National Mutual Aid and Resource Management Initiative

FEMA

Resource Definitions

120 Resources

September 2004

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National Mutual Aid and Resource Management Initiative
Glossary of Terms and Definitions

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Purpose
This glossary of terms and definitions provides a basic understanding of the resources commonly used and/or exchanged during a disaster. These terms provide a basis for the Federal Emergency Management Agency's (FEMA's) resource typing initiative. An annex of 11 Federal assets is also included in the glossary to provide a snapshot of the Federal capabilities available to State and local entities. The glossary is a living document, and will continuously be updated and revised. To provide additional information to the glossary, please e-mail Mr. Jon Mark Jenkins at jonathan.jenkins@associates.dhs.gov.

Background
The National Mutual Aid and Resource Management Initiative supports the National Incident Management System (NIMS) by establishing a comprehensive, integrated national mutual aid and resource management system that provides the basis to type, order, and track all (Federal, State, and local) response assets.

For ease of ordering and tracking, response assets need to be categorized via resource typing. Resource typing is the categorization and description of resources that are commonly exchanged in disasters via mutual aid, by capacity and/or capability. Through resource typing, disciplines examine resources and identify the capabilities of a resource's components (i.e., personnel, equipment, training). During a disaster, an emergency manager knows what capability a resource needs to have to respond efficiently and effectively. Resource typing definitions will help define resource capabilities for ease of ordering and mobilization during a disaster. As a result of the resource typing process, a resource's capability is readily defined and an emergency manager is able to effectively and efficiently request and receive resources through mutual aid during times of disaster.

Web Site
For more information, you can also refer to the National Mutual Aid and Resource Management Web site located at: http://www.fema.gov/nims/mutual_aid.shtm.

Alphabetical Listing of Terms

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Annex

A

Advanced Life Support (ALS) Ambulance
An ambulance service capable of delivering advanced skills performed by Emergency Medical Services (EMS) practitioners (e.g., intravenous [IV] fluids and drug administration).

Air Ambulance
A rotary-wing aircraft configured, staffed, and equipped to respond, care for, and transport patients. A rotary-wing aircraft must be approved/licensed by a State to do so.

Air Conditioner/Heater
A specialized climate-controlled piece of equipment used to support cooling and/or heating requirements within enclosed structures. Requires mobilization to the desired site, along with set-up requirements, such as power hookup and duct installation. Amps can range from 24 to 260 or more. Equipment used to accommodate schools and malls to small office and tent settings.

Air Search and Rescue Team
Team provides search and rescue emergency airlift and other special services at the request of, and to support, State and county agency needs.

Air Search Team (Fixed-Wing)
Team provides airborne search, emergency airlift, airborne communications, and other special services. Varying levels of specialized management support and command and control capabilities are included in team structures.

Air Tanker (Fixed-Wing Firefighting Aircraft Tanker)
Any fixed-wing aircraft certified by the Federal Aviation Administration (FAA) as being capable of transport and delivery of fire retardant solutions.

Airborne Communications Relay Team (Fixed-Wing), Civil Air Patrol (CAP)
A CAP Airborne Communications Relay Team provides airborne communications relay using fixed-wing platforms to support Federal, State, and local agency needs. Relays are primarily conducted through aircrews, but can also be accomplished through electronic repeaters carried aboard Civil Air Patrol (CAP) aircrafts. Varying levels of specialized management support and command and control capabilities are included in team structures.

Airborne Reconnaissance (Fixed-Wing)
An airborne reconnaissance fixed-wing observation aircraft is capable of flying back video or still imagery from an incident/disaster scene.

Airborne Transport (Fixed-Wing) Team, Civil Air Patrol (CAP)
A CAP Airborne Transport (Fixed-Wing) Team provides limited airborne transportation and emergency airlift to support Federal, State, and local agency needs using light fixed-wing platforms owned by the Civil Air Patrol (CAP). Varying levels of specialized management support and command and control capabilities are included in team structures.

Aircraft Rescue Firefighting (ARFF)
A motor-driven vehicle, designed and constructed for the purpose of aircraft rescue and fighting fires and capable of delivering Class B Foam, providing a specified level of pumping, water, hose, and rescue capacity and personnel.

