



**FEMA**

# Resource Typing Definitions - I

First 60 Resources



January 2004

# **Emergency Management Resources**



RESOURCE: DONATIONS MANAGEMENT PERSONNEL/TEAM						
<b>CATEGORY :</b>	Volunteers and Donations (ESF 15); Other Command Support/Management Functions			<b>KIND:</b>	Team	
<b>MINIMUM CAPABILITIES:</b>		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
<b>Component</b>	<b>Metric</b>					
Donations Team Leader	Size of Event/Level of Expertise Needed; Training/Experience	X (See capabilities description in Comments section)				
Donations Specialist (Type II Team may be referred to as Donations Strike Team)	Training/Experience	X (See capabilities description in Comments section)	X (See capabilities description in Comments section)			
<b>COMMENTS:</b>	<p>A donations management team consists of one or two persons trained and experienced in all aspects of donations management. The team will be deployed to a disaster-affected jurisdiction after impact to assist in the organization and operations of local or state donations management in support of the affected jurisdiction.</p> <p>Donations Specialist/Team Leader</p> <p>Possesses an overall knowledge of all aspects of donations management at all levels. Experienced in actual donations operations. Capable of providing advice on Voluntary Agency/Donations Coordination Team (DCT) coordination. Assists the NGOs, State, and local government in the coordination of joint activities to support donations management operations. Capable of assisting the jurisdiction (if required) in the establishment of a multiagency warehouse, integration of donated goods and services into the overall disaster supply system, and recommends the establishment of local distribution centers, as necessary.</p> <p>Donations Specialist</p> <p>Possesses an overall knowledge of all aspects of donations management at all levels. Capable of assisting in the physical establishment of the Donations Coordination Center (DCC) and the Phone Bank (if required). This includes facility, data management, and internal operations. Capable of assisting the NGOs, State, and local government in the coordination of joint activities to support donations management operations. Capable of assisting the jurisdiction (if required) in the establishment of a multiagency warehouse, integration of donated goods and services into the overall disaster supply system, and recommends the establishment of local distribution centers, as necessary.</p>					



RESOURCE: EVACUATION LIAISON TEAM (ELT)						
CATEGORY :	Serves as an extension of ESF 1; Transportation (ESF 1)			KIND:	Team	
Components and Capabilities: Variations may exist according to level of experience among team members.						
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Emergency Management Specialist	Training, Certification (where available), and Experience Scalable based on number of specialists needed	X				
Information Technology Specialist		X				
Department of Transportation Specialist		X				
Deployment Equipment		<ul style="list-style-type: none"><li>Two laptop computers with pre-loaded Internet access programs; HURREVAC loaded (with requesting community clearance times in EVACDATA folder in HURREVAC; Internet browser (Explorer preferred); access to ETIS (obtain appropriate state password upon arrival from the local EOC)</li><li>Two telephones (landline or cellular)</li></ul>				
COMMENTS:	Provides support in state and local emergency response efforts by compiling, analyzing, and disseminating traffic-related information that can be used to facilitate the rapid, efficient, and safe evacuation of threatened populations. Primarily operates in the state or local EOC as an extension of ESF 1—Transportation. Source: ELT draft profile, submitted by State of Florida, Division of Emergency Management, April 2003					



**RESOURCE: EOC MANAGEMENT SUPPORT TEAM**

<b>CATEGORY :</b>		Other: Command & Operations Support/Management Functions		<b>KIND:</b>		Team	
<b>Components and Capabilities:</b> <i>An Incident Commander is an optional member of the team, since it is assumed that an incident command/lead has already been established under which these support functions will operate. Refer also to "Incident Management Team."</i>							
<b>MINIMUM CAPABILITIES:</b>		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER	
<b>Component</b>	<b>Metric</b>						
Information Officer	See Comments for Metrics	Yes	Yes	Yes	Yes		
Liaison Officer		Yes	Yes	Yes	Yes		
Safety Officer							
Incident Commander (optional)		Optional	Optional	Optional			
Administrative Aide			Yes				
<b>COMMENTS :</b>		<p>Provides support to an Incident Commander. Typically comprised of an Information Officer, Liaison Officer, Safety Officer, and Administrative Aide, although some functions may be optional.</p> <p>Information Officer: The Information Officer is responsible for developing and releasing information about the incident to the news media, to incident personnel, and to other appropriate agencies and organizations. Only one Information Officer will be assigned for each incident, including incidents operating under Unified Command and multijurisdiction incidents. The Information Officer may have assistants as necessary, and the assistants may also represent assisting agencies or jurisdictions.</p> <p>Liaison Officer: Incidents that are multijurisdictional, or have several agencies involved, may require the establishment of the Liaison Officer position on the Command Staff. Only one Liaison Officer will be assigned for each incident, including incidents operating under Unified Command and multijurisdiction incidents. The Liaison Officer may have assistants as necessary, and the assistants may also represent assisting agencies or jurisdictions. The Liaison Officer is the contact for the personnel assigned to the incident by assisting or cooperating agencies. These are personnel other than those on direct tactical assignments or those involved in a Unified Command.</p> <p>Safety Officer: The Safety Officer's function is to develop and recommend measures for assuring personnel safety, and to assess and/or anticipate hazardous and unsafe situations. Only one Safety Officer will be assigned for each incident. The Safety Officer may have assistants as necessary, and the assistants may also represent assisting agencies or jurisdictions. Safety assistants may have specific responsibilities such as air operations, hazardous materials, etc.</p> <p>Administrative Aide: The Administrative Aide's function is to provide administrative/secretarial support to the EOC Management Support Team. Responsibilities include keeping official minutes of team meetings, receiving phone calls to the EOC, making meeting arrangements, and other duties as needed.</p> <p>Source: FIREScope, California Department of Emergency Services, 2001; Phoenix Fireground, City of Phoenix Fire Department, 2002</p>					



RESOURCE: INCIDENT MANAGEMENT TEAMS						
CATEGORY :	Encompasses all Functions; Other—Command & Operations Support/Management Functions			KIND:	Team	
Components and Capabilities: Variations may also be based on level and type of disaster experience. (i.e., local event experience vs. national event experience).						
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Incident Commander	See Comments for Metrics	Yes	Yes	Yes	Yes	
Operations Section Chief		Yes	Yes	Yes	Yes	
Planning Section Chief		Yes	Yes	Yes	Yes	
Logistics Section Chief		Yes	Yes	Yes	Yes	
Finance/ Admin Section Chief		Yes	Yes	Yes	Yes	
Specialized Functions (i.e., HazMat, Insurance, etc.)		Yes	Optional	Optional	Optional	



RESOURCE: INCIDENT MANAGEMENT TEAMS						
CATEGORY :	Encompasses all Functions; Other—Command & Operations Support/Management Functions			KIND:	Team	
Components and Capabilities: Variations may also be based on level and type of disaster experience. (i.e., local event experience vs. national event experience).						
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
COMMENTS:	<p>A command team comprised of the incident commander, appropriate command and general staff personnel assigned to an incident. (Source: FIRESCOPE)</p> <p>Incident Commander: The Incident Commander's responsibility is the overall management of the incident (to which it is assigned). On most incidents, the command activity is carried out by a single Incident Commander. The Incident Commander is selected by qualifications and experience. The Incident Commander may have a deputy, who may be from the same agency, or from an assisting agency. Deputies may also be used at section and branch levels of the ICS organization. Deputies must have the same qualifications as the person for whom they work, as they must be ready to take over that position at any time. Depending on the extent of the Incident Management team needed, this area of management may also have under its purview an Information Officer, Liaison Officer, Agency Representative(s), and Safety Officer.</p> <p>Operations Section Chief: The Operations Section Chief, a member of the General Staff, is responsible for the management of all operations directly applicable to the primary mission. The Operations Chief activates and supervises organization elements in accordance with the Incident Action Plan and directs its execution. The Operations Chief also directs the preparation of unit operational plans; requests or releases resources; makes expedient changes to the Incident Action Plan as necessary; and reports such to the Incident Commander. Depending on the extent of the Incident Management team needed, this area of management may also have under its purview a Branch Director, Division/Group Supervisor, Strike Team/Task Force Leader, Single Resource Coordinator, and Staging Area Manager.</p> <p>Planning Section Chief: The Planning Section Chief is responsible for the collection, evaluation, dissemination, and use of information about the development of the incident and status of resources. Information is needed to: 1) understand the current situation, 2) predict probable course of incident events, and 3) prepare alternative strategies and control operations for the incident. This section serves as the Incident Commander's "clearing house" for information. The Section Chief's goal is to plan ahead of current events and to identify the need for resources before they are needed. Depending on the extent of the Incident Management team needed, this area of management may also have under its purview a Resources Unit Leader, Situation Unit Leader, Documentation Unit Leader, Demobilization Unit Leader, and Technical Specialists.</p> <p>Logistics Section Chief: The Logistics Section Chief is responsible for providing facilities, services, and material in support of the incident, and is accountable for all personnel working in the hazard zone of the incident. The Section Chief participates in development and implementation of the Incident Action Plan and activates and supervises the Branches and Units within the Logistics Section. Depending on the extent of the Incident Management team needed, this area of management may also have under its purview a Service Branch Director, Support Branch Director, Facilities Unit Leader, and Ground Support Unit Leader.</p> <p>Finance/Administration Section Chief: The Finance/Administration Section Chief is responsible for all financial, administrative, and cost analysis aspects of the incident and for supervising members of the Finance/Administration section. Depending on the extent of the Incident Management team needed, this area of management may also have under its purview a Time Unit Leader, Procurement Unit Leader, Compensation/Claims Unit Leader, and Cost Unit Leader.</p> <p>Source: FIRESCOPE. California Department of Emergency Services, 2001</p>					



**RESOURCE: MOBILE COMMUNICATIONS CENTER (ALSO REFERRED TO AS "MOBILE EOC")**

CATEGORY :		Communication (ESF 2); Command & Control			KIND:	Vehicle	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER	
Component	Metric						
Chassis	Feet	48'-53' custom trailer, bus chassis, conventional cab/van chassis, or diesel motorhome chassis with or without slide-out room	35'-40' motorhome chassis with or without slide-out room	25'-35' Gas or diesel motorhome chassis, or custom trailer (trailer does require additional tow vehicle)	Converted SUV or Travel Trailer, or 25'-40' custom built trailer (trailer does require additional tow vehicle)		
Interior	Workstations	6-10 workstations, with private meeting area for Command personnel	4-6 workstations, with private meeting area for Command personnel	2-4 workstations	1 to 2 workstations		
Radio Frequency Transceivers	1 Unit	RF Communications with adjoining agencies, state agencies through mutual aid transceiver and any other frequencies	RF Communications with adjoining agencies, state agencies through mutual aid transceiver and any other frequencies	RF Communications with adjoining agencies, state agencies through mutual aid transceiver	RF Communications within jurisdiction and with adjoining agencies		
Internet Access	Speed	High bandwidth capabilities via satellite such as INMARSAT or V-Sat	High bandwidth capabilities via satellite such as INMARSAT or V-Sat; Faxing through cell or satellite system (4800 bps)	Cellular system; Faxing through cell or satellite system (4800 bps)	Via cellular system (portable)		
Video Teleconferencing	N/A				--		
High Speed Fax	Speed				--		
Voice Communications through Landlines, Cell Lines and Satellite	Type of system	PBX office-style telephone system & Cellular PBX System (ML500 or similar)	PBX office-style telephone system & Cellular PBX System (ML500 or similar)	PBX office-style telephone system	Through individual cell phones only		
On-scene Video Monitoring	N/A	Through camera/video system	Through camera/video system				
Computer-assisted Dispatch	N/A	Yes	Yes	Yes			





**RESOURCE: MOBILE COMMUNICATIONS CENTER (ALSO REFERRED TO AS "MOBILE EOC")**

CATEGORY :		Communication (ESF 2); Command & Control			KIND:	Vehicle	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER	
Component	Metric						
Computer/ Server Capabilities	N/A	Hardwired and wireless LAN. Workstations should have Ethernet connection and 120 vac protected receptacle. All computer based software packages pre-installed	Hardwired and wireless LAN. Workstations should have Ethernet connection and 120 vac protected receptacle. All computer based software packages pre-installed	Hardwired and wireless LAN. Workstations should have Ethernet connection and 120 vac protected receptacle. All computer based software packages pre-installed	Basic computer systems only (power source must be provided from outside vehicle)		
Personnel	Function	IT Support, Driver/Operator with CDL certification, and Communications Support	IT Support, Driver/Operator, and Communications Support	Driver/Operator	Driver/Operator		
Deployment Capabilities		All types should be capable of: <ul style="list-style-type: none"><li>• Operating in environment with little to no basic services, including no electrical service, no phone lines and no cell towers</li><li>• Providing own power generation and fuel supply to operate a minimum of 3-4 days without refueling.</li><li>• Sustaining long term deployment as well as short-term responses</li><li>• Facilitating communications between multiple agencies (Federal, state, county and municipal agencies)</li><li>• Operating as forward EOC</li><li>• Minimal set up time</li><li>• Serving basic personnel needs such as a bathroom, mini-refrigerator, microwave and coffee maker where space is available</li></ul>					
COMMENTS:	<p><b>Radio Frequency Transceivers</b>—Every agency has their assigned RF equipment in use. These frequencies should be distributed throughout the unit along with the most utilized adjoining agency transceivers. A central Communications rack should be built near the Communications Officer position. This rack should contain less utilized adjoining agency radios and programmable radios, giving the unit the ability to communicate with as many agencies as possible. Type I &amp; II units should have an Interoperability Module installed in addition to the central rack. This module will allow for different frequency transceivers to communicate commonly.</p> <p><b>Satellite Systems</b>—NMARSAT system can be utilized for telecommunications and DOD secure data transfer. For a MCC the unit should be roof mounted and auto-tracking. Useful for video-teleconferencing, high quality voice transmission, faxing, and dial-up Internet access. V-Sat systems use roof-mounted auto-deploy, auto-tracking dishes and allow large downloads of bandwidth. This bandwidth can be managed to provide Internet access, voice communications and video transfer for sending live on-scene video back to an EOC or other location. The FCC continues to approve new technology for this system. Iridium, Global Star or other Sat-phones are ideal for in-the-field communications.</p> <p><b>Microwave Units</b>—Some states and jurisdictions have microwavecapable facilities and equipment installed for quality video transfer.</p> <p><b>Server Computers</b>—A rack-mounted Server should be installed in Type I, II, and III units. This Server can be designed to mimic many of the operations and software in use at the EOC. A hard-wired LAN and a wireless LAN should also be installed to enable all workstations access to the Server.</p> <p><b>Telephone System</b>—An office-style PBX system should be installed in Type I, II and III units. This system can be integrated with landlines, cell lines and satellite telephones. Each workstation should have a telephone unit as well as units on-hand for exterior operations.</p> <p><b>Cellular PBX System (ML500 or similar)</b>—This unit is utilized for multiple cell lines (suggest 5). It is tied into the main PBX for distribution throughout unit. The unit has auto-detect sensors that check for landline first and then switch to cell if landline is not available.</p> <p><b>Camera and Video Systems</b>—The unit should have an installed mast (no taller than 30' without exterior supports) and camera system with monitors in both the conference and communications area. The video system controls the multiple inputs and distributes them to the monitors. The system should support the mast and camera, display Server Computer programs, helicopter downlink, DSS, and have the capability to receive signals from additional units by plugging into exterior console.</p> <p>Source: North American Catastrophe Service, Inc., 2003.</p>						



**RESOURCE: MOBILE FEEDING KITCHEN (ALSO KNOWN AS A “MOBILE FIELD KITCHEN”)**

CATEGORY:	Food & Water (ESF 11)			KIND:	Equipment	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Mobile Field Kitchen	Number of people unit is capable of feeding	Feeds up to 1,000 twice daily	Feeds up to 650 twice daily	Feeds up to 300 twice daily	Feeds up to 100 twice daily	
Mobile Kitchen Trailer (MKT-I)	1 Trailer	45-53' trailer	36-42' trailer	20-30' trailer	16-18' trailer (concession-type)	
2 1/2-Ton or 5-Ton Truck and Driver for Transport	1 Truck + Driver	Yes	Yes	Yes	Yes	
Kitchen Support Personnel	# of Personnel	4, including kitchen supervisor	3, including kitchen supervisor	2	2	
COMMENTS:	The Mobile Feeding Kitchen (a.k.a. Mobile Field Kitchen or Rapid Deployment Kitchen) is a containerized kitchen that can be positioned forward in fulfillment of ESF 11. The units are used to support feeding operations at emergency incidents. It should be capable of providing hot meals twice daily to 650 to 1,000 individuals, either those providing the emergency response or those displaced by the disaster. The system should be equipped to provide storage, refrigeration, sanitation, and other essentials for all types of meal preparation. The units may be fitted with convection and conventional ovens, steam and tilt skillets, and modern burner units. <u>The kitchens <b>may</b> come with a support trailer that carries tables, chairs, additional implements, tents or dining hall facilities as requested.</u> The kitchen should provide a minimum of 360 square feet of food preparation and serving areas protected from natural elements of the environment. All food preparation equipment, the electrical supply, the environmental control system, and all related controls should be included. Setup and tear down should be accomplished in approximately 45 minutes. Personnel to operate the kitchen may include a crew of four, plus a kitchen supervisor.					



RESOURCE: RAPID NEEDS ASSESSMENT TEAM						
CATEGORY :		Other			KIND:	Team
Components and Capabilities: <i>There is only <u>one</u> type of RNA Team. Variations may exist and/or specialists may be added according to the type and scale of disaster.</i>						
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Management Element	Number Determined by Size of Event. See Comments for Function Descriptions. Determined by Number of Personnel Deployed with Team					
Team Leader		X				
FEMA Representative		X				
Assessment Element						
HazMat Specialist		X				
Medical Specialist		X				
Mass Care Specialist		X				
Infrastructure Specialist		X				
Fire/US&R		X				
Support Element		X				
Telecomm Specialist		X				
Logistics Specialist		X				
Operations Specialist		X				
Deployment Equipment		<ul style="list-style-type: none"> <li>▪ Personal Kit</li> <li>▪ Resupply Kit</li> <li>▪ Team Life Support Kit</li> <li>▪ Team Admin. Kit</li> <li>▪ Vehicle Kit</li> <li>▪ Communications Support Kit</li> <li>▪ Fly-Away Kit</li> </ul>				



RESOURCE: RAPID NEEDS ASSESSMENT TEAM						
CATEGORY :	Other			KIND:	Team	
Components and Capabilities: <i>There is only <u>one</u> type of RNA Team. Variations may exist and/or specialists may be added according to the type and scale of disaster.</i>						
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
COMMENTS :	<p>Provides a rapid assessment capability immediately following a major disaster or emergency. The RNA Team will collect and provide information to determine requirements for critical resources needed to support emergency response activities. The Team is responsible for assessing both overall impact of a disaster event, and determining state and/or federal immediate response requirements. Management Element–supervises and coordinates the assessment process and team logistical support (1) State Team Leader – maintains overall responsibility for RNA Team operations, knowledgeable of local assets, geographic information, information management systems, state response plans and procedures, state assets, response philosophies, etc. (2) FEMA Representative Assessment Element–members of the assessment element are cross-trained in more than one ESF, enabling them to assess immediate needs and requirements in more than one functional area. (1) Haz Mat Specialist (representing ESF 10)–assesses the affected sites and facilities and their potential for public exposure, identifies unsafe areas and types of hazards, contamination threats, and local hazardous materials mutual-aid response capability. (2) Medical Specialist (representing ESF 8)–assesses the health/medical infrastructure including hospital and primary care systems, pharmacy systems, special population needs, environmental health, sanitation issues, emergency medical services, and patient evacuation needs and capabilities. (3) Mass Care Specialist (representing ESF 6, -11)–assesses the status of needs for mass feeding and emergency mass shelters, bulk distribution of relief supplies, emergency first aid needs, potential secondary disaster effects, and state and local governmental volunteer capability. (4) Infrastructure Specialist (representing ESF 3)–assesses the status of transportation (5) Fire/Urban Search &amp; Rescue (representing ESF 4, 9)–assesses the status of fire, and search and rescue services including capabilities and limitations of any existing mutual-aid agreements. Also identifies immediate needs for fire and/or search and rescue services. Support Element (QRS)–provides documentation, logistics, and communications support for the Management and Assessment elements. (1) Telecommunications Specialists–installs, operates and maintains the communications support package and provides technical support to the team during deployment. (2) Logistics Specialist–provides logistical support and services for the team during all phases of team activity.( 3) Operations Specialist–collects assessment data from the Assessment Element, compiles data into report formats and transmits reports to required individuals and organizations. Source: FEMA Rapid Needs Assessment Team Operations Manual, April 2001</p>					



RESOURCE: SHELTER MANAGEMENT TEAM						
CATEGORY: 1 Mass Care (ESF 6)			KIND: Team			
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Shelter Supervisor	Number Determined by Size of Shelter Operations	X	X	X		
Medical Services Manager		X				
Operations Manager (water, sanitation, power, structural)		X	X			
Food Services Manager		X				
Exposure Control Monitor (depends on type of event)		Optional	Optional	Optional		
COMMENTS:	The Shelter Management Team provides the managerial and operation support for a shelter used to house, feed, counsel, provide first aid and related social services and welfare activities required to assist the victims of an emergency. Responsibilities of the team may include all or some of the following: operating the shelter; establishing security; ensuring the availability of adequate care, food, sanitation, and first aid; selecting and training personnel to perform operational tasks; monitoring contamination; performing decontamination; establishing exposure control and monitoring; monitoring overpressure and filtration systems; performing post-event reconnaissance; and directing egress.					

