

SEARCH AND RESCUE AIRCRAFT – HELICOPTER/ROTARY WING

DESCRIPTION	The Search and Rescue (SAR) Aircraft - Helicopter/Rotary Wing resource is equipped to conduct helicopter-based search, rescue, and recovery operations.
RESOURCE CATEGORY	Search and Rescue
RESOURCE KIND	Aircraft
OVERALL FUNCTION	<ol style="list-style-type: none"> 1. Provides air SAR using rotary wing aircraft during day or night under Visual Meteorological Conditions (VMC) 2. Completes SAR personnel insertion or extraction and SAR equipment transport 3. Performs air SAR that includes technical rescues, hoist or short-haul techniques, specialized helicopter operations in all water environments such as swiftwater, and evacuation 4. Provides medical care that includes Basic Life Support (BLS) and transport to Advanced Life Support (ALS) providers 5. Operates in environments with or without infrastructure, including those with compromised access to roadways, utilities, transportation, or medical facilities, and with limited availability to shelter, food, and water
COMPOSITION AND ORDERING SPECIFICATIONS	<ol style="list-style-type: none"> 1. Discuss additional requirements prior to deployment, including: <ol style="list-style-type: none"> a. Communications beyond the resource's intra-team communications, such as command, logistics, aircraft, and military b. Additional specialized personnel, such as advanced medical personnel, animal SAR personnel, or helicopter support personnel c. Any contaminated environments and related personal protective equipment (PPE), respiratory protection, clothing, and equipment d. Resource logistics support, such as security or force protection, lodging, transportation, and meals 2. Deploys with a full complement of personnel, unless requested otherwise, and the requestor provides a Flight Observer 3. Hours per shift and duration must comport with Federal Aviation Administration (FAA) regulations 4. Personnel numbers listed reflect those reasonably necessary to conduct operations safely; agreement between the requestor and provider can adapt team positions within the personnel numbers 5. The requestor should base the number of requested aircraft on the nature and magnitude of mission, logistics, intensity of demand, and duration of service activity 6. The requestor determines and specifies mission operations under Instrument Flight Rules (IFR) or using night vision goggles (NVG) 7. The requestor should specify special environmental capabilities and load needs during ordering

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	TYPE 4	NOTES
CAPABILITY PER AIRCRAFT FUNCTIONS	Same as Type 2, PLUS: <ol style="list-style-type: none"> 1. Multi-engine 2. Capability to provide medical attention for at least two persons being transported 	Same as Type 3, PLUS: <ol style="list-style-type: none"> 1. Night operations 2. IFR capable 3. NVG capable 	Same as Type 4	Same as Type 5, PLUS: <ol style="list-style-type: none"> 1. Rescue capability 2. Ability to transport at least two persons, one of which can be in a litter 	Only crew members with certification in accordance with Authority Having Jurisdiction (AHJ) requirements may administer medical care, including BLS.

Superseded

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

COMPONENT	TYPE 1	TYPE 2	TYPE 3	TYPE 4	NOTES
EQUIPMENT PER AIRCRAFT COMMUNICATIONS	Same as Type 2, PLUS: Dual VHF aviation radios	Same as Type 3	Same as Type 4	Same as Type 5	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.
EQUIPMENT PER AIRCRAFT OPERATIONS	Same as Type 2	Same as Type 3, PLUS: 1. NVG 2. IFR equipment	Same as Type 4, PLUS: Access, rescue, and recovery equipment, including: 1. Air rescue litter 2. Straps 3. Baskets 4. Human cargo hoist 5. Dual external hooks or hook and harness/ backup 6. BLS level care and equipment	Same as Type 5, PLUS: 1. Human cargo dual external hooks or hook and harness/ backup 2. One litter or ability to carry one person flat	Recommend for daylight search only unless the aircraft is equipped with a thermal imager, search light, or NVG certified/capable aircraft for night searches.
EQUIPMENT PER TEAM MEMBER PPE	Same as Type 2	Same as Type 3	Same as Type 4	Same as Type 5	PPE should meet requirements in 29 Code of Federal Regulations (CFR) Part 1910.134 Respiratory Protection and 29 CFR Part 1910.1030 Bloodborne Pathogens.
PERSONNEL PER TEAM MANAGEMENT AND OVERSIGHT	Same as Type 2	Same as Type 3	Same as Type 4	Same as Type 5	Pilot should have training for NVG use and have a rating to operate in IFR conditions.
PERSONNEL PER TEAM MINIMUM	5	4	Same as Type 4	3	Not Specified
PERSONNEL PER TEAM OPERATIONS AND SUPPORT	Same as Type 2, PLUS: 1 - NIMS Type 1 Emergency Medical Technician (EMT)	Same as Type 3, PLUS: 1 - NIMS Type 1 Helicopter SAR Crew Chief	Same as Type 4	Same as Type 5, PLUS: 1 - NIMS Type 1 Helicopter SAR Technician	1. Crew Chief and Technician should have training for NVG operations. 2. Flight Observer is not a NIMS typed support position and the requestor should acquire locally. The position is not a part of the crew and does not deploy with the aircraft.