All-Terrain Cranes
A self-propelled, all-terrain, hydraulic crane capable of traveling over primary, secondary, and off-road surfaces at the tactical support level. Technical characteristics include diesel engine, power shift transmission, three-mode steering, and independently controlled hydraulic outriggers telescoping boom. Comes in various lifting capabilities and is used for construction, maintenance, bridging, and resupply activities. Mobilization of larger all-terrain cranes requires tractor-trailer support for booms and jibs along with additional escort services.

Alpine Search and Rescue Team (Snow and Ice Rescue)
Team conducts search and rescue operations for individuals in a high-altitude alpine environment.

Ambulance Strike Team
An Ambulance Strike Team is a group of five ambulances of the same type with common communications and a leader. It provides an operational grouping of ambulances complete with supervisory elements for organization command and control. The strike teams may be all ALS or all BLS.

Ambulance Task Force
An Ambulance Task Force is a group of any combination of ambulances, within span of control, with common communications and a leader.

Animal Health Incident Management Team
Team provides overall management of animal-related volunteers and donations.

Animal Rescue Team
A team proficient in animal handling and capture and management (minimum teams of two). Environments include water (swift water and flood), wildfire, and hazardous materials (HazMat) conditions. Operations include communications and/or evacuations to effect animal rescue.

Animal Health Technician
Technician performs variety of animal healthcare duties to assist veterinarians in settings such as veterinarians' clinics, zoos, research laboratories, kennels, and commercial facilities. Prepares treatment room for examination of animals and holds or restrains animals during examination, treatment, or inoculation.

Animal Sheltering Team
A team proficient in animal handling, animal care, and animal shelter management and manages the setup, management, and staffing of temporary animal shelters.

Animal Treatment Team – Small
A self-equipped team proficient in the medical treatment of companion animals affected by disasters.

Area Command Team, Firefighting
An Area Command Team is an interagency organization under the auspices of NWCG (1) oversee the management of multiple incidents that are each being handled by an incident management team (IMT) organization; or (2) to oversee the management of a very large incident that has multiple IMTs assigned to it. Area Command has the responsibility to set overall strategy and priorities, allocate critical resources based on priorities, ensure incidents are properly managed, and that objectives are met and strategies followed.

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Backhoe Loader (Wheel Loader; Backhoe)
This is dual-purpose equipment used for loading materials and excavating. Components are located at each end of the equipment. The loading attachments are usually to the front end and the excavating attachment is to the rear. Equipment is available with all-wheel or two-wheel drive. Various sizes are available. Mobilization can be self-propelled and/or on a flat bed trailer. Refer to definitions of wheel loaders (medium to small) and hydraulic excavators for a sampling of capabilities.

Basic Life Support (BLS) Ambulance
An ambulance service capable of delivering basic emergency interventions performed by Emergency Medical Services (EMS) practitioners trained and credentialed to do so (e.g., splinting, bandaging, oxygen administration).

Biological Agent
Living organisms or the materials derived from them (such as bacteria, viruses, fungi, and toxins) that cause disease in or harm to humans, animals, or plants, or cause deterioration of material.

Boat, Fire
A vessel or watercraft designed and constructed for the purpose of fighting fires providing specified level of pumping capacity. The boat is designed with the ability to carry firefighting foam and personnel for the extinguishments of fires in the marine environment.

Bomb Squad/Explosives Teams
A police unit specializing in the investigation and disarming of suspected explosive devices.

Bomb Suits
Suits made of Kevlar® (inner material) and Nomex 3 (outer material to protect from fire).

Breathing Apparatus Support (SCBA Support; Breathing Air, Firefighting)
A mobile unit designed and constructed for the purpose of providing specified level of breathing air support capacity and personnel capable of refilling self-contained breathing apparatus (SCBA) at remote incident locations (Compressor Systems or Cascade).

Brush Patrol Unit, Firefighting (Brush Patrol)
Any light, mobile vehicular unit with limited pumping and water capacity for off-road operations.

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C

Canine Recovery Team (Cadaver Dog Team; K-9 Recovery Team)
Team provides highly trained air scent recovery dog teams for search and recovery operations for deceased victims.

Canine Search Team (Search Dog Team; Dog Rescue Team; K-9 Rescue Team)
Team provides highly trained search dog teams for search and rescue operations for living and deceased victims in a variety of environments. Teams can be broken into three capabilities: air scent (primary), tracking/trailing, and disaster dogs.