# **Emergency Medical Services**



RESOURCE: AIR AMBULANCE (FIXED WING)						
CATEGORY: Health & Medical (ESF 8)			KIND: Aircraft			
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Supplies, Equipment, Personnel, and Fixed Wing Aircraft	Emergency medical services team with equipment, supplies and aircraft for patient transport & emergency medical care out of hospital, providing service from airport to airport	Critical Care and Advanced Life Support; Minimum 3 staff (pilot, 2 paramedics or 1 paramedic and 1 nurse or physician); transport 2 or more litter patients; night ops capable; IFR capable; ability to deploy a medical team; MICU equipment (i.e.; ventilators and infusion pumps, medications, blood)	Critical Care and Advanced Life Support; Minimum 3 staff (pilot, 2 paramedics or 1 paramedic & 1 nurse or physician); transport 1 litter patient; night ops capable; IFR capable; ability to deploy a medical team; MICU equipment (i.e.; ventilators and infusion pumps, medications, blood)	Advanced Life Support; Minimum 3 staff (pilot, 2 paramedics, or 1 paramedic and 1 nurse or physician); transport 2 or more litter patients; night ops capable; ALS ambulance equipment	Basic Life Support; Minimum 2 staff (pilot, and 1 paramedic transport 1 litter patients; night ops capable; ALS ambulance equipment	
COMMENTS:	Fixed-wing service in a disaster is primarily for moving injured or sick people located in the disaster area to medical facilities located outside the disaster area. Fixed-wing service providers may also be utilized to import personnel and or equipment/supplies into the area of need. Fixed-wing services require the use of an airport of sufficient length and access to a sufficient quantity of proper fuel type for the type of aircraft requested. Each team/unit can work a maximum of 12-hour shifts, depending upon individual policies and procedures. Aircraft maintenance requirements may occur during deployment. Aviation maintenance must be planned. Hangar facilities should be planned for all extended operations. Backup supplies and some equipment may be required depending upon number of patients and type of event. Communication equipment may be programmable for interoperability but must be verified. Plan for augmenting existing communication equipment to allow fixed-wing aircraft to communicate with command center. Coordination with ground ambulance service required. Ground safety assurance and traffic control are important support requirements for injury and crash prevention. This support may be significant depending upon the size and location of the incident.					



RESOURCE: AIR AMBULANCE (ROTARY WING)						
CATEGORY: Health & Medical (ESF 8)			KIND: Aircraft			
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Supplies, Equipment, Personnel, and Aircraft	Emergency medical services team with equipment, supplies and aircraft for patient transport & emergency medical care out of hospital	Advanced Life Support; Minimum 3 staff (pilot, 2 paramedics or 1 paramedic and 1 nurse or physician); transport 2 or more litter patients; full SAR including hoist capabilities; night ops capable; IFR capable; ALS ambulance equipment	Advanced Life Support; Minimum 3 staff (pilot, 2 paramedics or 1 paramedic & 1 nurse or physician); transport 2 or more litter patients; night ops capable; IFR capable; ability to deploy a medical team; MICU equipment (i.e., ventilators & infusion pumps, medications, blood)	Advanced Life Support; Minimum 3 staff (pilot, 2 paramedics, or 1 paramedic and 1 nurse or physician); transport 1 litter patient; night ops capable; VFR capable; ability to deploy a medical team; MIC U equipment (i.e., ventilators & infusion pumps, medications, blood)	Advanced Life Support; Minimum 2 staff (pilot, and 1 paramedic transport 1 litter patient; night ops capable; VFR; ALS ambulance equipment	
COMMENTS:	Each team/unit can work a maximum of 12-hour shifts, depending upon individual policies & procedures. Aircraft maintenance requirements may occur during deployment. Aviation maintenance must be planned. Hangar facilities should be planned for all extended operations. Fuel tankers or other supply points must be identified. Backup supplies and some equipment may be required depending upon number of patients and type of event. Communication equipment may be programmable for interoperability but must be verified. Provide communication frequencies of ground incident command. Plan for augmenting existing communication equipment. Landing zones (space, clearance, and weight restrictions) must be considered. The typical civilian air ambulance requires an LZ of 150' x 150'. Ground safety assurance and traffic control are important support requirements for injury and crash prevention. This support may be significant depending upon the size of the incident and the location of the incident.					





RESOURCE: AMBULANCES (GROUND)						
CATEGORY: Health & Medical (ESF 8)			KIND: Team; Equipment; Personnel, Supplies; Vehicles			
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Supplies, Equipment, Personnel, and Vehicle	Emergency medical services team with equipment, supplies, and vehicle for patient transport (Type I-IV) and emergency medical care out of hospital	Advanced Life Support; Minimum 2 staff (paramedic and EMT), transport 2-litter patients, training and equipment meets or exceeds standards as addressed by EPA, OSHA and NFPA 471,472,473 and 29 CFR 1910, 120 ETA 3-11 to work in HazMat Level B and specific threat conditions, all immunized in accordance with CDC core adult immunizations and specific threat as appropriate	Advanced Life Support, Minimum 2 staff (paramedic and EMT), transport 2-litter patients, nonHazMat response	Basic Life Support Minimum 2 staff (EMT and first responder), transport 2 litter patients, training and equipment meets or exceeds standards as addressed by EPA, OSHA and NFPA 471,472,473 and 29 CFR 1910, 120 ETA 3-11 to work in HazMat Level B and specific threat conditions, all immunized in accordance with CDC core adult immunizations and specific threat as appropriate	Basic Life Support operations; minimum 2 personnel (1 EMT and first responder), transport 2 litter patients	Nontransporting emergency medical response, minimum 1 staff, BLS or ALS equipment, supplies
COMMENTS:	Each team unit can work 12-hour shifts. Backup supply and some equipment required according to number of patients and type of event. Communication equipment may be programmable for interoperability but must be verified. Fuel supply and maintenance support must be available. Plan for augmenting existing communication equipment. Environmental considerations related to temperature control in patient care compartment and pharmaceutical storage may be necessary for locations with excessive ranges in temperature. Security of vehicle support required for periods of standby without crew in attendance. Decontamination supplies and support required for responses to incidents with potential threat to responding services or transport of infectious patients.					

# **Fire/HazMat Resources**



RESOURCE: BRUSH PATROL, FIREFIGHTING (TYPE VI ENGINE)						
CATEGORY :		Firefighting (ESF 4)			KIND:	Equipment
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Pump						Pump: 15 GPM
Hose						Hose 1 inch; 150 feet
Tank						Tank: 75 Gallons
Personnel						Personnel: 1
COMMENTS:		Brush Patrols apply to all vehicles equipped as described.				



RESOURCE: CREW TRANSPORT (FIREFIGHTING CREW)						
CATEGORY: Firefighting (ESF 4)			KIND: Equipment			
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Passengers		30	20	10		
COMMENTS:	Vehicles may be buses, vans, and special crew carrying vehicles (CCV), and may be equipped to carry firefighting tools.					



RESOURCE: ENGINE, FIRE (PUMPER)								
CATEGORY : Firefighting (ESF 4)					KIND: Equipment			
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	TYPE V	TYPE VI	TYPE VII
Component	Metric							
Pump Capacity		1000 GPM	500 GPM	120 GPM	70 GPM	50 GPM	50 GPM	50 GPM
Tank Capacity		400 Gal.	400 Gal.	500 Gal.	750 Gal.	500 Gal.	200 Gal	125 Gal.
Hose, 2.5 inch		1200 ft.	1000 ft.					
Hose, 1.5 inch		400 ft.	500 ft.	1000 ft.	300 ft.	300 ft.	300 ft.	200 ft.
Hose, 1 inch		200 ft.	300 ft.	800 ft.	300 ft.	300 ft.	300 ft.	200 ft.
Personnel		4	3	3	2	2	2	2
COMMENTS:	The engine typing needs to be taken out to Type VII. Compromise between FIREScope and NWCG is to use NWCG Standards for Engines and Crews. NWCG has seven engine types.							



RESOURCE: FIRE BOAT						
CATEGORY : Firefighting (ESF 4)			KIND: Equipment			
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Pump Capacity GPM		5,000	1,000	250		
COMMENTS:		Fire Boats vary in length, draft, and related firefighting equipment.				



RESOURCE: FOAM TENDER, FIREFIGHTING						
CATEGORY: Firefighting (ESF 4); HazMat (ESF 10)				KIND: Equipment		
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Class B Foam		500 gallons	250 gallons			
COMMENTS:		Specify percent of concentrate (1%, 3%, etc.).				



RESOURCE: FUEL TENDER (GASOLINE, DIESEL, AVGAS, AKA GAS TANKER)						
CATEGORY :		Transportation (ESF 1); Public Works and Engineering (ESF 3)			KIND:	Equipment
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Fuel		1000 gal	100 gal			
Specify: Gas, Diesel, AvGas, etc.						
COMMENTS:		These vehicles vary widely. May be Gasoline, Diesel, Jet Fuel, AvGas, or combinations.				





RESOURCE: HAND CREW						
CATEGORY: Firefighting (ESF 4)			KIND: Other – Crew			
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Fireline Capability		Initial attack/can be broken up into squads, fireline construction, complex firing operations (backfire)	Initial attack/can be broken up into squads, fireline construction, firing to include burnout	Initial attack, fireline construction, firing to include burnout	Fireline construction, fireline improvement, mop-up and rehab	
Crew Size		18-20	18-20	18-20	18-20	
Leadership Qualifications		Permanent Supervision Superintendent: TFLD, ICT4 Asst Supt: STCR, ICT4, 3 Squad Bosses: CRWB(T), ICT5	CRWB and 3 ICT5	CRWB and 3 FFT1	CRWB and 3 FFT1	
Experience		80% 1 season or more	60% 1 season or more	40% 1 season or more	20% 1 season or more	
Full-Time Organized Crew		Yes	No	No	No	
COMMENTS:		Crews need to be listed as Type I, Type II with Initial Attack Capability, Type II, Type III.				



RESOURCE: HAZMAT ENTRY TEAM						
CATEGORY: HazMat (ESF 10)			KIND: Team			
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Field Testing		<b>(Known Chemicals, Unknown Chemicals; Known or Suspect Weapons of Mass Destruction Chemical/Biological Substances [WMD Chem/Bio])</b> The presumptive testing and identification of chemical substances using a variety of sources to be able to identify associated chemical and physical properties. Sources may include printed and electronic reference resources, safety data sheets, field testing kits, specific chemical testing kits, chemical testing strips, data derived from detection devices, and air-monitoring sources	<b>(Known Chemicals; Unknown Chemicals)</b> The presumptive testing and identification of chemical substances using a variety of sources to be able to identify associated chemical and physical properties. Sources may include printed and electronic reference resources, safety data sheets, field testing kits, specific chemical testing kits, chemical testing strips, data derived from detection devices, and air-monitoring sources	<b>(Known Chemicals)</b> The presumptive testing and identification of chemical substances using a variety of sources to be able to identify associated chemical and physical properties. Sources may include printed and electronic reference resources, safety data sheets, field testing kits, specific chemical testing kits, chemical testing strips, data derived from detection devices, and air-monitoring sources		
Air Monitoring		<b>(Basic Confined Space Monitoring, Specific Known Gas Monitoring, WMD Chem/Bio Aerosol Vapor and Gas)</b> The use of advanced detection equipment to detect the presence of known or unknown gases or vapors. The basics begin with ability to provide standard confined space readings (oxygen deficiency percentage; flammable atmosphere Lower Explosive Limit [LEL]; carbon monoxide; and	<b>(Basic Confined Space Monitoring, Specific Known Gas Monitoring)</b> The use of advanced detection equipment to detect the presence of known or unknown gases or vapors. The basics begin with ability to provide standard confined space readings (oxygen deficiency percentage; flammable atmosphere Lower Explosive Limit [LEL]; carbon monoxide; and hydrogen sulfide). Advanced detection and monitoring	<b>Basic Confined Space Monitoring, Specific Known Gas Monitoring)</b> The use of devices to detect the presence of known gases or vapors. The basics begin with ability to provide standard confined space readings (oxygen deficiency percentage; flammable atmosphere Lower Explosive Limit [LEL]; carbon monoxide; and hydrogen sulfide)		



RESOURCE: HAZMAT ENTRY TEAM						
CATEGORY : HazMat (ESF 10)			KIND: Team			
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
		hydrogen sulfide). Advanced detection and monitoring may incorporate more sophisticated instruments that differentiate between two or more flammable vapors, and may directly identify by name a specific flammable or toxic vapor. This includes WMD Chem/Bio detection Instruments	may incorporate more sophisticated instruments that differentiate between two or more flammable vapors, and may directly identify by name a specific flammable or toxic vapor			
Sampling: Capturing Labeling Evidence Collection		<b>(Known Industrial Chemicals, Unknown Industrial Chemicals, WMD Chem/Bio)</b> Known and unknown industrial chemicals' standard evidence collection protocols required for each include capturing and collection; containerizing and proper labeling; and preparation for transportation and distribution, including standard environmental sampling procedures for lab analysis. Consistent with established chain of custody protocols. Ability to sample liquids and solids. Special resources may be required for air sample collection	<b>(Known Industrial Chemicals, Unknown Industrial Chemicals)</b> Known and unknown industrial chemicals' standard evidence collection protocols required for each include capturing and collection; containerizing and proper labeling; and preparation for transportation and distribution, including standard environmental sampling procedures for lab analysis. Consistent with established chain of custody protocols. Ability to sample liquid and solids	<b>(Known Industrial Chemicals)</b> Known industrial chemicals' standard evidence collection protocols required for each include capturing and collection; containerizing and proper labeling; and preparation for transportation and distribution, including standard environmental sampling procedures for lab analysis. Consistent with established chain of custody protocols		
Radiation Monitoring/ Detection		<b>(Alpha Detection, Beta Detection, Gamma Detection)</b> The ability to accurately interpret readings from the radiation-detection devices and conduct geographical survey search of suspected	<b>(Alpha Detection, Beta Detection, Gamma Detection)</b> The ability to accurately interpret readings from the radiation-detection devices and conduct geographical survey search of suspected	<b>(Beta Detection, Gamma Detection)</b> The ability to accurately interpret readings from the radiation-detection devices and conduct geographical survey search of suspected radiological source or		



RESOURCE: HAZMAT ENTRY TEAM						
CATEGORY: HazMat (ESF 10)			KIND: Team			
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
		radiological source or contamination spread. Identify and establish the exclusion zones after contamination spread (this does include identification of some, but not all, radionuclides). Ability to conduct environmental and personnel survey. Basic criteria include detection and survey capabilities for alpha, beta, and gamma. Ensure all members of survey teams are equipped with accumulative selfreading instruments (dosimeters)	radiological source or contamination spread. Basic criteria include detection and survey capabilities for alpha, beta, and gamma	contamination spread. Basic criteria include detection and survey capabilities for beta and gamma		
Protective Clothing: Ensembles		<b>(Vapor-Protective CPC, Weapons of Mass Destruction (WMD) Vapor-Protective CPC, Flash Fire Vapor-Protective CPC, Liquid Splash-Protective CPC, WMD Liquid Splash-Protective CPC)</b> Chemical protective clothing (CPC), which includes complete ensembles (suit, boots, gloves) and may incorporate various configurations (encapsulating, non-encapsulating, jumpsuit, multi-piece) depending upon the level of protection needed. Levels of CPC vapor protection are: Vapor-Protective, Flash Fire Protective option for Vapor-Protective, and	<b>(Vapor-Protective CPC, Flash Fire Vapor-Protective CPC, Liquid Splash-Protective CPC)</b> Chemical Protective Clothing (CPC), which includes complete ensembles (suit, boots, gloves) and may incorporate various configurations (encapsulating, non-encapsulating, jumpsuit, multi-piece) depending upon the level of protection needed. Levels of CPC vapor protection are: Vapor-Protective, and Flash Fire Protective both of which must be compliant with NFPA Standard # 1991, "Standard on Vapor-Protective Ensembles for Hazardous	<b>(Liquid Splash-Protective CPC)</b> Chemical Protective Clothing (CPC), which includes complete ensembles (suit, boots, gloves) and may incorporate various configurations (encapsulating, non-encapsulating, jumpsuit, multi-piece) depending upon the level of protection needed. Level of CPC liquid protection is: Liquid Splash-Protective, which must be compliant with NFPA Standard # 1992, "Standard on Liquid Splash-Protective Ensembles and Clothing for Hazardous Materials Emergencies," current edition		



