASSP) Z359.1: Safety Requirements for Personal Fall Arrest Systems, Subsystems & Components, latest edition adopted

10. ASTM International (ASTM) F2890: Standard Guide for Hazard Awareness for Search and Rescue Personnel, latest edition adopted

11. National Search and Rescue Committee, 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

12. National Fire Protection Association (NFPA) 1006: Standard for Technical Rescue Personnel Professional Qualifications, latest edition adopted

13. NFPA 1670: Standard on Operations and Training for Technical Search and Rescue Incidents, latest edition adopted

14. NFPA 1983: Standard on Life Safety Rope and Equipment for Emergency Services, latest edition adopted

15. Occupational Safety and Health Administration (OSHA) 29 Code of Federal Regulations (CFR) Part 1910.146: Permit-Required Confined Spaces, latest edition adopted

16. U.S. Department of Homeland Security, Office of Emergency Communications (OEC), National Interoperability Field Operations Guide (NIFOG), latest edition adopted