Cave Search and Rescue Team (Technical Rescue Team)
Team performs search and rescue services to locate and remove injured, lost, or deceases individuals from caves and caverns. Team members work in totally dark environments that may include vertical drops, narrow or small spaces, boulder fields and scree slopes, cold, and water hazards.

Chemical/Biological (C/B) Protective Ensemble
A compliant vapor-protective ensemble that is also certified as being compliant with the additional requirements for protection against C/B warfare agents such as vapors, gases, liquids, and particulate. (National Fire Protection Association [NFPA] Standard # 1991)

Chemical Warfare Agent
A chemical substance (such as a nerve agent, blister agent, blood agent, choking agent, or irritating agent) used to kill, seriously injure, or incapacitate people through its physiological effects.

Chillers and Air Handlers
A portable system that produces cold water through a series of components. When equipped with an air handler, cold air is generated and distributed. Requires mobilization to the desired site along with setup requirements, such as power hookup, water connections, and duct installation.

Collapse Search and Rescue Team (Technical Rescue Team)
Team responds to locate, rescue, and recover individuals trapped in a fallen structure or buried in structural collapse.

Communications Support Team, Civil Air Patrol (CAP)
A CAP Communications Support Team establishes and maintains CAP communications infrastructure in support of Federal, State, and local agencies.

Confined Space Search and Rescue Team (Mine Search and Rescue)
Team provides search and rescue services to individuals in an enclosed area with limited entry or egress, which has a configuration not designed for human occupancy, such that an entrant could become trapped or asphyxiated. An Occupational Safety and Health Administration (OSHA) permit is required for confined space operations.

Crawler Cranes
Crawler cranes have a steel undercarriage. Usually used for long-term applications where significant weights and reaches are a factor. Stabilization is accomplished through precise boom and counterweight configuration. Best used on level working areas. Several mobilization units will be required to transport boom units and counterweights. Set-up time can be accomplished with relative ease and speed once all components are available for assembly.

Crew Transport
Any vehicle capable of transporting a specified number of crew personnel in a specified manner.

Critical Care Transport (CCT)
An ambulance transport of a patient from a scene or a clinical setting whose condition warrants care commensurate with the scope of practice of a physician or registered nurse (e.g., capable of providing advanced hemodynamic support and monitoring, use of ventilators, infusion pumps, advanced skills, therapies, and techniques).

Critical Incident Stress Management Team (CISMT)
A Critical Incident Stress Management Team is responsible for the prevention and mitigation of disabling stress among emergency responders in accordance with the standards of the International Critical Incident Stress Foundation (ICISF). Team composition, management, membership and governance varies, but can include psychologists, psychiatrists, social workers, and licensed professional counselors.

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Debris Management Monitoring Team
Team manages oversight of the removal, collection, and disposal of debris following a disaster, to mitigate against any potential threat to the health, safety, and welfare of the impacted citizens, and expedite recovery efforts in the impacted area, and address any threat of significant damage to improved public or private property. To act as the representing agent for the owner/agency hiring for this service providing overall coordination with all levels of government and other Emergency Support Functions (ESFs). Provides daily reports as required. Required liability coverage for all aspects of operations and financial capabilities to manage progressive monitoring processes.

Debris Management Site Reduction Team
A debris management site reduction team is designed to reduce debris from affected areas, and aims at limiting the modification of the site to the extent practicable to minimize site closure and restoration activities and cost. Teams must have knowledge and expertise to perform varying debris reduction separation techniques, including at minimum four categories: woody vegetative debris, construction or building rubble, hazardous materials [HazMat], and recyclable materials (e.g., aluminum, cast iron, steel, or household white goods or appliances). These methods of debris reduction separation could include grinding or mulching, air curtain incineration or ash, compaction, recycling, or other specialized separation techniques. Teams should have appropriate education and training in managing inspection stations located at such debris reduction sites, recycling locations, or temporary debris staging reduction sites. The management of said inspection stations shall at all times comply with OSHA, ADA, and other regulatory requirements. Routine maintenance of temporary debris staging reduction sites will be undertaken regularly to ensure no additional environmental impacts and that regulatory requirements are met. Upon completion of debris removal, teams shall provide a timely closeout of the debris reduction site by testing soil and water samples to compare with pre-use baselines, remove all unnecessary debris and equipment from the site, conduct environmental audits, and develop a restoration plan for the site. For quality assurance, teams shall provide debris monitors to observe and provide guidance to workers, whether government or contractual, that may assist in the process. All debris collected, separated, and analyzed by such debris reduction site management teams shall be done so in accordance with Federal, State, territorial, Tribal, or local laws, standards, and regulations.