RESOURCE: HAZMAT ENTRY TEAM						
CATEGORY: HazMat (ESF 10)			KIND: Team			
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
		Chemical/Biological-Protective option for Vapor-Protective, all of which must be compliant with National Fire Protection Association (NFPA) Standard # 1991, "Standard on Vapor-Protective Ensembles for Hazardous Materials Emergencies" current edition. Level of CPC liquid protection is: Liquid Splash-Protective, which must be compliant with NFPA Standard # 1992, "Standard on Liquid Splash-Protective Ensembles and Clothing for Hazardous Materials Emergencies", current edition.	Materials Emergencies," current edition. Level of CPC liquid protection is: Liquid Splash-Protective, which must be compliant with NFPA Standard # 1992, "Standard on Liquid Splash-Protective Ensembles and Clothing for Hazardous Materials Emergencies, current edition			
Technical Reference		<b>(Printed and Electronic; Plume Air Modeling, Map Overlays, WMD Chem/Bio)</b> Access to and use of various databases, chemical substance data depositories, and other guidelines and safety data sheets, either in print format, electronic format, stand-alone computer programs, or data available via telecommunications. The interpretation of data collected from electronic devices and chemical testing procedures. At a minimum, technical references will have the ability to outsource additional capabilities and have one source for air-	<b>(Printed and Electronic; Plume Air Modeling; Map Overlays)</b> Access to and use of various databases, chemical substance data depositories, and other guidelines and safety data sheets, either in print format, electronic format, stand-alone computer programs, or data available via telecommunications. The interpretation of data collected from electronic devices and chemical testing procedures. At a minimum, technical references will have the ability to outsource additional capabilities and have one source for air-	<b>(Printed and Electronic)</b> Access to and use of various databases, chemical substance data depositories, and other guidelines and safety data sheets, either in print format, electronic format, stand-alone computer programs, or data available via telecommunications. The interpretation of data collected from electronic devices and chemical testing procedures		



RESOURCE: HAZMAT ENTRY TEAM						
CATEGORY: HazMat (ESF 10)			KIND: Team			
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Special Capabilities		modeling capability (Gloves and Other Specialized Equipment Based on Local Risk Assessment, Heat Sensing Capability, Light Amplification Capability, Digital Imaging Documentation Capability) Additional resources that augment the capabilities of the team	modeling capability (Gloves and Other Specialized Equipment Based on Local Risk Assessment, Heat Sensing Capability, Light Amplification Capability) Additional resources that augment the capabilities of the team	(Gloves and Other Specialized Equipment Based on Local Risk Assessment) Additional resources that augment the capabilities of the team		
Intervention		(Diking, Damming, Absorption; Liquid Leak Intervention; Neutralization, Plugging, Patching, Vapor Leak Intervention WMD Chem/Bio Agent Confinement) Employment of mechanical means of intervention and control such as plugging, patching, off-loading, and tank stabilization; environmental means such as absorption, dams, dikes, and booms; and chemical means such as neutralization and encapsulation of known and unknown industrial chemicals. Mechanical means include specially designed kits for controlling leaks in rail car dome assemblies and pressurized containers, to pneumatic and standard patching systems. Advanced capabilities should include ability to intervene	(Diking, Damming, Absorption; Liquid Leak Intervention; Neutralization, Plugging, Patching; Vapor Leak Intervention) Employment of mechanical means of intervention and control such as plugging, patching, off-loading, and tank stabilization; environmental means such as absorption, dams, dikes, and booms; and chemical means such as neutralization and encapsulation of known and unknown chemicals. Mechanical means include specially designed kits for controlling leaks in rail car dome assemblies and pressurized containers, to pneumatic and standard patching systems	(Diking, Damming, Absorption) Employment of mechanical means of intervention and control such as plugging, patching, off-loading, and tank stabilization; environmental means such as absorption, dams, dikes, and booms		



RESOURCE: HAZMAT ENTRY TEAM						
CATEGORY : HazMat (ESF 10)			KIND: Team			
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
		and confine incidents involving WMD Chem/Bio substances				
Decontami- nation		<b>(Known Contaminants Based on Local Risk Assessment Unknown contaminants, WMD Chem/Bio)</b> Must be selfsufficient to provide decontamination for members of their team. Capable of providing decontamination for known and unknown contaminants and WMD Chem/Bio.	<b>(Known Contaminants Based on Local Risk Assessment Unknown contaminants)</b> Must be selfsufficient to provide decontamination for members of their team. Capable of providing decontamination for known and unknown contaminants.	<b>(Known Contaminants Based on Local Risk Assessment)</b> Must be selfsufficient to provide decontamination for members of their team. Capable of providing decontamination for known contaminants.		
Communi- cations		<b>(In-Suit, Wireless Voice, Wireless Data, Secure Communications)</b> Personnel utilizing CPC shall be able to communicate appropriately and safely with one another and their team leaders	<b>(In-Suit, Wireless Voice, Wireless Data)</b> Personnel utilizing CPC shall be able to communicate appropriately and safely with one another and their team leaders	<b>(In-Suit, Wireless Voice)</b> Personnel utilizing CPC shall be able to communicate appropriately and safely with one another and their team leaders		
Personnel	Staffing	5 Personnel	5 Personnel	5 Personnel		
Personnel	Training	All personnel must be trained to the minimum response standards in accordance with the most current editions of NFPA Standard # 471, "Recommended Practice for Responding to Hazardous Materials Incidents," NFPA Standard # 472, "Standard for Professional Competence of Responders to Hazardous Materials Incidents," and NFPA Standard # 473, "Standard for Competencies for EMS Personnel	All personnel must be trained to the minimum response standards in accordance with the most current editions of NFPA Standard # 471, "Recommended Practice for Responding to Hazardous Materials Incidents," NFPA Standard # 472, "Standard for Professional Competence of Responders to Hazardous Materials Incidents," and NFPA Standard # 473, "Standard for Competencies for EMS Personnel	All personnel must be trained to the minimum response standards in accordance with the most current editions of NFPA Standard # 471, "Recommended Practice for Responding to Hazardous Materials Incidents," NFPA Standard # 472, "Standard for Professional Competence of Responders to Hazardous Materials Incidents," and NFPA Standard # 473, "Standard for Competencies for EMS Personnel		



RESOURCE: HAZMAT ENTRY TEAM						
CATEGORY : HazMat (ESF 10)			KIND: Team			
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
		Responding to Hazardous Materials Incidents," as is appropriate for the specific team type	Responding to Hazardous Materials Incidents," as is appropriate for the specific team type	Responding to Hazardous Materials Incidents," as is appropriate for the specific team type		
Sustainability		Capability to Perform Three (3) Entries in a 24-hour Period	Capability to Perform Three (3) Entries in a 24-hour Period	Capability to Perform Three (3) Entries in a 24-hour Period		
COMMENTS						





RESOURCE: HELICOPTERS, FIREFIGHTING						
CATEGORY: Firefighting (ESF 4)			KIND: Aircraft			
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Seats, Including Pilot		16	10	5	3	
Card Weight Capacity		5,000 lbs	2,500 lbs	1,200 lbs	600 lbs	
Gallons		700	300	100	75	
Example		Bell 214	Bell 205	Bell 206	Bell 47	
COMMENTS:		Firefighting Helicopters may be equipped with rescue, medical, or other equipment.				



RESOURCE: MOBILE COMMUNICATIONS UNIT (LAW/FIRE)						
CATEGORY: Firefighting (ESF 4); Law Enforcement/Security; Public Works and Engineering (ESF 3)			KIND: Vehicle			
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Console/ Workstation		2	2			
Frequency Cap.		Multi Range	Multi Range			
Power Source		Internal	Internal			
Telephone System		6 Trunk/16 Extentions				
Personnel		2	2			
COMMENTS:		Multi Range: 150-174 MHz, 450-470 MHz, 800 MHz (Simplex or Repeated), Single Range: 150-174 Mhz only				



RESOURCE: PORTABLE PUMP						
CATEGORY: Fire			KIND: Equipment			
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Pumping Capacity (GPM)		500	250	50		
COMMENTS:		These are normally trailer mounted units.				



RESOURCE: STRIKE TEAM, ENGINE (FIRE)						
CATEGORY: Firefighting (ESF 4); Search & Rescue (ESF 9)			KIND: Team			
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Engine, Fire		5	5	5	5	(See Engine for details)
STL		1	1	1	1	Strike Team Task Force Leader
Pers (Engine)		4	3	3	3	Staffing on each Engine
Pers (Total)		21	16	16	16	
COMMENTS:		Strike Team defined as like number of resources, with common communications, and a leader. Engine Strike Team Typing is based on individual Engine Typing.				



RESOURCE: WATER TENDER, FIREFIGHTING (TANKER)						
CATEGORY :		Firefighting (ESF 4)			KIND:	Equipment
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Tank		2000 gallon	1000 gallon	1000 gallon		
Pump		300 GPM	120 GPM	50 GPM		
COMMENTS :						

# **Health and Medical**



**RESOURCE: DISASTER MEDICAL ASSISTANCE TEAM (DMAT)—BASIC**

CATEGORY :		Health & Medical (ESF 8)			KIND:	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER	
Component	Metric						
Overall Function (see Definition and NOTE 1)	Patient-care Capabilities	Triage and treat up to 250 patients per day for up to 3 days without resupply	Triage and treat up to 250 patients per day for up to 3 days without resupply	Augment or supplement Type I or II team within this team's local area	Personnel may be used to supplement other teams		
Personnel and Equipment Readiness	Roster Fulfillment, Equipment Loading	Upon alert, full 35-person roster within 4 hrs. After activation, deployment ready within 6 hrs	Upon alert, full roster within 6 hrs. After activation, deployment ready within 12 hrs	Upon alert, 75% rostered within 12 hrs. After activation, deployment ready within 24 hrs	Does not meet minimal deployable team requirements		
Demonstrated Readiness	Readiness Testing and Deployment History	100% rating on NDMS readiness test in past 12 mos. History of prior full deployment to austere environment	100% rating on NDMS readiness test in past 12 mos	75% or greater rating on NDMS readiness test in past 12 mos	Less than Type III		
Personnel Standard DMAT deploys with 35 personnel for all missions (NOTE 2)	Membership Level	105 or more deployable team personnel on NDMS roster; 12 or more physicians; 3 or more of each of PA or NP, RN, RPh, and paramedic	90 or more deployable team personnel on NDMS roster; 9 or more physicians; 3 or more of each of PA or NP, RN, RPh, and paramedic	50 or more deployable team personnel on NDMS roster; 6 or more physicians; 2 or more of each of PA or NP, RN, RPh, and paramedic	Less than Type III		
Shelters, Equipment, and Supplies	Logistics Status	Full DMAT equipment cache properly managed, stored, and inventoried per NDMS requirements	Full DMAT equipment cache properly managed, stored and inventoried per NDMS requirements	Full or partial DMAT equipment cache properly managed, stored, and inventoried per NDMS requirements	Less than partial cache		
Transportation	Vehicle Status	Pre-arrangement for obtaining primary and alternate use vehicles	Pre-arrangement for obtaining primary and alternate use vehicles	Incomplete transportation arrangements	None		
Didactic Training	Basic (Core) and Advanced Training Modules	90% completion of NDMS basic core training plus 50% of advanced training modules (By 08/05)	80% completion of NDMS basic core training plus 25% of advanced training modules (By 08/05)	50% completion of NDMS basic core training plus 25% of advanced training modules (By 08/05)	Less than Type III		



RESOURCE: DISASTER MEDICAL ASSISTANCE TEAM (DMAT)—BASIC						
CATEGORY: Health & Medical (ESF 8)			KIND: Team			
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Training experience	Field Exercises (FEXs)	Participate in at least 2 NDMS approved FEXs, one observed	Participate in at least 2 NDMS approved FEXs, one observed	Participate in at least 1 NDMS approved FEX	N/A	
COMMENTS:	Definition: A DMAT is a volunteer group of medical and nonmedical individuals, usually from the same state or region of a state, who have formed a response team under the guidance of the National Disaster Medical System, or under similar state or local auspices. NOTE 1: TYPE I = fully operational; Type II = operational ; Type III = augmentation/local team; Type IV = developmental. NOTE 2: Personnel include a mix of physicians, nurses (RN), nurse practitioners (NP), physicians' assistants (PA), pharmacists (RPh), emergency medical technicians (EMT), other allied health professionals, and support staff.					





RESOURCE: DISASTER MEDICAL ASSISTANCE TEAM (DMAT)? BURN SPECIALTY						
CATEGORY: Health & Medical (ESF 8)			KIND: Team			
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Variable number of personnel; includes medical providers with specialty training/skills in management of burn patients (NOTE 1)	Deployment Readiness; Staffing; Equipment Status; Training Status; Patient Treatment Capacity	Deploy to site within 24 hrs. of notification with all necessary staff and equipment; function for 72 hrs. in austere location without resupply	Deploy to site within 24 hrs. of notification with all necessary staff; function in existing fixed facility using facility's equipment and supplies (NOTE 2)	Personnel roster only; may be less than full complement		
Shelters, Equipment, and Supplies	Logistics Status	Full complement	Limited to specialized items for burns	None		
COMMENTS:						



RESOURCE: DISASTER MEDICAL ASSISTANCE TEAM (DMAT)—CRUSH INJURY SPECIALTY						
CATEGORY: Health & Medical (ESF 8)			KIND: Team			
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Variable number of personnel; includes medical providers with specialty training/skills in management of crush injuries. (NOTE 1)	Deployment Readiness; Staffing; Equipment Status; Training Status; Patient Treatment Capacity	Deploy to site within 24 hrs. of notification with all necessary staff and equipment; function for 72 hrs. in austere location without resupply	Deploy to site within 24 hrs. of notification with all necessary staff; function in existing facility using facility's equipment and supplies (NOTE 2)	Personnel roster only; may be less than full complement		
Shelters, Equipment, and Supplies	Logistics status	Full complement	Limited or none	None		
COMMENTS:	Definition: A Crush Injury Specialty DMAT is a volunteer group of medical and nonmedical individuals, usually from the same state or region of a state, who have formed a response team under the guidance of the National Disaster Medical System (or state or local auspices), and whose personnel have specific training/skills in the management of crush injury patients. NOTE 1: Usually includes a mix of physicians, nurses, nurse practitioners, physician's assistants, pharmacists, emergency medical technicians, other allied health professionals and support staff. Deployment rosters are usually constituted on an ad hoc basis, depending on situational need. NOTE 2: Current NDMS crush injury teams are Type II.					



RESOURCE: DISASTER MEDICAL ASSISTANCE TEAM (DMAT)—MENTAL HEALTH SPECIALTY						
CATEGORY: Health & Medical (ESF 8)			KIND: Team			
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Variable number of deploying personnel; includes medical providers with specialty training/skills in treating psychiatric patients (NOTE 1)	Deployment readiness; Staffing; Training Status; Patient Treatment Capacity	Deploy to site within 24 hrs. of notification with all necessary staff and equipment; function for 72 hrs. in austere location without resupply	Deploy to site within 24 hrs. of notification with all necessary staff; function in existing facility using facility's equipment and supplies (NOTE 2)	Personnel roster only; may be less than full complement		
Shelters, Equipment, and Supplies.	Logistics Status	Full complement	Limited or none	None		
COMMENTS:	<p>Definition: A Mental Health Specialty DMAT is a volunteer group of medical and nonmedical individuals, usually from the same state or region of a state, who have formed a response team under the guidance of the National Disaster Medical System (or state or local auspices), and whose personnel have specific training/skills in the management of psychiatric patients.</p> <p>NOTE 1: Usually includes a mix of physicians, nurses, nurse practitioners, physician's assistants, pharmacists, emergency medical technicians, other allied health professionals and support staff. Deployment rosters are usually constituted on an ad hoc basis, depending on situational need.</p> <p>NOTE 2: Current NDMS mental health teams are Type II.</p>					



**RESOURCE: DISASTER MEDICAL ASSISTANCE TEAM (DMAT)—PEDIATRIC SPECIALTY**

CATEGORY :	Health & Medical (ESF 8)			KIND:	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Variable number of deploying personnel; includes medical providers with specialty training/skills in pediatrics and use of pediatric equipment (NOTE 1)	Deployment Readiness; Staffing; Training Status; Patient Treatment Capacity	Deploy to site within 24 hrs. of notification with all necessary staff and equipment; function for 72 hrs. in austere location without resupply	Deploy to site within 24 hrs. of notification with all necessary staff; function in existing facility using facility's equipment and supplies (NOTE 2)	Personnel roster only; may be less than full complement		
Shelters, Equipment, and Supplies	Logistics status	Full complement	Limited to pediatric items or none	None		
COMMENTS :	Definition: A Pediatric Specialty DMAT is a volunteer group of medical and nonmedical individuals, usually from the same state or region of a state, who have formed a response team under the guidance of the National Disaster Medical System (or state or local auspices), and whose personnel have specific training/skills in the management of pediatric patients. NOTE 1: Usually includes a mix of physicians, nurses, nurse practitioners, physician's assistants, pharmacists, emergency medical technicians, other allied health professionals and support staff. Deployment rosters are usually constituted on an ad hoc basis, depending on situational need. NOTE 2: Current NDMS pediatric teams are Type II; they do not deploy as a fully functioning team but generally codeploy and augment another team.					



RESOURCE: DISASTER MORTUARY OPERATIONAL RESPONSE TEAM (DMORT)						
CATEGORY: Health & Medical (ESF 8)			KIND: Team			
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Standard DMORT has 31 personnel plus basic load of equipment (NOTE 1)	Deployment Readiness, Staffing, Equipment Status, Training Status, Patient Treatment Capacity	Deploy to site within 24 hrs. of notification; provide on-site victim identification and morgue operations; provide family assistance services (NOTE 2)				
DMORT—WMD	Same as above	Same as above except adds additional capability to deal with residually contaminated chemical, biological, or radiological dead				
Deployable Portable Morgue Unit (DPMU)	Fully equipped to support DMORT functions	Add-on when no local morgue facilities available. Supports either standard DMORT or DMORT-WMD. (NOTE 3)				
COMMENTS:	<p>Definition: A Disaster Mortuary Operational Response Team is a volunteer group of medical and forensic personnel, usually from the same geographic region, who have formed a response team under the guidance of the National Disaster Medical System (or state or local auspices), and whose personnel have specific training/skills in victim identification, mortuary services, and forensic pathology and anthropology methods.</p> <p>NOTE 1: Usually includes a mix of medical examiners, coroners, pathologists, forensic anthropologists, medical records technicians, fingerprint technicians, forensic odontologists, dental assistants, radiologists, funeral directors, mental health professionals, and support personnel.</p> <p>NOTE 2: DMORTs are mission tailored on an ad hoc basis, and usually deploy only with personnel and equipment specifically required for current mission.</p> <p>NOTE 3: There are currently two Portable Morgue Units within NDMS.</p>					



RESOURCE: INTERNATIONAL MEDICAL SURGICAL RESPONSE TEAM (IMSuRT)						
CATEGORY: Health & Medical (ESF 8)			KIND: Team			
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
IMSuRT is equipped and trained to provide surgical care outside CONUS. Full team consists of roughly 26 personnel (NOTE 1)	Deployment Readiness; Staffing; Training Status; Patient Treatment Capacity	Able to begin deployment to OCONUS location within 3 hrs. of notification; staff 2 OR suites providing emergency surgery, treatment, and stabilization. Usually deploys with all necessary equipment (NOTE 2)	Some mix of capabilities less than Type I			
Equipment, and Supplies	Logistics Status	Fully equipped to provide free-standing surgical capability, etc. (NOTE 2)	Limited to none			
COMMENTS:	Definition: An International Medical/Surgical Response Team is a volunteer group of medical and nonmedical individuals, usually from the same state or region of a state, that have formed a response team under the guidance of the National Disaster Medical System and the State Department, and whose personnel and equipment give it deployable medical and surgical treatment capability, worldwide. NOTE 1: This is the only NDMS medical team with surgical OR capability. Currently a single IMSuRT exists at level 1, being a successor to the previous IST specialty DMAT. Two additional teams are being formed. NOTE 2: IMSuRT does not usually function in an austere environment without additional support.					