Superseded

COMPONENT	TYPE 5	NOTES
CAPABILITY PER AIRCRAFT FUNCTIONS	<ol style="list-style-type: none"> 1. Search only 2. Aircraft may be multi- or single-engine 3. Operates under Visual Flight Rules (VFR) 4. Day operations only 	Only crew members with certification in accordance with Authority Having Jurisdiction (AHJ) requirements may administer medical care, including BLS.
EQUIPMENT PER AIRCRAFT COMMUNICATIONS	<ol style="list-style-type: none"> 1. Two-way handheld radios 2. Portable radios with ground to air capability 3. Single Very High Frequency (VHF) aviation radio 4. Programmable VHF/Ultra High Frequency (UHF) P25 Radio for air-to-ground communications 5. Marine band radio 6. Electronic direction finder 7. Mobile phones and waterproof bag 8. Handi-mikes or ear/headsets 	<ol style="list-style-type: none"> 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.
EQUIPMENT PER AIRCRAFT OPERATIONS	<ol style="list-style-type: none"> 1. Aviation Global Positioning System (GPS) equipped 2. Equipment suitable for day operations 3. Portable Basic First Aid equipment 4. Gyro-stabilized handheld binoculars 5. Spare batteries 	Recommend for daylight search only unless the aircraft is equipped with a thermal imager, search light, or NVG certified/capable aircraft for night searches.
EQUIPMENT PER TEAM MEMBER PPE	<p>Minimum PPE, including:</p> <ol style="list-style-type: none"> 1. Aviation Life Support Equipment (ALSE) in accordance with AHJ definitions and commensurate with the operating environment 2. Flight helmet and other helmets 3. Headlamps 4. Eye and hearing protection 5. Respiratory protection 6. Uniforms, gloves, and other protective clothing 	PPE should meet requirements in 29 Code of Federal Regulations (CFR) Part 1910.134 Respiratory Protection and 29 CFR Part 1910.1030 Bloodborne Pathogens.

Superseded

COMPONENT	TYPE 5	NOTES
PERSONNEL PER TEAM MANAGEMENT AND OVERSIGHT	1 - National Incident Management System (NIMS) Type 1 Helicopter SAR Pilot	Pilot should have training for NVG use and have a rating to operate in IFR conditions.
PERSONNEL PER TEAM MINIMUM	2	Not Specified
PERSONNEL PER TEAM OPERATIONS AND SUPPORT	1 - Flight Observer	1. Crew Chief and Technician should have training for NVG operations. 2. Flight Observer is not a NIMS typed support position and the requestor should acquire locally. The position is not a part of the crew and does not deploy with the aircraft.

Superseded

NOTES

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

REFERENCES

1. FEMA, NIMS 509: Helicopter Search and Rescue Pilot
2. FEMA, NIMS 509: Helicopter Search and Rescue Crew Chief
3. FEMA, NIMS 509: Helicopter Search and Rescue Technician
4. FEMA, NIMS 509: Emergency Medical Technician
5. American National Standards Institute/American Society of Safety Engineers (ANSI/ASSE) Z359.1-2007 Safety Requirements for Personal Fall Arrest Systems, Subsystems & Components
6. ASTM International (ASTM) F2209-14: Standard Guide for Training of Level I Land Search Team Member
7. Firefighting Resources of Southern California Organized for Potential Emergencies (FIRESCOPE) Field Operations Guide ICS 420-1, December 2012
8. National Fire Protection Association (NFPA) 1006: Standard for Technical Rescuer Professional Qualifications, 2013
9. NFPA 1582: Standard on Comprehensive Occupational Medical Program for Fire Departments, 2013
10. NFPA 1670: Standard on Operations and Training for Technical Search and Rescue Incidents, 2014
11. NFPA 1983: Standard on Life Safety Rope and Equipment for Emergency Services, 2012
12. 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, v. 3, June 2012
13. NWCG, Interagency Helicopter Operations Guide (IHOG), PMS 510, October 2013
14. Federal Aviation Administration (FAA) 14 Code of Federal Regulations (CFR) Part 139.319: Aircraft rescue and firefighting: Operational requirements
15. Occupational Health and Safety Administration (OSHA) 29 CFR Part 1910.120: Hazardous Waste Operations and Emergency Response
16. OSHA 29 CFR Part 1910.134: Respiratory Protection
17. OSHA 29 CFR Part 1910.1030: Bloodborne Pathogens
18. U.S. Department of Homeland Security, Office of Emergency Communications (OEC), National Interoperability Field Operations Guide (NIFOG), v. 1.4, January 2014
19. U.S. Department of the Interior (DOI), Helicopter Short-Haul Handbook (351 DM 1), February 2010

Superseded