Debris Management Team
Team facilitates and coordinates the removal, collection, and disposal of debris following a disaster, to mitigate against any potential threat to the health, safety, and welfare of the impacted citizens, and expedite recovery efforts in the impacted area, and address any threat of significant damage to improved public or private property. Team mobilization will vary depending on the team selection, need, and or emergency. Debris removal process will vary depending on the team selection and need.

Decontamination
The physical or chemical process of reducing and preventing the spread of contaminants from persons and equipment used at a hazardous materials (HazMat) incident. (National Fire Protection Association [NFPA] Standard # 472)

Deployable Portable Morgue Unit (DPMU)
Mobile equipment and operations facility, fully equipped to support DMORT functions. Add-on to DMORT when no local morgue facilities are available. Supports either standard DMORT or DMORT-WMD.

Deployment
Departure of team or personnel from home unit or base.

Desert Search and Rescue Team (Wilderness Rescue Team)
Conducts search and rescue missions, evidence searches, and responds to other disaster or emergency situations in a desert environment.

Disaster Assessment Team
Governed by type and magnitude of the disaster, the structure of the team consists of people most knowledgeable about the collection or material inventory of the disaster site, and assessing the magnitude and extent of impact on both the population and infrastructure of society. Trained specifically for disaster assessment techniques, team members are multidisciplinary and can include health personnel, engineering specialists, logisticians, environmental experts, and communications specialists. Responsibilities include recording observations and decisions made by the team, photographing and recording disaster site damage, and investigating where damage exists. Teams also analyze the significance of affected infrastructures, estimate the extent of damages, and establish initial priorities for recovery. Disaster assessment teams can perform an initial assessment that comprises situational and needs assessments in the early, critical stages of a disaster to determine the type of relief needed for an emergency response, or they may carry out a much more expedited process termed a rapid assessment.

Disaster Medical Assistance Team (DMAT) – Basic, **National Disaster Medical System (NDMS)**
A DMAT is a volunteer group of medical and nonmedical individuals, usually from the same State or region of a State, which has formed a response team under the guidance of the NDMS (or under similar State or local auspices). Usually includes a mix of physicians, nurses, nurse practitioners, physician's assistants, pharmacists, emergency medical technicians, other allied health professionals, and support staff. Standard DMAT has 35 deployable personnel. ***See Annex A: Federal Response Teams for more detailed information on this Federal Resource.***

Disaster Medical Assistance Team (DMAT) – Burn Specialty, National Disaster Medical System (NDMS)
A Burn Specialty DMAT is a volunteer group of medical and nonmedical individuals, usually from the same State or region of a State, that has formed a response team under the guidance of the NDMS (or State or local auspices), and whose personnel have specific training/skills in the acute management of burn trauma patients. Members of the burn team are especially trained surgeons, nurses, and support personnel that include physical and occupational therapists, social workers, child life specialists, psychologists, nutrition and pharmacy consultants, respiratory therapists, chaplains, and volunteers. Team composition is usually determined ad hoc, based on the mission at hand. ***See Annex A: Federal Response Teams for more detailed information on this Federal Resource.***

Disaster Medical Assistance Team (DMAT) – Crush Injury Specialty, National Disaster Medical System (NDMS)
A Crush Injury Specialty DMAT is a volunteer group of medical and nonmedical individuals, usually from the same State or region of a State, that has formed a response team under the guidance of the NDMS (or State or local auspices), and whose personnel have specific training/skills in the management of crush injury patients. Crush teams deal with crush and penetrating injuries. Usually includes a mix of physicians, nurses, nurse practitioners, physician's assistants, pharmacists, emergency medical technicians, other allied health professionals, and support staff. Team composition is usually determined ad hoc, based on the mission at hand. ***See Annex A: Federal Response Teams for more detailed information on this Federal Resource.***