RESOURCE: NDMS MANAGEMENT SUPPORT TEAM (MST)						
CATEGORY: Health & Medical (ESF 8)			KIND: Team			
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Supervisory, Logistics, Communications, and Other Support Personnel (NOTE 1)	Deployment Readiness; Staffing; Training Status; Patient Treatment Capacity	Deploy to site within 24 hrs. of notification; provide federal supervision, coordination, and support at site of any NDMS team deployment, to include ambulatory care (sick call) for federal personnel (NOTE 2)	Deploy to site within 24 hrs. of notification with limited staff and communications equipment, but no tentage (NOTE 2)			
Shelters, Equipment, and Supplies	Logistics status	Full complement	Communication and administration only			
COMMENTS:	Definition: An MST is a command and control team that provides support and liaison functions for other NDMS teams in the field. NOTE 1: MSTs are normally staffed by a mix of federal employees from NDMS headquarters, the PHS-2 team, or the CCRF. Although rostered, MSTs do not exist except when actually deployed in support of a mission. An MST (perhaps as small as one or two individuals) always accompanies an NDMS unit on a deployment. NOTE 2: MSTs are mission-tailored on an ad hoc basis, and usually deploy only with personnel and equipment specifically required for current support mission.					



RESOURCE: VETERINARY MEDICAL ASSISTANCE TEAM (VMAT)						
CATEGORY: Animals and Agriculture Issues			KIND: Team			
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
60 Personnel Plus Equipment (NOTE 1)	Deployment Readiness; Staffing; Training Status; Patient Treatment Capacity	Deploy to site within 24 hrs. of notification; provide animal care, treatment, and shelter; food and water testing; basic epidemiologic capabilities (NOTE 2)	Some mix of capabilities less than Type I			
Shelters, Equipment, and Supplies	Logistics Status	Full complement	Limited or none			
COMMENTS:	<p>Definition: Veterinary Medical Assistance Teams (VMATs) are volunteer teams of veterinarians, technicians, and support personnel, usually from the same region, who have organized a response team under the guidance of the American Veterinary Medical Association and the NDMS, and whose personnel have specific training in responding to animal casualties and/or animal disease outbreaks during a disaster.</p> <p>NOTE 1: Usually includes a mix of veterinarians, veterinary technicians, support personnel, microbiologists, epidemiologists, and veterinary pathologists.</p> <p>NOTE 2: VMATs are usually mission tailored on an ad hoc basis, and usually deploy only with personnel and equipment specifically required for the current mission. All VMATs within NDMS are considered Type 1. Epidemiologic capabilities are limited.</p>					



# **Law Enforcement Resources**



**RESOURCE: BOMB SQUAD/ EXPLOSIVES TEAMS**

CATEGORY :		Law Enforcement/Security			KIND:	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER	
Component	Metric						
Equipment	Blast Protective Clothing	(5) Bomb Suits; (5) Search Suits; (10) Cooling Vests; Tactical Body Armor (helmet with ballistic shield, fire resistant clothing, gloves & hood); Hydration System	(3) Bomb Suits (3) Search Suits (6) Cooling Vests; Tactical Body Armor (helmet with ballistic shield, fire resistant clothing, gloves & hood); Hydration System	(1) Bomb Suits (1) Search Suits (2) Cooling Vests; (recommended); Tactical Body Armor (helmet with ballistic shield, fire resistant clothing, gloves & hood); Hydration System			
	X-Ray	(5) Portable XRay Devices	(3) Portable XRay Devices	(1) Portable XRay Device			
		(2) Real-Time X-Ray	(1) Real-Time X-Ray	(1) Real-Time X-Ray (Recommended)			
	RSP	(5) Disrupters & Advanced render safety Capabilities; DEMO kits	(3) Disrupters & Advanced render safety Capabilities; DEMO kits	(1) Disrupter & Advanced render safety Capabilities; DEMO kits			
	CBRN Protective Clothing	(5) Level A PPE (10) Level B PPE (10) Level C PPE APR	(6) Level B PPE (6) Level C PPE APR	(2) Level C PPE APR			
	Respiratory Protection	SCBA/APR necessary to sustain all team members	SCBA/APR necessary to sustain all team members	APR necessary to sustain all team members			
	Remote Stand-Off Capability	Complete Robot system	Robot system	Stand-Off Manipulation Equipment			
		Rigging Equipment	Rigging Equipment				
	Tools	Bomb Squad Hand Tools	Bomb Squad Hand Tools	Bomb Squad Hand Tools			
		Fiber Optics Camera	Fiber Optics Camera (recommended)				
		"COBRA" Computer	"COBRA" Computer				
	Monitoring/ Detection	CBRN Monitors; personal dosimeters	CBRN Monitors; personal dosimeters				
	Explosive Transport	Total Containment Vessel (TCV)—Chemical/Biological	Containment Vessel	Explosive Containment Box			
	Communi-cation	Intrinsically Safe In-Suit Communication Capability	Intrinsically Safe In-Suit Communication Capability				



**RESOURCE: BOMB SQUAD/ EXPLOSIVES TEAMS**

<b>CATEGORY :</b>		Law Enforcement/Security			<b>KIND:</b>	Team	
<b>MINIMUM CAPABILITIES:</b>		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER	
Component	Metric						
Personnel		(2) Supervisors trained to bomb technician level (10) Bomb Technicians (2) Bomb Trained Medics (Recommended) (2) Explosive K-9 Teams (recommended)	(2) Supervisors trained to bomb technician level (6) Bomb Technicians (1) Bomb Trained Medic (Recommended) (2) Explosive K-9 Teams (recommended)	(2) Tech Bomb Technicians (1) Supervisor recommended (1) Explosive K-9 Teams (recommended)			
Vehicles		(1) Primary Response Vehicle; (1) Back-up Vehicle (1) Armored Vehicle	(1) Dedicated Equipment Vehicle	Equipment Vehicle			
Training		Post Blast Investigation Training—6 weeks; Basic Hazardous Devices school—6 weeks; Robot Operator's Course; Hazardous Materials Tech Training; Additional WMD Training; Advanced Access and Disablement; Explosive Breaching Training; 40 hours continuous training annually; 16 hours training monthly; Recertification every 3 years	Post Blast Investigation Training—6 weeks; Basic Hazardous Devices school – 6 weeks; Hazardous Materials Tech Training; WMD Training; Advanced Access and Disablement; Explosive Breaching Training (Recommended); 40 hours continuous training annually; 16 hours training monthly; Recertification every 3 years	Post Blast Investigation Training—6 weeks; Basic Hazardous Devices school—6 weeks; Hazardous Materials Tech Training; WMD Training; Advanced Access and Disablement; Explosive Breaching Training (Recommended); 40 hours continuous training annually; 16 hours training monthly; Recertification every 3 years			



**RESOURCE: BOMB SQUAD/ EXPLOSIVES TEAMS**

CATEGORY :		Law Enforcement/Security		KIND:		Team					
MINIMUM CAPABILITIES:		TYPE I		TYPE II		TYPE III		TYPE IV		OTHER	
Component		Metric									
COMMENTS :		Type I—A dedicated full-time bomb squad, capable of handling a complex incident. A complex incident may include multiple or simultaneous life-threatening or time-sensitive IEDD incidents, involving sophisticated improvised energetic materials, electronic/remote firing systems, and tactical explosive breaching support. Teams shall consist of a minimum of 10 bomb technicians and 2 supervisors. Team must have render safe capabilities up to and including large vehicle borne IEDs (capable of containing up to 60,000 lbs. of explosive material) and CBRN dispersal devices. Team shall be capable of working in a CBRN environment and support tactical team operations.									
		Type II—A full-time or part-time bomb squad, capable of handling a moderate incident. A moderate incident may include a life-threatening or time-sensitive incident, involving sophisticated improvised energetic materials and electronic/remote firing systems. Teams shall consist of a minimum of 6 bomb technicians and 2 supervisors. Team must have render safe capabilities up to and including a medium vehicle borne IEDs (capable of containing up to 4,000 lbs. of explosive material) and CBRN dispersal devices. Teams should be capable of working in a CBRN environment absent of vapors.									
		Type III—A full-time or part-time bomb squad, capable of handling a small incident. Teams shall consist of a minimum of 2 bomb technicians. Team must have basic IED render safe capabilities. Teams should be capable of working in a CBRN environment absent of vapors and liquids.									
		Definitions									
		RSP		Render Safe Procedure							
		IEDD		Improvised Explosive Device Disposal							
		CBRN		Chemical, Biological, Radiological, Nuclear							
		PPE		Personal Protective Equipment							
		APR		Air Purifying Respirator							
		SCBA		Self Contained Breathing Apparatus							
		Level A PPE		Totally encapsulated chemical resistant vapor suit with SCBA							
		Level B PPE		Non-encapsulated or encapsulated chemical resistant suit with SCBA							
		Level C PPE		Non-encapsulated chemical resistant suit with APR							
		"COBRA" Computer		Chemical Biological Response Aide							
		TCV		Total Containment Vessel							
		WMD		Weapons of Mass Destruction							



**RESOURCE: LAW ENFORCEMENT AVIATION-HELICOPTERS-PATROL & SURVEILLANCE**

CATEGORY :		Law Enforcement/Security			KIND:	Aircraft	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER	
Component	Metric						
Vehicles	Helicopters	4 or more seats incl. Pilot, 12K ft or < ceiling, Certified aircraft, Jet turbine	Same as Type I except Military Surplus	Same as Type II except 2 or more seats incl. Pilot, Certificated aircraft or Military Surplus but would meet Certified, turbine, or reciprocating engine	Same as Type II except 2 or more seats incl. Pilot, Certificated aircraft or Military Surplus but would meet Certified, turbine, or reciprocating engine with fixed or inflatable flotation device		
	Capabilities	VFR	VFR	VFR	VFR		
Equipment	Radios	Programmable/encryption radios (aviation (2) & law enforcement (3 or <))	VHF/UHF capabilities, police radios	VHF/UHF capabilities, police radios	VHF/UHF capabilities, police radios		
	Navigation Equipment	GPS Night Vision Goggles					
	Visual Aids	FLIR	FLIR	FLIR	FLIR		
		Binoculars	Binoculars	Binoculars	Binoculars		
		Microwave Downlink Video Capability	Recommended: Microwave Downlink Video Capability				
	PPE	Helmet, Nomex Flight Suits, Gloves, Full Leather Boots (mandatory for flight crew, optional for other passengers)	Helmet, Nomex Flight Suits, Gloves, Full Leather Boots (mandatory for flight crew, optional for other passengers)	Helmet, Nomex Flight Suits, Gloves, Full Leather Boots (mandatory for flight crew, optional for other passengers)	Helmet, Nomex Flight Suits, Gloves, Full Leather Boots (mandatory for flight crew, optional for other passengers)		
Personnel		Pilot—Commercial or higher, rotary/helicopter, pilot license w/Class I Medical, pre-TFO experience, full-time assignment to unit TFO—Complete unit level trng program, Min. 2 yrs in patrol, Superior field tactics skills, full-time asgmt to unit Maint. Staff—Full-time asgmt, A&P/IA license	Pilot—Same as Type I except Class II Medical TFO—Same as Type I Maint. Staff—Same as Type I except not required to be I/A	Same as Type II except Maint. Staff may be part-time or contracted	Pilot—Same as Type II		



**RESOURCE: LAW ENFORCEMENT AVIATION-HELICOPTERS-PATROL & SURVEILLANCE**

CATEGORY :		Law Enforcement/Security			KIND:	Aircraft	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER	
Component	Metric						
Training		Pilot—Currency trng every 6 mos. with all emerg proc as well as mtg all FAA license requirements TFO—Unit-level trng & Law Enf. AOT Maint. Staff—Maintain I/A license w/ yearly classes	Pilot—Currency trng every 6 mos. with all emerg proc as well as mtg all FAA license requirements TFO—Unit-level trng & Law Enf. AOT	Pilot—Currency trng every 6 mos. with all emerg proc as well as mtg all FAA license requirements TFO—Unit-level trng & Law Enf. AOT	Pilot—Currency trng every 6 mos. with all emerg proc as well as mtg all FAA license requirements, including sea plane license TFO—Unit level trng & Law Enf. AOT		
COMMENTS :	Type I—Day/night patrol helicopters, infrared and visible light, searchlight, jet turbine powered, GPS, microwave or similar downlink, tracking devices Type II—Same as Type I except military surplus Type III—Same as Type II except: jet turbine or reciprocating engines Type IV—Water landing/surveillance/patrol capabilities						
	Definitions						
	A&P	Airframe and Powerplant mechanic					
	FAA	Federal Aviation Administration					
	FLIR	Forward Looking Infrared					
	GPS	Global Positioning System					
	IA	Inspection Authorization					
	IFR/VFR	Instrument Flight Rules/Visual Flight Rules					
	PA	Public Address (speaker)					
	PPE	Personnel Protective Equipment consists of clothing and equipment that provides protection to an individual in a hazardous environment. Chapter 9 of the IHOG details appropriate equipment requirements for various aerial missions and ground helicopter operations.					
	VHF/UHF	Very High Frequency/Ultra High Frequency					
	TFO	Tactical Flight Officer					



RESOURCE: LAW ENFORCEMENT OBSERVATION AIRCRAFT (FIXED WING)						
CATEGORY: Law Enforcement/Security			KIND: Aircraft			
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Vehicle	Fixed-Wing Aircraft	Fixed-Wing Observation Aircraft	Fixed-Wing Observation Aircraft–Low and Slow			
	Capacity	2-4 passenger with cargo not to exceed design specifications of aircraft	2-4 passenger with cargo not to exceed design specifications of aircraft			
Equipment	Flight Suit	Appropriate level of PPE	Appropriate level of PPE			
	Video/ Electronic	Microwave Downlink Video, FLIR				
	Radios	VHF Radios, Police Frequency Radios	VHF Radios, Police Frequency Radios			
Personnel		Pilot–Commercial or higher, ASEL, pilot license w/Class I or II Medical, full-time assignment to unit  TFO–Complete unit level training program, law enforcement trained	Pilot–Commercial or higher, ASEL, pilot license w/Class I or II Medical, full-time assignment to unit  TFO–Complete unit level training program, law enforcement trained			
Training		Pilot—Commercial Pilots Certification or higher (instrument rated), updated every 6 mos. with Emergency Procedures as well as meet all FAA license requirements; Current Medical Flight Review (FAA) TFO–Unit level training & Law Enforcement AOT	Pilot—Commercial Pilots Certification or higher (instrument rated), updated every 6 mos. with Emergency Procedures as well as meet all FAA license requirements; Current Medical Flight Review (FAA) TFO–Unit level training & Law Enforcement AOT			
COMMENTS:	Type I–Fixed-Wing Aircraft with advanced observation capabilities for extended operations and nighttime use. Capable of sending video images to ground location (downlinking). Low and slow observation ability. General law enforcement type of fixed wing.					
	Type II–Fixed-Wing Aircraft with observation capabilities for extended operations, low and slow observation ability. General law enforcement type or fixed wing.					
	<b>Definitions</b>					
	AOT	Advanced Officer Training				
	FAA	Federal Aviation Administration				
	TFO	Tactical Flight Officer				
	VHF	Very High Frequency				



**RESOURCE: MOBILE FIELD FORCE LAW ENFORCEMENT (CROWD CONTROL TEAMS)**

CATEGORY :		Law Enforcement/Security			KIND:	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER	
Component	Metric						
Equipment	Protective Clothing	Protective Clothing; Soft Body Armor (helmet and face shield, gloves, shin guards); Fire-resistant clothing recommended	Protective Clothing; Soft Body Armor (helmet and face shield, gloves, shin guards); Fire-resistant clothing recommended	Protective Clothing; Soft Body Armor (helmet and face shield, gloves, shin guards); Fire-resistant clothing recommended			
	Communi- cation	Team Radio Communication Equipment (portable radios, extra batteries, battery charger, cellular phones)	Team Radio Communication Equipment (portable radios, extra batteries, battery charger, cellular phones)	Team Radio Communication Equipment (portable radios, extra batteries, battery charger, cellular phones)			
	Respiratory Protection	NIOSH-approved protective mask	NIOSH-approved protective mask;	NIOSH-approved protective mask			
	Safety Equipment	Safety glasses; ear protection (recommended); fire extinguisher	Safety glasses; ear protection (recommended); fire extinguisher	Safety glasses; ear protection (recommended); fire extinguisher			
		Foul Weather Gear; Hand-Held Shields	Foul Weather Gear; Hand-Held Shields	Foul Weather Gear; Hand-Held Shields			
		Personal Hydration System	Personal Hydration System	Personal Hydration System			
	Chemical Protective Clothing	Level C PPE suits for entire team	Level C PPE suits for entire team				
	Counter-Sniper Equipment	Provided by SWAT team	(2) Shoulder fired weapons				
	Surveillance Equipment	Video equipment capabilities	Video equipment capabilities	Video equipment capabilities			
	Individual Weapons	Department authorized handguns; duty gear and equipment	Department authorized handguns; duty gear and equipment	Department authorized handguns; duty gear and equipment			
	Impact Weapons	Riot Control Batons or approved impact weapon	Riot Control Batons or approved impact weapon	Riot Control Batons or approved impact weapon			
	Misc. Equipment	Bullhorns; Flex Cuffs; Mass arrest kits	Bullhorns; Flex Cuffs; Mass arrest kits	Bullhorns; Flex Cuffs; Mass arrest kits			
	Delivery Systems	Chemical Agents and Delivery Systems; Less lethal munitions and delivery systems	Chemical Agents and Delivery Systems; Less lethal munitions and delivery systems	Chemical Agents and Delivery Systems; Less lethal munitions and delivery systems			





RESOURCE: MOBILE FIELD FORCE LAW ENFORCEMENT (CROWD CONTROL TEAMS)						
CATEGORY: Law Enforcement/Security			KIND: Team			
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Personnel		1 OIC 1 Deputy OIC 4 Supervisors 2 Counter Snipers 8 Grenadiers 38 Officers 4 Prison Transportation Officers 1 Field Booking Team Recommended	1 OIC 1 Deputy OIC 4 Supervisors 2 Counter Snipers 8 Grenadiers 38 Officers 4 Prison Transportation Officers	1 OIC 2 Supervisors 1 Counter Sniper 4 Grenadiers 19 Officers 2 Prison Transportation Officers		
Vehicles		2 Prisoner Transportation Vans; 14 Patrol Vehicles	2 Prisoner Transportation Vans; 14 Patrol Vehicles	1 Prisoner Transportation Van; 7 Patrol Vehicles		
Training		No known national standard; Law enforcement officer with certified advanced training	No known national standard; Law enforcement officer with certified advanced training	No known national standard; Law enforcement officer with certified advanced training		



**RESOURCE: MOBILE FIELD FORCE LAW ENFORCEMENT (CROWD CONTROL TEAMS)**

<b>CATEGORY :</b>	Law Enforcement/Security			<b>KIND:</b>	Team																			
<b>MINIMUM CAPABILITIES:</b>	<b>TYPE I</b>	<b>TYPE II</b>	<b>TYPE III</b>	<b>TYPE IV</b>	<b>OTHER</b>																			
<b>Component</b>	<b>Metric</b>																							
<b>COMMENTS:</b>	<p>Type I – A pre-designated team consisting of a Type I or a Type II tactical team (platoon) including four 12-person squads and an OIC and a Deputy OIC. Each squad includes a supervisor. The team is capable of managing large-scale operations including managing crowds, traffic control enforcement, and general saturation presence for the purpose of maintaining order and preserving the peace to include CBRN environments. The team engages in routine training to maintain advanced skill level.</p> <p>Type II – A pre-designated team consisting of four 12-person squads and an OIC and a Deputy OIC. Each squad includes a supervisor. The team is capable of managing large crowds, traffic control enforcement, and general saturation presence for the purpose of maintaining order and preserving the peace to include CBRN environments. The team engages in routine training to maintain advanced skill level.</p> <p>Type III – A non-designated team consisting of two 12-person squads and an OIC. Each squad includes a supervisor. The team is capable of managing large crowds, traffic control enforcement, and general saturation presence for the purpose of maintaining order and preserving the peace.</p> <p>**List of Definitions of acronyms and terms used in document will be attached to form.</p> <p><b>Definitions</b></p> <table border="1"> <tr> <td>OIC</td> <td>Officer in Charge</td> </tr> <tr> <td>NIOSH</td> <td>National Institute of Occupational Safety and Health</td> </tr> <tr> <td>CBRN</td> <td>Chemical, Biological, Radiological, Nuclear</td> </tr> <tr> <td>Level C PPE</td> <td>Personal Protection Equipment consisting of a non-encapsulated chemical resistant suit with APR</td> </tr> <tr> <td>SWAT</td> <td>Special Weapons Assault Team</td> </tr> <tr> <td>Platoon</td> <td>Consists of (4) 12-person squads with an OIC (minimum rank of lieutenant) and Deputy OIC (minimum rank of sergeant), each with a driver. Total minimum personnel is 52, with a minimum total of 14 vehicles</td> </tr> <tr> <td>Squad</td> <td>An organized element of a platoon consisting of 11 officers and a supervisor (sergeant). 12 total personnel in a minimum of 3 patrol vehicles</td> </tr> <tr> <td>Field Booking Team</td> <td>A team of personnel specially trained to respond to field incidents and set up a booking site to facilitate the booking process and transportation of those arrested. The size of the team depends on the nature of the incident</td> </tr> <tr> <td>Mass Arrest Kit</td> <td>Kit containing field booking forms, Polaroid or digital camera, flex cuffs, plastic bags for prisoner property, computers, cutting tool for flex cuffs, fingerprint equipment</td> </tr> </table>						OIC	Officer in Charge	NIOSH	National Institute of Occupational Safety and Health	CBRN	Chemical, Biological, Radiological, Nuclear	Level C PPE	Personal Protection Equipment consisting of a non-encapsulated chemical resistant suit with APR	SWAT	Special Weapons Assault Team	Platoon	Consists of (4) 12-person squads with an OIC (minimum rank of lieutenant) and Deputy OIC (minimum rank of sergeant), each with a driver. Total minimum personnel is 52, with a minimum total of 14 vehicles	Squad	An organized element of a platoon consisting of 11 officers and a supervisor (sergeant). 12 total personnel in a minimum of 3 patrol vehicles	Field Booking Team	A team of personnel specially trained to respond to field incidents and set up a booking site to facilitate the booking process and transportation of those arrested. The size of the team depends on the nature of the incident	Mass Arrest Kit	Kit containing field booking forms, Polaroid or digital camera, flex cuffs, plastic bags for prisoner property, computers, cutting tool for flex cuffs, fingerprint equipment
OIC	Officer in Charge																							
NIOSH	National Institute of Occupational Safety and Health																							
CBRN	Chemical, Biological, Radiological, Nuclear																							
Level C PPE	Personal Protection Equipment consisting of a non-encapsulated chemical resistant suit with APR																							
SWAT	Special Weapons Assault Team																							
Platoon	Consists of (4) 12-person squads with an OIC (minimum rank of lieutenant) and Deputy OIC (minimum rank of sergeant), each with a driver. Total minimum personnel is 52, with a minimum total of 14 vehicles																							
Squad	An organized element of a platoon consisting of 11 officers and a supervisor (sergeant). 12 total personnel in a minimum of 3 patrol vehicles																							
Field Booking Team	A team of personnel specially trained to respond to field incidents and set up a booking site to facilitate the booking process and transportation of those arrested. The size of the team depends on the nature of the incident																							
Mass Arrest Kit	Kit containing field booking forms, Polaroid or digital camera, flex cuffs, plastic bags for prisoner property, computers, cutting tool for flex cuffs, fingerprint equipment																							



RESOURCE: SWAT/TACTICAL TEAMS						
CATEGORY : Law Enforcement/Security			KIND: Team			
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Equipment	Protective Clothing	Protective Clothing; Tactical Body Armor (helmet with ballistic shield, fire resistant gloves & hood);	Protective Clothing; Tactical Body Armor (helmet with ballistic shield, fire resistant gloves & hood);	Protective Clothing; Tactical Body Armor (helmet with ballistic shield, fire resistant gloves & hood);		
	Communi- cation	Team Radio Communication Equipment (portable radios, extra batteries, battery charger, cellular phones)	Team Radio Communication Equipment (portable radios, extra batteries, battery charger, cellular phones)	Team Radio Communication Equipment (portable radios, extra batteries, battery charger, cellular phones)		
		Night Vision Goggles for entry and containment				
		2 Night Vision Scopes	2 Night Vision Scopes			
	Ballistic Protection	Soft and tactical Body Armor for all team members	Soft and tactical Body Armor for team members	Soft and tactical Body Armor for team members		
	Respiratory Protection	NIOSH-approved protective mask	NIOSH-approved protective mask;	NIOSH-approved protective mask		
		14 SCBAs	SCBAs recommended			
	Safety Equipment	Safety glasses, ear protection	Safety glasses, ear protection	Safety glasses, ear protection		
	Chemical Protective Clothing	Level B and C PPE Suits for entire team	Level B and C PPE Suits for entire team	Level C PPE Suits for entire team		
	Breaching Equipment	Mechanical Breaching Equipment	Mechanical Breaching Equipment	Mechanical Breaching Equipment		
		Shotgun Breaching Equipment	Shotgun Breaching Equipment	Shotgun Breaching Equipment (Recommended)		
		Explosive Breaching Equipment	Explosive Breaching Equipment Recommended			
	Sniper Equipment	Extended long-range weapons greater than 500 yards with day and night scope	Long-range weapons less than 500 yards with day and night scope	Long-range weapons less than 500 yards with day scope		
		Chemical Agents and delivery system	Chemical Agents and delivery system	Chemical Agents and delivery system		
		Less lethal munitions and delivery systems	Less lethal munitions and delivery systems	Less lethal munitions and delivery systems		
	Robot Systems	Robot System with tactical options	Robot System with tactical options recommended			







RESOURCE: SWAT/TACTICAL TEAMS						
CATEGORY : Law Enforcement/Security			KIND: Team			
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
	Safety Equipment	Foul Weather Gear	Foul Weather Gear	Foul Weather Gear		
		Personal Hydration System	Personal Hydration System	Personal Hydration System		
	Surveillance Equipment	Listening equipment; video equipment; fiber optics	Listening equipment; video equipment			
		Transmitting equipment that will include wireless and hardline				
		IR Capability				
		Portable Ladders	Portable Ladders	Portable Ladders		
	Weapons	Weapons: Handguns, assault weapons,	Weapons: Handguns, assault weapons,	Weapons: Handguns, assault weapons,		
		Lighted Weapon System	Lighted Weapons System	Lighted Weapons System		
		Distraction Devices	Distraction Devices	Distraction Devices		
		Rappelling & Fast Rope Equipment	Rappelling Equipment			
		Hand Held Ballistic Shields	Hand-Held Ballistic Shields	Hand-Held Ballistic Shields		
Personnel		2 Long Rifle Teams (2-man Team); 6 Man Entry Team; 1 Team Leader; 8 Containment to include grenadiers; 2 Tactical Medics; 1 Liaison; 1 Tactical Commander; 2 Canine Teams; 1 Electronic Tech; 1 Scribe; 1 Communications Officer; 2 Explosive Breachers; 1 Robot Technician	2 Long Rifle Teams (2-man Team); 6 Man Entry Team; 1 Team Leader; 8 Containment to include grenadiers; 1 Tactical Medic; 1 Liaison; 1 Tactical Commander; Canine Teams recommended; Electronic Tech recommended; Explosive Breachers recommended; Robot Technician recommended	2 Long Rifle Teams (2-man Team); 4 Man Entry Team; 1 Team Leader; 8 Containment to include grenadiers; 1 Tactical Medic recommended; 1 Liaison recommended; 1 Tactical Commander;		
Vehicles		Armored Personnel Carrier (APC)	Armored Personnel Carrier (APC) recommended			






RESOURCE: SWAT/TACTICAL TEAMS						
CATEGORY :	Law Enforcement/Security			KIND:	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Training		No known national standard; Law enforcement officer with certified advanced training	No known national standard; Law enforcement officer with certified advanced training	No known national standard; Law enforcement officer with certified advanced training		
COMMENTS :	Type I—A dedicated full-time team designated to handle high-risk situations requiring specialized weapons or extraordinary special operations. Team capable of operating in rural and urban environments. Team capability includes dealing with chemical, biological, radiological, and nuclear (CBRN) events. Teams should be capable of working in a CBRN environment absent of vapors.					
	Type II—A full-time or part-time team designated to handle high-risk situations requiring specialized weapons or extraordinary special operations. Team capable of operating in either rural or urban environments. Teams should be capable of working in a CBRN environment absent of vapors.					
	Type III—A team designated to handle high-risk situations requiring specialized weapons with limited resources and capabilities. Teams should be capable of working in a CBRN environment absent of vapors and liquids.					
	Definitions					
	CBRN		Chemical, Biological, Radiological, Nuclear			
	PPE		Personal Protective Equipment			
	APR		Air Purifying Respirator			
	SCBA		Self-Contained Breathing Apparatus			
	Level B PPE		Non-encapsulated or encapsulated chemical resistant suit with SCBA			
	Level C PPE		Non-encapsulated chemical resistant suit with APR			
NIOSH		National Institute of Occupational Safety and Health				
APC		Armored Personnel Carrier				

# Public Works





RESOURCE: Air Conditioner/Heater						
CATEGORY: Public Works and Engineering (ESF 3)			KIND: Equipment			
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric	90 Ton	60 Ton	25 Ton	10 Ton	
Equipment	Ton	<p>Air conditioner/heater; 90 Ton Air Cooled Direct Expansion portable A/C unit w/ heat; 26,000 cfm (cubic feet per minute) of air delivered; Weight: 19,900 lbs; Can be trailer mounted (flat bed semi) dimensions: 20' Long x 8' Wide x 9'5" Tall; Power requirements: <b>Cooling only</b> 260 Amps at 460 volts, 3 phase, 60 hz; <b>Heat only</b> (250 kW) 368 Amps at 460 volts, 3 phase, 60 hz; (8) 20" Flex duct connections for air supply (4)/ return (4); <b>Potential application examples: Airports, Universities, Malls, Moisture removal from wet buildings &amp; materials (weather / temperature permitting).</b> Setup time varies depending on duct installation, fabricating, wiring, etc...2+ hours; 4/0 Cam-Lock type quick connect cable used for power termination to source.</p>	<p>Air conditioner/heater; 60 Ton Air Cooled Direct Expansion portable A/C unit w/ heat; 17,000 cfm (cubic feet per minute) of air delivered; Weight: 16,500 lbs; Can be trailer mounted (flat bed semi) dimensions: 20' Long x 8' Wide x 8'5" Tall. Power requirements: <b>Cooling only</b> 160 Amps at 460 volts, 3 phase, 60 hz; <b>Heat only</b> (125 kW) 200 Amps at 460 volts, 3 phase, 60 hz; (8) 20" Flex duct connections for air supply (4)/ return (4); <b>Potential application examples: Airports, Retail stores, Schools, Moisture removal from wet buildings &amp; materials (weather / temperature permitting).</b> Setup time varies depending on duct installation, fabricating, wiring, etc...2+ hours; 4/0 Cam-Lock type quick connect cable used for power termination to source.</p>	<p>Air conditioner/heater; 25 Ton Air Cooled Direct Expansion portable A/C unit w/ heat; 9,400 cfm (cubic feet per minute) of air delivered; Weight: 4,140 lbs; Can be trailer mounted (flat bed tow behind) dimensions: 12' Long x 7'6" Wide x 5' Tall; Power requirements: <b>Cooling only</b> 60 Amps at 460 volts, 3 phase, 60 hz; <b>Heat only</b> (72 kW) 100 Amps at 460 volts, 3 phase, 60 hz; (4-6) 20" Flex duct connections for air supply (2)/ return (2-4); <b>Potential application examples: Tents, Small retail stores, Libraries, Moisture removal from wet buildings &amp; materials (weather / temperature permitting).</b> Setup time varies depending on duct installation, fabricating, wiring, etc...2+ hours; 4/0 Cam-Lock type quick connect cable used for power termination to source.</p>	<p>Air conditioner / heater; Caterpillar/York 10 Ton Air Cooled Direct Expansion portable A/C unit w/ heat; 4,000 cfm (cubic feet per minute) of air delivered; Weight: 1,500 lbs; Can be trailer mounted (flat bed tow behind) dimensions: 11' Long x 6'5" Wide x 5' Tall; Power requirements: <b>Cooling only</b> 24 Amps at 460 volts, 3 phase, 60 hz; <b>Heat only</b> (54 kW) 71 Amps at 460 volts, 3 phase, 60 hz; (3) 20" Flex duct connections for air supply (1)/ return (2); <b>Potential application examples: Tents, Computer rooms, Small office (2,000 sq. ft.), Moisture removal from wet buildings &amp; materials (weather / temperature permitting).</b> Setup time varies depending on duct installation, fabricating, wiring, etc...2+ hours; 4/0 Cam-Lock type quick connect cable used for power termination to source.</p>	
COMMENTS:	   					


RESOURCE: AIR CURTAIN BURNERS (FIRE BOX-ABOVE GROUND, REFRACTORY WALLED)							
CATEGORY : Public Works and Engineering (ESF 3)				KIND: Equipment			
MINIMUM CAPABILITIES:		TYPE I	TYPE II	Type III	TYPE IV	TYPE V	TYPE VI
Component	Metric	S-327	S-321	S-220	S-217	S-116	S-111
Equipment	Tons/Hr	<b>Dimensions:</b> Overall LxWxH: 37'4"x11'10"x9'7" Firebox: 27'2"x8'5"x8'1" Weight: 50,000 lbs Avg. Thru-put: 6-10 tons/hr Engine: Perkins 1004.42 Fuel: Diesel, ~ 3 gal/hr Unit is shipped completely assembled; transportable by drop- deck trailer	<b>Dimensions:</b> Overall LxWxH: 31'4"x11'10"x9'7" Firebox: 21'2"x8'5"x8'1" Weight: 46,000 lbs Avg. Thru-put: 5-8 tons/hr Engine: Perkins 1004.42 Fuel: Diesel, ~ 3 gal/hr Unit is shipped completely assembled; transportable by drop- deck trailer	<b>Dimensions:</b> Overall LxWxH: 30'2"x8'6"x8'6" Firebox: 19'8"x6'2"x7'1" Weight: 33,500 lbs Avg. Thru-put: 3-6 tons/hr Engine: Perkins 404C Fuel: Diesel, ~ 2.5 gal/hr Unit is shipped completely assembled transportable by flatbed or tilt bed tag trailer	<b>Dimensions:</b> Overall LxWxH: 27'x8'6"x8'6" Firebox: 16'5"x6'2"x7'1" Weight: 30,000 lbs Avg. Thru-put: 2-5 tons/hr Engine: Perkins 404C Fuel: Diesel, ~ 2.5 gal/hr Unit is shipped completely assembled transportable by flatbed or tilt bed tag trailer	<b>Dimensions:</b> Overall LxWxH: 27'x7'5"x7'8" Firebox: 16'x5'x6' Weight: 26,000 lbs Avg. Thru-put: 1-4 tons/hr Engine: Perkins 404C Fuel: Diesel, ~ 2.5 gal/hr Unit is shipped completely assembled transportable by flatbed or tilt bed tag trailer	<b>Dimensions:</b> Overall LxWxH: 21'6"x7'5"x7'8" Firebox: 11'x5'x6' Weight: 21,300 lbs Avg. Thru-put: ½-2 tons/hr Engine: Perkins 404C Fuel: Diesel, ~ 2.5 gal/hr Unit is shipped completely assembled transportable by flatbed or tilt bed tag trailer
		<b>Application:</b> Wood Waste Reduction & Animal Carcass Disposal (needs wood waste to support carcass combustion)	<b>Application:</b> Wood Waste Reduction & Animal Carcass Disposal (needs wood waste to support carcass combustion)	<b>Application:</b> Wood Waste Reduction & Animal Carcass Disposal (needs wood waste to support carcass combustion)	<b>Application:</b> Wood Waste Reduction & Animal Carcass Disposal (needs wood waste to support carcass combustion)	<b>Application:</b> Wood Waste Reduction & Small Animal Carcass Disposal (needs wood waste to support carcass combustion)	<b>Application:</b> Wood Waste Reduction & Small Animal Carcass Disposal (needs wood waste to support carcass combustion)
		On GSA Schedule	On GSA Schedule	On GSA Schedule	On GSA Schedule	On GSA Schedule	On GSA Schedule
COMMENTS:							
		S-300 Series (Type I & II)		S-200 Series (Type II & III)		S-100 Series (Type IV & V)	



**RESOURCE: AIR CURTAIN BURNERS (TRENCH BURNER, IN-GROUND)**

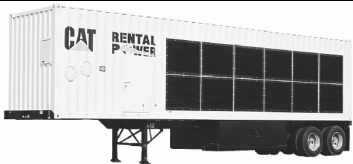



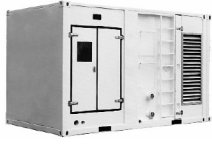
CATEGORY :	1 Public Works and Engineering (ESF 3)			KIND:	Equipment	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric	T-400	T-200	T-350		
Equipment	Tons/HR	<b>Dimensions:</b> Overall L×W×H: 28'×8'1"×6'10" Pit or Trench: 40'×10'×12' Weight: 6,900 lbs Tongue: 1,400 lbs Avg. Thru-put: 5-8 tons/hr Engine: Kubota V3300E Fuel: Diesel, ~ 3 gal/hr Unit is dual-axle trailer-mounted; 2 5/8" ball hitch or pintle hitch; electric brakes	<b>Dimensions:</b> Overall L×W×H: 28'×8'1"×6'10" Pit or Trench: 20'×10'×10' Weight: 4,900 lbs Tongue: 890 lbs Avg. Thru-put: 1-4 tons/hr Engine: Perkins 404C Fuel: Diesel, ~ 2.5 gal/hr Unit is dual-axle trailer-mounted; 2 5/8" ball hitch or pintle hitch; electric brakes	<b>Dimensions:</b> Overall L×W×H: 18'9"×8'2"×8'7" Pit or Trench: 35'×12'×12' Weight: 7,000 lbs Tongue: 1,200 lbs Avg. Thru-put: 4-7 tons/hr Engine: Perkins 1004.42 Fuel: Diesel, ~ 3 gal/hr Unit is dual-axle trailer-mounted; 2 5/8" ball hitch or pintle hitch; electric brakes		
		<b>Application:</b> Wood Waste Reduction & Animal Carcass Disposal (needs wood waste to support carcass combustion)	<b>Application:</b> Wood Waste Reduction & Animal Carcass Disposal (needs wood waste to support carcass combustion)	<b>Application:</b> Wood Waste Reduction & Animal Carcass Disposal (needs wood waste to support carcass combustion)		
		On GSA Schedule	On GSA Schedule			
COMMENTS :						
	T-400 & T200 (Type I & II)			T-350 (Type III)		



RESOURCE: ALL TERRAIN CRANES						
CATEGORY: Public Works and Engineering (ESF 3)			KIND: Equipment; Personnel; Vehicle			
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Equipment & Personnel	Tons	<b>210-175</b> Crane type with boom reach of 170 feet. With jib reaches to approx. 280 feet. Self-propelled/driven over the road. Operator furnished. Setup time minimal. Jib and counter-weight are transported by two tractor-trailers	<b>50-120</b> Crane type with boom reach of 150 feet. With jib reaches to approx. 250 feet. Self-propelled/driven over the road. Operator furnished. Setup time minimal. Jib and counter-weight are transported by two tractor-trailers	<b>110-90</b> Crane type with boom reach of 192 feet. With jib add approx. 30 feet. Self-propelled/driven over the road. Operator furnished. Setup time minimal. Jib and counter-weight are transported by two tractor-trailers	<b>22.5</b> Crane type with boom reach of 90 feet. With jib add approx. 30 feet. Self-propelled/driven over the road. Operator furnished. Setup time minimal	
COMMENTS:	Check with your local/state transportation and law enforcement organizations to determine mobilization requirements.					
						




RESOURCE: CHILLERS & AIR HANDLERS (500 Ton to 50 Ton)							
CATEGORY	Public Works and Engineering (ESF 3)				KIND:	Equipment	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	Type III	TYPE IV	TYPE V	TYPE VI
Component	Metric						
Equipment	Ton	<b>500/450 Ton Chiller</b> Caterpillar/York 450/500 Ton Air Cooled Chiller; Built-in pump delivering 330-1600 gpm (gallons per minute); will operate in series or parallel operation w/multiple units; 8" flanged water fittings on exterior; Weight: 50,000 lbs; Trailer mounted (semitractor) dimensions: 40' Long x 8'.5" Wide x 13'.5" Tall; Power requirements: 800-980 Amps at 460 volts, 3 phase, 60 hz; Temporary quick connect chilled water hose available with unit for tie in to chilled water system; Potential application examples: Single or multiple units for Computer centers, High-rise buildings, Heavy manufacturing, Airports, Universities. Setup time varies depending on hose installation, water filling, fabricating, etc...4+ hours; 4/0 Cam-Lock type quick connect cable used for power termination to source	<b>300 Ton Chiller</b> Caterpillar/York 300 Ton Air Cooled Chiller; Built-in pump(s) delivering 250-800 gpm; 6" flanged water fittings on exterior; Weight: 33,000 lbs; Trailer mounted (semitractor) dimensions: 30' Long x 8' Wide x 13'.5" Tall; Power requirements: 600-700 Amps at 460 volts, 3 phase, 60 hz; Temporary quick connect chilled water hose available with unit for tie in to chilled water system; Potential application examples: Single or multiple units for Office buildings, Multi-story buildings, Schools, Temporary structures, Retail stores. Setup time varies depending on hose installation, water filling, fabricating, etc...3+ hours; 4/0 Cam-Lock type quick connect cable used for power termination to source	<b>150 Ton Chiller</b> Caterpillar/York 150 Ton Air Cooled Chiller; Built-in pumps delivering 250-700 gpm; 6" flanged water fittings on exterior; Weight: 31,000 lbs; Trailer mounted (semitractor) dimensions: 20/30' Long x 8' Wide x 12'.5" Tall; Power requirements: 329-400 Amps at 460 volts, 3 phase, 60 hz; Temporary quick connect chilled water hose available with unit for tie in to chilled water system; Potential application examples: Single or multiple units for Medium office buildings, Libraries, Hotels/motels, Condominiums, Retail stores. Setup time varies depending on hose installation, water filling, fabricating, etc...2+ hours; 4/0 Cam-Lock type quick connect cable used for power termination to source	<b>50 Ton Chiller</b> Caterpillar/York 50 Ton Air Cooled Chiller; Built-in pump delivering 75-200 gpm; 4" quick connect water fittings on exterior; Weight: 5,500 lbs.; Skid mounted w/ forklift pockets (8,000 lb. lift recommended) dimensions: 12' Long x 7'.5" Wide x 8'.5" Tall; Power requirements: 125 Amps at 460 volts, 3 phase, 60 hz; Temporary quick connect chilled water hose available with unit for tie in to chilled water system. Potential application examples: Single or multiple units for Small office buildings, Tent/shelter cooling, Small-medium retail stores. Setup time varies depending on hose installation, water filling, fabricating, etc...2+ hours; 4/0 Cam-Lock type quick connect cable used for power termination to source	<b>Custom Rental Air Handling Units: 50, 75, &amp; 100 Tons</b> For delivering cold air with use of any chiller, 5,000-30,000 cfm depending on unit; 20" diameter flex duct inlets/outlets for air distribution supply/return; 4/0 Cam-Lock type quick connect cable used for power termination to source; Call for power requirements and sizing; Potential application examples: Single or multiple units for buildings w/out HVAC systems, Tent/shelter cooling, etc Setup time varies on application 1-2 hours each	


RESOURCE: CHILLERS & AIR HANDLERS (500 TON TO 50 Ton)						
CATEGORY	Public Works and Engineering (ESF 3)			KIND:	Equipment	
MINIMUM CAPABILITIES:	TYPE I	TYPE II	Type III	TYPE IV	TYPE V	TYPE VI
Component	Metric					
COMMENTS:	Caterpillar equipment used for typing. Equipment not available at all locations, but CAT dealer network can acquire equipment from one another and ship. Need fresh water source for filling chilled water system. Temporary chilled water hose & 4/0 power cable available for chillers. Set up & monitoring available. Low Temp Chillers and Cooling Towers available. Air handlers require use of chillers or chilled water supply to operate.					
						
	500/450 Ton	300 Ton	150 Ton	50 Ton	Custom Rental Air Handling Unit	



RESOURCE: CONCRETE CUTTER/MULTI-PROCESSOR FOR HYDRAULIC EXCAVATOR						
CATEGORY: Public Works and Engineering			KIND: Equipment			
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric	MP40 CC (Largest)	MP30 CC	MP20 CC	MP15 CC (smallest)	
Jaw Opening	Inches	50.4	38.4	32	26	
Jaw Depth	Inches	43.3	35	31	26	
Force at Tooth Tip	Short Ton	168	140	107	79	
Force Primary Blade Center	Short Ton	494	460	337	247	
Weight of Jaw	Pounds	4850	7935	5730	3970	
Weight With housing	Pounds	12785	20.5	18	16	
Cutter Length	Inches	23.6	110.2	95	87	
Length	Inches	137.8	208	157	112	
Force At Cutting Tip	Short Ton	247	2865	2205	1430	
Max Op Pres Hyd. Cylinder	Pressure Per Square Inch	5075	5075	5075	5075	
Maximum Oil flow Cylinder	Gallons Per Minute	106	79	53	40	
Maximum Oil flow Cylinder	Cycle - Seconds	7.5	6.5	6	5	
Maximum Operating Pressure Rotator	Pressure Per Square Inch	2030	2030	2030	2030	
Maximum Oil Flow Rotator	Gallons per minute	22	11	11	11	
For Use on Models		375, 375 L Hydraulic Excavators	345B L Series II Hydraulic Excavators	322C L, 325C L Hydraulic Excavators	321 B LCR, 322C L Hydraulic Excavators	
COMMENTS:	Multi-processors do the work of many types of demolition tools by use of interchangeable jaw sets. Changing jaws allows a single unit to crush, pulverize, and perform a variety of specialized cutting tasks, such as cutting steel rebar and tanks. Check with Cat dealer/owner to match Multi-processor model attachment to Hydraulic Excavator.					



RESOURCE: CONCRETE CUTTER/MULTI-PROCESSOR FOR HYDRAULIC EXCAVATOR						
CATEGORY :	Public Works and Engineering			KIND:	Equipment	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric	MP40 CC (Largest)	MP30 CC	MP20 CC	MP15 CC (smallest)	
						

RESOURCE: CRAWLER CRANES						
CATEGORY: Public Works and Engineering (ESF 3)			KIND: Equipment; Personnel; Vehicle			
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Equipment & Personnel	Tons	<b>200</b> (Manitowoc 777) with a boom reach of 300 feet Operator with one (1) oiler/rigger. Requires nine (9) tractor-trailers to mobilize & demobilize. Setup time six (6) hours.	<b>100</b> (Manitowoc 222) with a boom reach of 300 feet Operator with one (1) oiler/rigger. Requires four (4) tractor-trailers to mobilize & demobilize. Setup time four (4) hours.	<b>80</b> (Manitowoc 111) with a boom reach of 300 feet Operator with one (1) oiler/rigger. Requires four (4) tractor-trailers to mobilize & demobilize. Setup time two (2) hours.		
COMMENTS:		Check with your local/state transportation and law enforcement organization to determine mobilization requirements.				
						



**RESOURCE: DEBRIS MANAGEMENT MONITORING TEAM**

CATEGORY :		Public Works and Engineering (ESF 3)			KIND:	Team; Personnel	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER	
Component	Metric						
Services	Annual Contracts; Per Unit; Hourly; Lump Sum	<b>General Manager (GM)</b>  GM responsibility would include overall coordination with all levels of government and other ESFs; Knowledge of the Federal Response Plan, and Federal response and recovery procedures related to debris management; Site monitoring of health and safety requirement in meeting local, State, or Federal standards during any and all parts of the recovery process whether from manmade or natural occurrences; Appropriate standards for the debris processing and disposal to successfully complete the recovery process of an event; Ability to manage and oversee owner's current debris removal operations plan; Highest trained in debris monitoring management and recovery operations; Highest experience level in meeting federal record keeping requirements and processing procedures; Highest knowledge in managing multiple service levels of manmade and or natural disasters; Financial capabilities to manage progressive monitoring processes; Required and	<b>Project Manager (PM)</b>  PM responsibility would include overall management of all taskings under the project to include removal, reduction and disposal/salvage operations. Monitors changes in the scope of original assignment, cost estimates, coordinating the procurement process, scheduling, tracking of funds, and reporting all elements of work progress. Knowledge of the Federal Response Plan, and Federal response and recovery procedures related to debris management; Monitors and assures that health and safety procedures and requirements meet local, State, or Federal standards during any and all parts of the recovery process whether from manmade or natural occurrences; Monitors the compliance of debris processing and disposal to successfully complete the recovery process of an event; Ability to manage and oversee owner's current debris removal operations plan; Highest trained in debris project management and recovery operations; Highest experience level in meeting				





**RESOURCE: DEBRIS MANAGEMENT MONITORING TEAM**

CATEGORY :		Public Works and Engineering (ESF 3)			KIND:	Team; Personnel	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER	
Component	Metric						
		necessary liability coverage for all aspects of operation; Highest ability to manage work programs and personnel safely, with the highest regard to safety and applicable regulations protecting employees of the company and community; Highest capabilities to recruit support staffing within acceptable timeframe	federal record keeping requirements and processing procedures; Highest ability to manage work programs and personnel safely, with the highest regard to safety and applicable regulations protecting employees of the company and community				
Equipment		Ability to supply, support, and maintain an inventory of varying equipment specialties in assisting the handling of all aspects of monitoring for health and safety of personnel involved with recovery operations	Ability to support and maintain an inventory of varying equipment specialties in assisting the handling of all aspects of monitoring the health and safety of personnel involved with recovery operations				
Personnel		The highest trained and experienced in the field of debris management procedures; Very good communication skills and the ability to effectively brief high level officials; Highest capability to train and manage assisting resources; Highest ability to comply with all local, State, Federal authority, and OSHA regulations to which services are being applied; No use restriction as it relates to assignment; Fully mobilized and fully equipped; Permanently assigned to completion of task on rotation, 30/3	Trained and experienced in the field of debris management procedures; Very good communication skills; Highest capability to manage assisting resources; General understanding of equipment leasing contracts, various type of equipment, and unit price contracts. Highest ability to comply with all local, State, Federal authority, and OSHA regulations to which services are being applied; No use restriction as it relates to assignment; Fully mobilized and fully equipped; Have an engineering background with a background in site				



RESOURCE: DEBRIS MANAGEMENT MONITORING TEAM						
CATEGORY : Public Works and Engineering (ESF 3)			KIND: Team; Personnel			
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
			development and proven skills in the field of construction; Permanently assigned to completion of task on rotation, 30/3			
COMMENTS:						



**RESOURCE: DEBRIS MANAGEMENT TEAM**






CATEGORY :		Public Works and Engineering (ESF 3)			KIND:	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER	
Component	Metric						
Services	Annual Contracts; Per Unit; Hourly; Lump Sum	<b>Long &amp; Short Term</b> Management of national and international situations and events for manmade and natural occurrences that would produce debris requiring the resources to successfully complete the recovery process of debris management; Maintains a current and active debris removal operations plan; Highest training in debris management and recovery operations; Highest experience level in meeting federal record keeping requirements and processing procedures; Highest knowledge in managing multiple service levels of manmade and/or natural disasters; Financial capabilities to manage progressive recovery processes; Has required and necessary liability coverage for all aspects of operation; Highest ability to manage work programs and its personnel safely and with the highest regard to safety and applicable regulations protecting employees of the company and community. Highest capabilities to recruit support staffing within acceptable timeframe; Mobilization timeframe: 24 hours—25%	<b>Long &amp; Short Term</b> Management of national and international situations and events for manmade and natural occurrences that would produce debris requiring the resources to successfully complete the recovery process of debris management; Maintains a current and active debris removal operations plan; Highest training in debris management and recovery operations; Highest experience level in meeting federal record keeping requirements and processing procedures; Highest knowledge in managing multiple service levels of manmade and or natural disasters; Financial capabilities to manage progressive recovery processes; Has required and necessary liability coverage for all aspects of operation; Highest ability to manage work programs and its personnel safely and with the highest regard to safety and applicable regulations protecting employees of the company and community. Highest capabilities to recruit support staffing within acceptable timeframe; Mobilization timeframe: 24 hours—25%,	<b>Long &amp; Short Term</b> Management of national and international situations and events for manmade and natural occurrences that would produce debris requiring the resources to successfully complete the recovery process of debris management; Management of multiple community resources through its management teams; Maintains a current and active debris removal operations plan; Highest training in debris management and recovery operations; Highest experience level in meeting federal record keeping requirements and processing procedures; Highest knowledge in managing multiple service levels of manmade and or natural disasters; Financial capabilities to manage progressive recovery processes; Has required and necessary liability coverage for all aspects of operation; Highest ability to manage work programs and its personnel safely and with the highest regard to safety and applicable regulations protecting employees of the company and community. Highest capabilities to recruit			





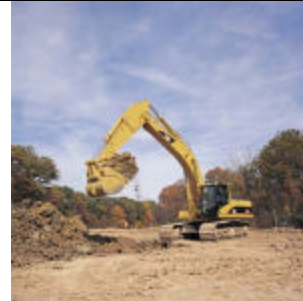


RESOURCE: DEBRIS MANAGEMENT TEAM						
CATEGORY: Public Works and Engineering (ESF 3)			KIND: Team			
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
		48 hours—75%, 72 hours—100%; Debris removal will commence following the first 24 hours	48 hours—50%, 72 hours—75%, 96 hours? 100%; Debris removal will commence following the first 24-36 hours	support staffing within acceptable timeframe; Mobilization timeframe: 36 hours—25%, 48 hours—50%, 72 hours—75%, 96 hours—100%; Debris removal will commence following the first 24-36 hours		
Equipment		Ability to supply, support, and maintain an inventory of varying equipment specialties in handling all aspects of disaster recovery	Ability to supply, support, and maintain an inventory of varying equipment specialties in handling all aspects of disaster recovery	Utilization of all available community support equipment; Ability to supply, support, and maintain additional inventory of varying equipment specialties in handling all aspects of disaster recovery		
Personnel		The highest trained and experienced in the field of debris management and recovery; Sufficient quantity of personnel to support all required services; Highest capability to train assisting resources; Highest ability to comply with OSHA regulations to which services are being applied; No use restriction as it relates to assignment; Fully mobilized and fully equipped; Permanently assigned to completion of task	The highest trained and experienced in the field of debris management and recovery; Sufficient quantity of personnel to support all required services; Highest capability to train assisting resources; Highest ability to comply with OSHA regulations to which services are being applied; No use restriction as it relates to assignment; Fully mobilized and fully equipped; Permanently assigned to completion of task	The highest trained and experienced in the field of debris management and recovery; Sufficient quantity of personnel to support all required services; Interacting available community management resources at all levels and managing their performance; Highest capability to train all assisting resources; Highest ability to comply with OSHA regulations to which services are being applied; No use restriction as it relates to assignment; Fully mobilized and fully equipped; Permanently assigned to completion of task		
COMMENTS:						







RESOURCE: GENERATORS						
CATEGORY: Public Works and Engineering (ESF 3)			KIND: Equipment			
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	TYPE V
Component	Metric					
Equipment	KW	<b>XQ2000</b> 2000 kW Generator; Sound attenuated; Trailer mounted (semi tractor); Up to 3015 Amps@ 480 Volts, 3 Phase, 60 Hz; Dry weight 89,000 lbs; Fuel tank capacity 1250 Gallons; Dimensions 40' Long x 8' Wide x 13'.5" Tall; Potential application example—Single or multiple units for: Power plants, heavy industrial facility, high-rise buildings; Setup time (cables from generator to main power feed estimated at 5+ hours)	<b>XQ1500</b> 1500 kW Generator, Sound attenuated; Trailer mounted (semi tractor); Up to 2260 Amps@ 480 Volts, 3 Phase, 60 Hz; Dry weight 59,000 lbs; Fuel tank capacity 1250 Gallons; Dimensions 40' Long x 8' Wide x 13'.5" Tall; Potential application example—Single or multiple units for: Universities, hospitals, medium to large manufacturing facility; Setup time (cables from generator to main power feed estimated at 5+ hours)	<b>XQ600</b> 600 kW Generator; Sound attenuated; Trailer mounted (semi tractor); Up to 2080 Amps@ 208 Volts, 3 Phase, 60 Hz / up to 902 Amps@ 480 Volts 3 Phase, 60 Hz; Dry weight 37,000 lbs; Fuel tank capacity 660 Gallons; Dimensions 40' Long x 8' Wide x 13'.5" Tall; Potential application examples: Retail stores, HVAC system power, multi-story/buildings, light manufacturing, apartment buildings; Setup time (cables from generator to main power feed estimated at 3+ hours)	<b>XQ400</b> 400 kW Generator; Sound attenuated; Trailer mounted (pull behind); Multi -voltage distribution panel; Up to 1390 Amps @ 208 Volts, 3 Phase, 60 Hz/up to 602 Amps@ 480 Volts 3 Phase, 60 Hz; Dry weight 16,800 lbs; Fuel tank capacity 470 Gallons; Dimensions 23' Long x 8'.5" Wide x 11' Tall; Potential application example: Large office building, public schools, libraries, and communication equipment. Setup time (cables from generator to main power feed estimated at 2+ hours)	<b>XQ125</b> 125 kW Generator; Sound attenuated; Trailer mounted (pull behind); Multi -voltage distribution panel; Up to 433 Amps@ 208 Volts, 3 Phase, 60 Hz / up to 188 Amps @ 480 Volts 3 Phase, 60 Hz; Dry weight 10,610 lbs; Fuel tank capacity 223 Gallons; Dimensions 18'.5" Long x 6'.5" Wide x 9' Tall; Potential application example: Small office building, emergency mobile trailers & operations, restaurants. Setup time (cables from generator to main power feed estimated at 1 hour)
COMMENTS:	2500-gallon external fuel tanks available. Fuel consumption is estimated at 7% of the kW usage (example: fuel consumption on a 100 kW Generator operating at full load is approximately 7 gallons per hour). Technicians are available for hookup and monitoring of equipment. 4/0 Quick connect (Cam-Lock) cable is available for tie-in to power feed, rated at 400 Amps each cable. Fuel supply, and/or fuel vendors available. Power distribution equipment available. Transformers & Load Banks are available.					
		XQ2000	XQ1500	XQ600-400		XQ125


RESOURCE: GENERATORS						
CATEGORY: Public Works and Engineering (ESF 3)			KIND: Equipment			
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	TYPE V
Component	Metric					
		    				

**RESOURCE: HYDRAULIC EXCAVATOR-(MEDIUM MASS EXCAVATION 4 CY TO 1.75 CY BUCKETS)**


CATEGORY :		Public Works and Engineering (ESF 3)			KIND:	Equipment	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER	
Component	Metric						
Equipment	Cubic Yard	<b>345B L Series II</b> Net HP (321); Operating Weight-Long Undercarriage (111180 lb for UHD? 97940lb); Bucket Capacity -HDR (3 yd3); Bucket Capacities General Purpose GP (4 yd3); Max. Digging Depth (23.7 ft); Max. Reach at Ground Level (37.2 ft); Max. Loading Height (22.6 ft); Max. Drawbar Pull (74380 lb); Fuel Tank (190 gal); Overall Width (11.5 ft); Height To Top Of Cab (15.1 ft); Track Length-Std. (17.7 ft)	<b>330C-325C L</b> In respective order of size; Net HP (247-188); Operating Weight-Long Undercarriage (77400 lb-63100 lb); Bucket Capacities-HDR (2.12 yd3-1.75 yd3); Bucket Capacities General Purpose GP (3 yd3-2.5 yd3); Max. Drawbar Pull (66094 lb--54853 lb); Fuel Tank (163 gal-132 gal); Max. Digging Depth (24.3 ft-23.3 ft); Max. Reach at Ground Level (35.10 ft-34.6 ft); Max. Loading Height (23.7 ft-23.4 ft); Minimum Loading Height (8.11 ft-8 ft); Overall Width (11.3 ft-11.1 ft); Height To Top Of Cab (11 ft-10.11 ft); Track Length-Std. (16.6 ft-15.3 ft)	<b>322C L-320C L **Note</b> In respective order of size; Net HP (168-138); Operating Weight-Long Undercarriage; (53600 lb-46300 lb); Bucket Capacities-HDR (2.12 yd3--1 yd3) - General Purpose GP (3 yd3-1.75 yd3); Max. Drawbar Pull (50132 - 44040); Fuel Tank (132 gal-106 gal); Max. Digging Depth (22 ft-22 ft); Max. Reach at Ground Level (32.10 ft-32.4 ft); Max. Loading Height (22.1ft-21.4 ft); Overall Width (11.6ft-9.6 ft); Height To Top Of Cab (10.9-9.11ft); Track Length-Std. (15.3 ft-13.4ft)	<b>321B L-320C L Utility Models **Note</b> In respective order of size; Net HP (168-138); Operating Weight-Long Undercarriage; (50927 lb-50700 lb); Max. Drawbar Pull (44063 - 44040); Fuel Tank (66 gal-gal); Bucket capacities and other handling performances will be similar to 320 C L		
COMMENTS :		To better match bucket needs to material conditions, contact dealer and or owner. The reference to "L" means Long Undercarriage. Mobilization may require more than one truck w/trailer. Boom type will change reach, digging depth, and handling performances. **Note: 320C L has two versions for difference applications. Utility model has smaller radius.					
							
	345B L Series II UHD	345B L Series II	330C-325C L	322C-320C L	321B-320C L Utility		

RESOURCE: HYDRAULIC EXCAVATOR—(LARGE MASS EXCAVATION—13CY TO 3CY BUCKETS)						
CATEGORY: Public Works and Engineering (ESF 3)			KIND: Equipment			
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Equipment	Cubic Yard	<b>5130B ME</b> Net HP (800); Operating Weight-Std. (399000 lb); Bucket Capacity -HDR (13.7 yd3); Max. Digging Depth (27.6 ft); Max. Reach at Ground Level (48.9 ft); Max. Dump Height (29.8 ft); Max. Drawbar Pull (196000); Fuel Tank (987 gal); Overall Width (21.7 ft); Height To Top Of Cab (21.4 ft); Track Length-Std. (23.8 ft) Mining Machine	<b>385B-L</b> Net HP (513); Operating Weight-Std. (183940 lb); Operating Weight-Long (L) Undercarriage (189770 lb); Bucket Capacities-HDR (2.5 yd3) - General Purpose GP (5.5 yd3); Max. Drawbar Pull (132810); Fuel Tank (328 gal); Max. Digging Depth (38.7 ft); Max. Reach at Ground Level (56.11 ft); Max. Dump Height (37.11 ft); Minimum Loading Height (11.1 ft); Overall Width (12.7 ft); Height To Top Of Cab (12 ft); Track Length-Std. (19.2 ft)	<b>375-L, 365B—L Series II</b> In respective order of size; Net HP (428-404); Operating Weight-Std. (173100 lb-149000 lb); Operating Weight-Long (L) Undercarriage (179800 lb-150200 lb); Bucket Capacities-HDR (2.5 yd3-1.6 yd3) - General Purpose GP (5 yd3); Max. Drawbar Pull (126300 -103820); Fuel Tank (261gal--211 gal); Max. Digging Depth (37.7ft-31 ft); Max. Reach at Ground Level (52ft-46 ft); Max. Dump Height (33.11ft-30 ft); Overall Width (13.6ft--11.6ft); Height To Top Of Cab (12.2ft-11.1ft); Track Length-Std. (20.10 ft-19.3ft)		
COMMENTS:		To better match bucket needs to material conditions, contact dealer and or owner. The reference to "L" means Long Undercarriage. Mobilization may require more than one truck-trailer.				
						
		<b>5130B</b>	<b>385B &amp; L</b>	<b>375 &amp; L</b>	<b>365B L Series II</b>	







RESOURCE: HYDRAULIC TRUCK CRANES						
CATEGORY: Public Works and Engineering (ESF 3)			KIND: Equipment; Personnel; Vehicle			
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Equipment & Personnel	Tons	<b>75-70</b> Crane type with boom reach of 190-170 feet. With jib add approx. 30 feet. Self-propelled/driven over the road. Operator furnished. Setup time minimal. Counter weight transported by tractor-trailer. No other special transport permit required	<b>65-60</b> Crane type with boom reach of 160-150 feet. With jib add approx. 30 feet. Self-propelled/driven over the road. Operator furnished. Setup time minimal and ready for use. No special transport permit required	<b>40-35</b> Crane type with boom reach of 140 feet. With jib add approx. 30 feet. Self-propelled/driven over the road. Operator furnished. Setup time minimal and ready for use. No special transport permit required		
COMMENTS:	Check with your local/state transportation and law enforcement organizations to determine mobilization requirements.					
						











RESOURCE: LATTICE TRUCK CRANES						
CATEGORY: Public Works and Engineering (ESF 3)			KIND: Equipment; Personnel; Vehicle			
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Equipment	Tons	220 Manitowoc Reach of 430 feet; Requires 7 tractor-trailers to mobilize & demobilize; setup time 6 hours				
Personnel		Operator with one (1) oiler/rigger				
COMMENTS:		Check with your local/state transportation and law enforcement organizations to determine mobilization requirements.				
						







**RESOURCE: WHEEL LOADERS (LARGE 41CY TO 8CY)**

CATEGORY :		Public Works and Engineering (ESF 3)			KIND:	Equipment	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER	
Component	Metric						
Equipment	Cubic Yards	<b>994D</b> Gross Power 1027 kW (1375 hp); Operating Weight 191200 kg (421600 lb); Rated Payload-Standard 34.5 tonnes (38 tons); Bucket Capacity Range 15-31 m3 (19.5-41 yd3); Reach at Max. Lift/Dump-Std 2263 mm (7.4 ft); Clearance at Max. Lift/Dump-Std 5592 mm (18.4 ft); Bucket pivot at Max. Lift-Std 8157 mm (26.8 ft); Overall Height Bucket Raised-Std 100996 mm (36.1 ft); Overall Length-Std 16809 mm (55.1 ft); Width Over Tires 5499 mm (18 ft); Fuel Tank (1226 gal)	<b>992G</b> Gross Power 656 kw (880 hp); Max. Bucket Capacity 12.3 m3 (16 yd3); Operating Weight 93779 kg (206783 lb); Dump Clearance 4636 mm (19 ft); Fuel Tank 413 gal)	<b>990 Series II</b> Gross Power 503 kW (675 hp); Operating Weight 77141 kg (170067 lb); Rated Payload-Standard 15 tonnes (16.5 tons); Bucket Capacity Range 8.4-9.2 m3 (11-12 yd3); Static Tipping Load, Full Turn 38243 kg (84311 lb); Reach at Max. Lift/Dump-Std 1799 mm (5.9 ft); Clearance at Max. Lift/Dump-Std 4135 mm (13.7 ft); Overall Length-Std 12839 mm (42.1 ft); Width Over Tires 4071 mm (13.3 ft); Fuel Tank (284 gal)	<b>988G</b> Gross Power 388 kW (520 hp); Operating Weight 50183 kg (110634 lb); Rated Payload-Standard 11.4 tonnes (12.5 tons); Bucket Capacity Range 6.3-7 m3 (8.2-9.2 yd3); Static Tipping Load, Full Turn 26960 kg (59436 lb); Reach at Max. Lift/Dump-Std 2113 mm (6.9 ft); Clearance at Max. Lift/Dump-Std 3971 mm (13 ft); Overall Length-Std slightly less than 990 Series; Fuel Tank (176.5 gal)		
COMMENTS :		Caterpillar products used in typing. To better match bucket needs to material conditions, contact dealer and or owner.					
							
		<b>994D</b>	<b>992G</b>		<b>990 Series</b>	<b>988G</b>	

**RESOURCE: WHEEL LOADERS (MEDIUM-7CY TO 3 CY)**

CATEGORY :		Public Works and Engineering (ESF 3)		KIND:	Equipment	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Equipment	Cubic Yards	<b>980G, 972G</b> In respective order; Max. Flywheel Power 238 kW-213 kW (319 hp-285 hp); Operating Weight 30207 kg-25490 kg (66576 lb-56180 lb); Static Tipping Load 18032 kg (39743 lb); Breakout Force 210 kN (47277 lb); Bucket Capacity Range 3.8-5.7m (7.55 yd3); Fuel Tank (124-100 gal)	<b>966G Series II</b> Max. Flywheel Power 194 kW (260 hp); Operating Weight 22870 kg (50400 lb); Bucket Capacity Range 3.5-4.25 m3 (4.5-5.5 yd3); Fuel Tank (100 gal)	<b>962G Series II, IT62G, 950G Series II</b> Max. Flywheel Power 157-146 kW (210-196 hp) Operating Weight 18547-17780 kg (40889-39198 lb); Static Tipping Load 11966-10619 kg (26380-23411 lb); Breakout Force 154-125 kN (34666-28210 lb); Bucket Capacity Range 2.7-3.8 m3 (5-3.5 yd3); Fuel Tank (75 gal)	<b>938G, IT38G</b> In respective order; Max. Flywheel Power 128 kW (172 hp) Operating Weight 13062-13030 kg (28731-28714 lb); Static Tipping Load 9241-7621 kg (20373-16800 lb); Breakout Force 109-124 kN (25096-28020lb); Bucket Capacity Range 2.8-2.5 m3 (3.65-2.9 yd3); Fuel Tank (67 gal)	
COMMENTS :	Caterpillar products used in typing; to better match bucket needs to material conditions, contact dealer and or owner. IT models offer multiple attachments.					
						
	980G		972G		966G	
						
	950G		938G		IT62G	
					IT38G	

**RESOURCE: WHEEL LOADERS (SMALL 7CY TO 2CY)**

CATEGORY :	Public Works and Engineering (ESF 3)				KIND:	Equipment	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER	
Component	Metric						
Equipment	Cubic Yards	<b>928G, IT28G</b> In respective order; Max. Flywheel Power 107 kW (144 hp); Operating Weight 11836 kg-12134 kg (26094 lb-26751 lb); Bucket Capacity Range 2-5.35 m3 (2.5-7 yd3); Fuel Tank (59 gal)	<b>924G, 924Gz</b> In respective order; Max. Flywheel Power 98 kW (132 hp); Operating Weight 10328 kg-9844 kg (22769 lb-21702 lb); Bucket Capacity Range 1.7-5 m3 (2.2-6.5 yd3); Fuel Tank (59-51 gal)	<b>IT14G, 914G</b> In respective order; Max. Gross Power 73 kW (98 hp); Operating Weight 7906 kg-7243 kg (17393 lb-15935 lb); Breakout Force (17270-14007 lb); Static Tipping Load (10094-11737 lb); Dump Clearance 9.58-8.75 feet; Bucket Capacity Range 1.4 m3 (1.8 yd3); Fuel Tank (59-51 gal)			
COMMENTS :	Caterpillar products used in typing; to better match bucket needs to material conditions, contact dealer and or owner. IT models offer multiple attachments.						
							
	928G		IT28G		924G		924Gz
							
	IT14G				914G		

# **Search and Rescue**



**RESOURCE: COLLAPSE SEARCH AND RESCUE TEAMS**

CATEGORY: Search & Rescue		KIND: Team				
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Personnel	Training and Certification	Trained to the HazMat Technician Level (NFPA 472). Comply with NFPA 1006 Technician Level requirements for their area of specialization or organization Operations Level for support personnel as outlined in NFPA 1670.	Trained to the HazMat First Responder Operational Level (NFPA 472). Comply with organization Operations Level for support personnel as outlined in NFPA 1670.	Trained to the HazMat First Responder Operational Level (NFPA 472). Comply with organization Operations Level for support personnel as outlined in NFPA 1670	Trained to HazMat First Responder Awareness Level (NFPA 472). Comply with organization Awareness Level for support personnel as outlined in NFPA 1670	
Team	Training	Trained for Heavy Floor Construction, Pre-cast Concrete Construction, Steel Frame Construction, High Angle Rope Rescue (including highline systems), Confined Space Rescue (permit required), and Mass Transportation Rescue	Trained for Heavy Wall Construction, High Angle Rope Rescue (not including highline systems), Confined Space (no permit required) and Trench and Excavation Rescue	Trained for Light Frame Construction and Low Angle Rope Rescue	Trained for Surface Rescue and Non-Structural Entrapment in Non-Collapsed Structures	
Team	Sustained Operations	Capable of sustained heavy operations for 18-24 hours	Medium operations for 12-24 hours. Typically require relief for sustained 24-hour operations	Light operations for 6-12 hours. Typically require assistance from additional team for sustained 12-hour operations	Basic operations for 3-6 hours. Typically require assistance for sustained 6-hour operations	
Team	Safe and Effective Response Operation Incidents	Conduct safe and effective search and rescue operations at incidents involving collapse or failure of heavy floor, pre-cast concrete, and steel frame construction	Conduct safe and effective search and rescue operations at structural incidents involving the collapse or failure of heavy wall construction	Conduct safe and effective search and rescue operations at structure collapse incidents involving the collapse or failure of light frame construction	Conduct safe and effective search and rescue operations at incidents involving non-structural entrapments and minimal removal of debris and building contents	
Team	Specialty Search and Rescue Capabilities	Conduct High Angle Rope Rescue (including highline systems), Confined Space Rescue (permit required), and extraction of entrapped victims for Mass Transportation Rescue	Conduct High Angle Rope Rescue (not including highline systems), Confined Space Rescue, and Trench and Excavation Rescue	Conduct Low Angle Rope Rescue		
Team	Certifications	Confined Space Permit				





**RESOURCE: COLLAPSE SEARCH AND RESCUE TEAMS**

CATEGORY :		Search & Rescue			KIND:	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER	
Component	Metric						
Equipment	Technical Search Resources	Audible and optical search equipment to conduct technical search, shoring assortment, rebar cutters, demolition hammers, rotary hammers, reciprocating saws, hydraulic concrete breakers, hydraulic vehicle rescue system, hammer drill, chain saw, nail gun, cutting torch, assorted hand tools, generator, lights, extensions cords, hoisting slings and shackles, rope equipment (kernmantal and lifeline rope, ascenders/descenders, pulleys, tripod hauling system, carabineers) air blower, fire extinguishers, visual inspection devices, listening devices(seismic and acoustic), hand held radios	Shoring assortment, rebar cutters, demolition hammers, rotary hammers, reciprocating saws, hydraulic concrete breakers, hydraulic vehicle rescue system, hammer drill, chain saw, nail gun, cutting torch, assorted hand tools, generator, lights, extensions cords, hoisting slings and shackles, rope equipment (kernmantal and lifeline rope, ascenders/descenders, pulleys, tripod hauling system, carabineers) air blower, fire extinguishers	Shoring assortment, rebar cutters, demolition hammers, rotary hammers, reciprocating saws, hydraulic concrete breakers, hydraulic vehicle rescue system, hammer drill, chain saw, nail gun, cutting torch, assorted hand tools, generator, lights, extensions cords, hoisting slings and shackles, rope equipment (kernmantal and lifeline rope, ascenders/descenders, pulleys, tripod hauling system, carabineers) air blower, fire extinguishers	Shoring assortment, rebar cutters, reciprocating saws, chain saw, assorted hand tools, generator, lights, extensions cords, air blower, fire extinguishers		
Breathing Apparatus	Materials and Supplies	Breathing apparatus, self-contained (SCBA), respiratory protection, air bags	Air bags	Air bags			
Medical Equipment	Materials and Supplies	Medical aid equipment, backboards, Stokes stretcher	Medical aid equipment, backboards Stokes, stretcher	Medical aid equipment, backboards, Stokes stretcher	Medical aid equipment, backboards, Stokes stretcher		
HazMat Equipment	Materials and Supplies	HazMat monitoring equipment, sampling detection kit, 4-gas meters, rad monitoring, decontamination equipment, 4-gas meter	HazMat monitoring equipment, sampling detection kit, 4-gas meters, rad monitoring, decontamination equipment, 4-gas meter	4-gas meter			
COMMENTS :	A state, local, or private technical rescue team that responds to locate, rescue, and recover individuals trapped in a fallen structure or buried in structural collapse.						





**RESOURCE: MOUNTAIN SEARCH AND RESCUE TEAM**

CATEGORY :		Search & Rescue (ESF 9)			KIND:	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER	
Component	Metric						
Team	Personnel	Field team leader; field team members; medical specialist	Field team leader; field team members; medical specialist	Field team leader; field team members; medical specialist	Field team leader; field team members; medical specialist		
Personnel Training	Navigation Training	Same as Type II	Same as Type III	Same as Type IV, plus proficiency in back country navigation including the ability to triangulate a position, ascertain a UTM, utilize GPS, and follow a route to a new location using a topographical map and compass	Navigation (map and compass)		
Personnel Training	Survival Training	Operational and technical proficiency in personal survival in mountainous terrain and snow and ice environments	Operational and technical proficiency in personal survival in mountainous terrain and snow and ice environments	Technical proficiency in personal survival in mountainous terrain and snow and ice environments	Technical proficiency in personal survival in mountainous terrain		
Personnel Training	Technical Training	Same as Type II, plus proficient at estimating the mechanical forces involved in technical rescue systems and estimating factors of safety; proficiency in the use, placement and analysis of mechanical anchors and anchor systems; proficiency in the use of highlines; proficiency in the use of slings, etriers, Prusik hitches and mechanical ascenders; proficiency in the organization and direction of technical litter evacuation	Same as Type III, plus understanding of the mechanical forces involved in technical rescue systems; proficiency in the selection and setup of rescue anchor systems; proficiency in technical litter evacuation and transport; litter descents (on steep, vertical, and overhanging rock, on scree and snow, and traversing); lowering of a subject without a litter; raising a subject or litter; knowledge of procedures involved with helicopter transport	Proficiency in bagging, coiling, throwing and storing static and dynamic ropes; proficiency in tying common knots, and knowledge of their applications and strength efficiencies; proficiency in search techniques including in hasty and line search techniques, directing line searches and probe lines			



**RESOURCE: MOUNTAIN SEARCH AND RESCUE TEAM**

CATEGORY :		Search & Rescue (ESF 9)			KIND:	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER	
Component	Metric						
Personnel Training	Alpine Training	Proficiency in winter camping in any area, including above timberline; proficiency in snow and ice climbing; proficiency in avalanche search and rescue, including recognition of avalanche hazards, avalanche search and rescue organization and leadership, scuff searches, use of SAR dogs; proficiency in high and low-angle, technical snow and ice rescues and evacuations	Ability to recognize avalanche hazards and to perform avalanche search and rescue including probe lines and avalanche. Avalanche awareness training	Understanding of the fundamentals of mountain weather. Avalanche awareness training	Basic understanding of mountain weather. Ability to walk in mountainous terrain; ability to backpack personal equipment plus one rope at least four miles with an elevation gain of at least 2000 feet. Avalanche awareness training		
Personnel	Basic Training	Same as Type II, plus technical proficiency in one-person rescue and self-rescue techniques; proficiency in mantracking; ability to integrate into and operate using ICS; ability to plan, organize and direct search and rescue missions	Same as Type III, plus ability to operate using ICS	Same as Type IV	Proficiency in search techniques; awareness of mantracking and maintaining site integrity; understanding of the ICS		
Medical Specialist	Training	National standard EMT curriculum; ACLS, BTLS	National standard EMT-B curriculum or advanced wilderness first responder; BTLS	Same as Type IV	National standard first responder or wilderness first responder curriculum; BTLS		
Team	Sustained Operations	60 hours	48 hours	24 hours	12 hours		
Team	Rescue Capabilities	Same as Type II, plus: highly trained rescue personnel with multipitch, high-angle experience on vertical rock, ice, and steep snow	Same as Type III, plus single-pitch, high-angle rock rescue	Backcountry, low-angle scree evacuation	Trained rescue personnel with experience in non-technical backcountry evacuation/carryouts		



**RESOURCE: MOUNTAIN SEARCH AND RESCUE TEAM**

<b>CATEGORY :</b>		Search & Rescue (ESF 9)			<b>KIND:</b>	Team	
<b>MINIMUM CAPABILITIES:</b>		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER	
<b>Component</b>	<b>Metric</b>						
Team	Search Capabilities	Capable of searching during the day or night; capable of searching any terrain, including severe rock. Competent IC and section chief	Capable of searching steep, timbered terrain, excluding severe rock, day or night. Competent search team leaders/technicians	Self-sustaining for 48 hours in all weather/terrain, except severe winter/rock	Capable of searching moderate terrain. May be outdoorsmen with basic training		
Team Rescue Equipment	Supplies and Materials	Same as Type II, plus 8-10 ropes of various lengths (200-400 ft)	Same as Type III, plus 6-8 ropes of various lengths and a full complement of rescue/climbing gear	Same as Type IV, plus 4-6 ropes of various lengths	Harnesses, helmets, basic hardware, rope & radio communications on a common frequency		
Search Equipment	Supplies and Materials	Equipped to be self-sustaining for 60 hours in all environments; radio communications on common frequency	Equipped to be self-sustaining for 48 hours in all environments; radio communications on common frequency	Equipped to be self-sustaining for 24 hours in all weather/terrain, except severe winter/rock	Equipped to be self-sustaining for 12 hours in all weather/terrain, except severe winter/rock		
Personal Equipment	Supplies and Materials	Same as Type II, plus food for 60 hours	Same as Type III, plus water container of two-liter capacity and/or quantity of water appropriate for the conditions; food for 48 hours; second light source	Same as Type IV	Appropriate clothes and footwear for both fair and foul weather; water container of 1-liter capacity and/or quantity of water appropriate for the conditions; day pack; five large, heavy-duty plastic trash bags; food for 24 hours; headlamp or flashlight; lighter, matches and candle, or equivalent waterproof fire source; knife; compass; personal First Aid Kit; waterproof pen/pencil and paper; whistle; and two pairs plastic or vinyl examination gloves		
Medical Equipment	Supplies and Materials	As appropriate for level of training, as applied in wilderness environment and meeting local protocols and requirements	As appropriate for level of training, as applied in wilderness environment and meeting local protocols and requirements	As appropriate for level of training, as applied in wilderness environment and meeting local protocols and requirements	As appropriate for level of training, as applied in wilderness environment and meeting local protocols and requirements		



RESOURCE: MOUNTAIN SEARCH AND RESCUE TEAM					
<b>CATEGORY :</b>	Search & Rescue (ESF 9)			<b>KIND:</b>	Team
<b>MINIMUM CAPABILITIES:</b>		TYPE I	TYPE II	TYPE III	TYPE IV
<b>Component</b>	<b>Metric</b>				OTHER
<b>COMMENTS:</b>	Search for and rescue people in trouble either above the timberline or in high-angle areas below the timberline, which can include glacier, crevasse, backcountry and alpine search and rescue, and educate the population in safe activities so they will be able to avoid the dangers that result in the need for rescue.				
	<b>Definitions</b>				
	GPS	Global Positioning System			
	Navigation	The practice of charting a course for a group of people (team) using basic tools such as a map and compass.			



RESOURCE: US&R Incident Support Team						
CATEGORY: Search & Rescue (ESF 9)			KIND: Team			
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Personnel	Number of People per Response	30-60-person response depending on the needs of the incident	22-person response			
Personnel	Training	Qualified National US&R Response System	Qualified National US&R Response System			
Personnel	Areas of Specialization	Provide staffing to fill all necessary ICS functions to the assigned incident: provide technical assistance in the acquisition and utilization of ESF 9 resources through advice, incident command assistance, incident response planning, management and coordination of US&R task forces, and obtaining ESF 9 logistical support	Provide staffing for 14 ICS functions activated to provide technical assistance in the acquisition and utilization of ESF 9 resources through advice, incident command assistance, incident response planning, management and coordination of US&R task forces, and obtaining ESF 9 logistical support			
Personnel	Sustained Operations	24-hour operations for a minimum of 14 days before requiring personnel rotations and can provide administrative and living support if necessary	Type 2 is an advanced element of Type 1; will require supplemental IST staff to perform 24-hour operations rotations			
Personnel	Organization	Fully staffed US&R multi-functional management team; organized based on ICS guidelines, Command and Operations, Planning, Logistics, Finance and Administration	Organized based on ICS guidelines, Command and Operations, Planning, Logistics, Finance and Administration			
Equipment		Living support as necessary	Living support as necessary			
Equipment	Computer Supplies	Ink cartridge, CD, computer, disk, DVD, modem, mouse, mouse pad, printer, scanner	Ink cartridge, CD, computer, disk, DVD, modem, mouse, mouse pad, printer, scanner			



RESOURCE: US&R Incident Support Team						
CATEGORY: Search & Rescue (ESF 9)			KIND:	Team		
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Equipment	Communi- cation Equipment	Antennas, celwave, fax,. GPS, microphone, pager, phone, radio, repeater, receiver, recorder, repeater, satellite, Satellite phone, speaker phone	Antennas, celwave, fax, GPS, microphone, pager, phone, radio, repeater, receiver, recorder, repeater, satellite, Satellite phone, speaker phone			
Equipment	Tools	Blade, can opener, chisel, drill, drill bit, fire extinguisher, flashlight, guywire, hammer, handtruck, knife, level, lightstick, measuring tape, nails, paint, pump, rope, shovel, screwdriver smoke detector, saw, wrench, toolkit, tool bag, wire brad, wrecking bar, wrench	Blade, can opener, chisel, drill, drill bit, fire extinguisher, flashlight, guywire, hammer, handtruck, knife, level, lightstick, measuring tape, nails, paint, pump, rope, shovel, screwdriver smoke detector, saw, wrench, toolkit, tool bag, wire brad, wrecking bar, wrench			
Equipment	Power Supply	Battery, bulb, charger, electric cord, extension cord, generator, grounding, power adapter, power cord, power supply, socket, surge protector, transformer, watt meter	Battery, bulb, charger, electric cord, extension cord, generator, grounding, power adapter, power cord, power supply, socket, surge protector, transformer, watt meter			
Equipment	Administrative Supplies	Accounting book, acetate, binder clip, chalk, chalk line bracket, calculator, clipboard, envelope, etcher, FEMA logo, filing box, flip chart, folder, form, glue, handbook, hole punch, laminating sheets, letter tray, marker, marker-board, measuring tape, memo pad, name tag, note pad, paint, paper, paper clip, pen, pencil, push pins, rubber band, ruler, scissor, sheet protector, shrink wrap, sign, stamp, staple, stapler, staple remover, stationery, stenopad, tape, tape	Accounting book, acetate, binder clip, chalk, chalk line bracket, calculator, clipboard, envelope, etcher, FEMA logo, filing box, flip chart, folder, form, glue, handbook, hole punch, laminating sheets, letter tray, marker, marker-board, measuring tape, memo pad, name tag, note pad, paint, paper, paper clip, pen, pencil, push pins, rubber band, ruler, scissor, sheet protectbr, shrink wrap, sign, stamp, staple, stapler, staple remover, stationery, steno pad, tape, tape			



RESOURCE: US&R Incident Support Team						
CATEGORY: Search & Rescue (ESF 9)			KIND: Team			
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
		dispenser, three hole punch, white out, writing pad	dispenser, three hole punch, white out, writing pad			
Equipment	Logistics Equipment	Can opener, cleaner, clock, cup, garbage bag, road atlas, tissue, toilet paper, zip-lock bags, A/C unit, blanket, chair, commode, cot, fan, MRE, pillow, sheet, sleeping bag, sleeping pad, table, tarp, tent, towel, water	Can opener, cleaner, clock, cup, garbage bag, road atlas, tissue, toilet paper, zip-lock bags, A/C unit, blanket, chair, commode, cot, fan, MRE, pillow, sheet, sleeping bag, sleeping pad, table, tarp, tent, towel, water			
COMMENTS:		Federal asset. ISTs provide Federal, State, and local officials with technical assistance in the acquisition and utilization of ESF 9 resources through advice, incident command assistance, management and coordination of US&R task forces, and obtaining ESF #9 logistic support. ISTs are self-sufficient and mobilize within 2 hours of a request.				



RESOURCE: US & R TASK FORCES						
CATEGORY : Search & Rescue (ESF 9)			KIND: Team			
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Personnel	Number of People per Response	70-person response	28-person response			
Personnel	Training	NFPA 1670 Technician Level in area of specialty. Support personnel at Operations Level.	NFPA 1670 Technician Level in area of specialty. Support personnel at Operations Level.			
Personnel	Areas of Specialization	High angle rope rescue (including highline systems); confined space rescue (permit required); Advanced Life Support (ALS) intervention; communications; WMD/HM operations; defensive water rescue	Light frame construction and basic rope rescue operations; ALS intervention; HazMat conditions; communications; and trench and excavation rescue			
Personnel	Sustained Operations	24-hour S&R operations. Self-sufficient for first 72 hours.	12-hour S&R operations. Self-sufficient for first 72 hours.			
Personnel	Organization	Multidisciplinary organization of Command, Search, Rescue, Medical, HazMat, Logistics, and Planning.	Multidisciplinary organization of Command, Search, Rescue, Medical, HazMat, Logistics, and Planning.			
Equipment	Sustained Operations	Potential mission duration of up to 10 days.	Potential mission duration of up to 10 days.			
Equipment	Rescue Equipment	Pneumatic Powered Tools, Electric Powered Tools, Hydraulic Powered Tools, Hand Tools, Electrical, Heavy Rigging, Technical Rope, Safety	Pneumatic Powered Tools, Electric Powered Tools, Hydraulic Powered Tools, Hand Tools, Electrical, Heavy Rigging, Technical Rope, Safety			
Equipment	Medical Equipment	Antibiotics/ Antifungals, Patient Comfort Medication, Pain Medications, Sedatives/Anesthetics/Paralytics, Steroids, IV Fluids/Volume, Immunizations/Immune Globulin, Canine Treatment,	Antibiotics/Antifungals, Patient Comfort Medication, Pain Medications, Sedatives/Anesthetics/Paralytics, Steroids, IV Fluids/Volume, Immunizations/Immune Globulin, Canine Treatment, Basic Airway, Intubation, Eye			





RESOURCE: US &R TASK FORCES						
CATEGORY: Search & Rescue (ESF 9)			KIND: Team			
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
		Basic Airway, Intubation, Eye Care Supplies, IV Access/Administration, Patient Assessment Care, Patient Immobilization/Extrication, Patient/PPE, Skeletal Care, Wound Care, Patient Monitoring	Care Supplies, IV Access/Administration, Patient Assessment Care, Patient Immobilization/ Extrication, Patient/ PPE, Skeletal Care, Wound Care, Patient Monitoring			
Equipment	Technical Equipment	Structures Specialist Equip., Technical Information Specialist Equip., HazMat Specialist Equip., Technical Search Specialist Equip., Canine Search Specialist Equip.	Structures Specialist Equip., Technical Information Specialist Equip, HazMat Specialist Equip, Technical Search Specialist Equip., Canine Search Specialist Equip.			
Equipment	Communications Equipment	Portable Radios, Charging Units, Telecommunications, Repeaters, Accessories, Batteries, Power Sources, Small Tools, Computer	Portable Radios, Charging Units, Telecommunications, Repeaters, Accessories, Batteries, Power Sources, Small Tools, Computer			
Equipment	Logistics Equipment	Water/Fluids, Food, Shelter, Sanitation, Safety, Administrative Support, Personal Bag, Task Force Support, Cache Transportation/ Support, Base of Operations, Equipment Maintenance	Water/Fluids, Food, Shelter, Sanitation, Safety, Administrative Support, Personal Bag, Task Force Support, Cache Transportation/ Support, Base of Operations, Equipment Maintenance			
COMMENTS:		Federal asset. There are 28 FEMA US&R Task Forces, totally self-sufficient for the first 72 hours of a deployment, spread throughout the continental United States trained and equipped by FEMA to conduct physical search and rescue in collapsed buildings, provide emergency medical care to trapped victims, assess and control gas, electrical services and hazardous materials, and evaluate and stabilize damaged structures.				



RESOURCE: SWIFTWATER/FLOOD SEARCH AND DIVE RESCUE TEAM						
CATEGORY: Search & Rescue			KIND: Team			
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Personnel	# of people	14-member team	6-member team	4-member team	3-member team	
Technical Animal Rescue Personnel	Minimum number	2	1	1		
ALS Certified Personnel	Minimum number	2				
Helicopter/Aquatic Rescue Operations Personnel	Minimum number	4	2			
Powered Boat Operators	Minimum number	4	2			
SCUBA Trained Support Personnel with Equipment	Minimum number	4	2	2		
EMTs	Number and level	EMT-B (14), EMT-P (2)	EMT-B (1)	EMT-B (1)	EMT-B (1)	
Team	Composition	2 managers, 2 squad leaders, 10 personnel	1 squad leader, 5 personnel	1 squad leader, 3 personnel	1 squad leader, 2 personnel	
Team	Sustained operations	24-hour operations	24-hour operations	18-hour operations	18-hour operations	
Team	Capabilities	Manage search operations, power vessel operations, helicopter rescue operational, HazMat, animal rescue, ALS, communications, logistics	Manage search operations, power vessel operations, helicopter rescue operational, HazMat, animal rescue, BLS	Assist in search operations, nonpowered water craft, HazMat, animal rescue, BLS	Low-risk operations, land-based, HazMat, BLS	
Team	Specialty S&R Capabilities	In-water contact rescues, dive rescue, technical rope systems	In-water contact rescues, dive rescue, technical rope systems	In-water contact rescue and dive rescue		



**RESOURCE: SWIFTWATER/FLOOD SEARCH AND DIVE RESCUE TEAM**

CATEGORY :		Search & Rescue			KIND:	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER	
Component	Metric						
Team	Training	Class 3 paddle skills, contact and self-rescue skills, HazMat, Helicopter operations Awareness, ICS, Swiftwater rescue technician, technical rope rescue, divers to have 80 hours of formal public safety diver training.	Class 3 paddle skills, contact and self-rescue skills, HazMat, Helicopter operations Awareness, ICS, Swiftwater rescue technician, technical rope rescue, divers to have 60 hours of formal public safety diver training.	Class 3 paddle skills, contact and self-rescue skills, HazMat, ICS, Swiftwater rescue technician, divers to have 60 hours of formal public safety diver training.	Class 3 paddle skills, contact and self-rescue skills, HazMat, ICS, Swiftwater rescue technician		
Team	Certifications	ALS, Advanced First Aid & CPR	BLS, Advanced First Aid & CPR	BLS, Advanced First Aid & CPR	BLS, Advanced First Aid & CPR		
Equipment	Transportation Resources	Equipment trailer, personnel support vehicle					
Communi-cations Equipment	Materials and Supplies	Aircraft radio, batteries, headset, portable radios, cell phone	Aircraft radio, batteries, headset, portable radios, cell phone	Batteries, headset, portable radios, cell phone	Batteries, portable radios, cell phone		
Medical Equipment	Materials and Supplies	ALS medical kit, blankets, spineboard, litter	BLS medical kit, blankets, spineboard, litter	BLS medical kit, blankets, litter	BLS medical kit, blankets		
Personal Equipment	Materials and Supplies	Flares, markers, bags, life vests, fins, flashlight, gloves, HEED, lamps, helmets, light sticks, PFD Type V, knives, shoes, whistles	Flares, markers, bags, fins, life vests, flashlight, gloves, HEED, lamps, helmets, light sticks, PFD Type V, knives, shoes, whistles	Flares, markers, bags, fins, flashlight, gloves, lamps, helmets, light sticks, PFD Type III/IV, knives, shoes, whistles	Flares, markers, bags, flashlight, gloves, helmets, light sticks, PFD Type III/IV, knives, shoes, whistles		
SCUBA Equipment	Materials and Supplies	SCUBA cylinder, buoyancy compensator, weight belt, 2 cutting tools, chest harness & snap shackle, full face mask, U/W communication, dry suit, search line, spare SCUBA cylinder	SCUBA cylinder, buoyancy compensator, weight belt, 2 cutting tools, chest harness & snap shackle, full face mask, U/W communication, dry suit, search line, spare SCUBA cylinder	SCUBA cylinder, buoyancy compensator, weight belt, 2 cutting tools, chest harness & snap shackle, full face mask, U/W communication, dry suit, search line, spare SCUBA cylinder			
Rescue Boat and Equipment	Type and number	Fueled (2)	Fueled (1)	Non-powered 4 person (1)			
COMMENTS:	Conduct search and rescue operations in all water environments including swiftwater and flood conditions. Water rescue teams come with all team equipment required to safely and effectively conduct operations.						