Disaster Medical Assistance Team (DMAT) – Mental Health Specialty, National Disaster Medical System (NDMS)
A Mental Health Specialty DMAT is a volunteer group of medical and nonmedical individuals, usually from the same State or region of a State, that has formed a response team under the guidance of the NDMS (or State or local auspices), and whose personnel have specific training/skills in the management of psychiatric patients. A multidisciplinary staff of specially trained and licensed mental health professionals provides emergency mental health assessment and crisis intervention services. Usually includes a mix of physicians, nurses, nurse practitioners, physician's assistants, pharmacists, emergency medical technicians, other allied health professionals, and support staff. Team composition is usually determined ad hoc, based on the mission at hand. ***See Annex A: Federal Response Teams for more detailed information on this Federal Resource.***

Disaster Medical Assistance Team (DMAT) – Pediatric Specialty, National Disaster Medical System (NDMS)
A Pediatric Specialty DMAT is a volunteer group of medical and nonmedical individuals, usually from the same State or region of a State, that has formed a response team under the guidance of the NDMS (or State or local auspices), and whose personnel have specific training/skills in the management of pediatric patients. Usually includes a mix of physicians, nurses, nurse practitioners, physician's assistants, pharmacists, emergency medical technicians, other allied health professionals, and support staff. Team composition is usually determined ad hoc, based on the mission at hand. ***See Annex A: Federal Response Teams for more detailed information on this Federal Resource.***

Disaster Mortuary Operational Response Team (DMORT), National Disaster Medical System (NDMS)
A DMORT is a volunteer group of medical and forensic personnel, usually from the same geographic region, that has formed a response team under the guidance of the NDMS (or State or local auspices), and whose personnel have specific training/skills in victim identification, mortuary services, and forensic pathology and anthropology methods. 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. DMORTs are mission-tailored on an ad-hoc basis, and usually deploy only with personnel and equipment specifically required for current mission. ***See Annex A: Federal Response Teams for more detailed information for this Federal Resource.***

Disaster Mortuary Operational Response Team (DMORT) – Weapons of Mass Destruction (WMD), National Disaster Medical System (NDMS)
Same as DMORT except adds additional capability to deal with deceased persons residually contaminated by chemical, biological, or radiological agents.

Disaster Recovery Team
A Disaster Recovery team is governed by type and magnitude of the disaster, the structure of the team consists of people most knowledgeable about the collection or material inventory of the disaster site, as they direct their efforts to recovery of both the population and infrastructure of society. Responsibilities include separating collections and other materials to be salvaged, moving material to be recovered from affected areas to work or other storage locations for drying materials, and packing materials that will require shipment to another facility. Other responsibilities include maintaining records and photographs of the recovery effort, and establishing inventories and data collection of items as they are sent out of the building/affected location to off-site storage or other facilities. The Disaster Recovery Team may also label items that have lost inventory numbers, label or relabel boxes with locator information, and label boxes for shipment.

Donations Coordinator
The Donations Coordinator is a subsection of a Donations Management Team and has working knowledge of the Individual Assistance and Public Assistance functions under FEMA/State agreement. A Donations Coordinator also has working knowledge of establishing long-term recovery committees on local levels following events. A Donations Coordinator possesses an operational knowledge of all aspects of donations coordination, including management of solicited and unsolicited funds, goods and services from concerned citizens and private organizations following a catastrophic disaster situation.

Donations Management Team
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 State or local donations management in support of the affected jurisdiction.

Dozer (Bulldozer; Track Dozer)
A dozer is specialized equipment used for leveling dirt, debris, and other materials. Equipment is usually associated with large mass movement of various materials. Often used for reducing or increasing grade elevations for roads, airports, and land clearing operations. It is also capable of ripping and moving of ledge rock and other rock materials through the use of a special attachment. Also used for cross-country lying of communication infrastructure through special attachments.

Dump Trailer
Truck with a trailer attachment that has a dump body permanently attached. Dump body capacities will usually range from 20 yards to 50 yards. The equipment requires a level surface for dumping. The requirements from hauling over the road necessitate the equipment to be licensed by appropriate local jurisdictions. This equipment must meet specific standards for safety for hauling over the road whereby operators are usually required to have a commercial driver's license. This equipment is capable of transporting various aggregates along with construction and demolition debris. Typically used for long hauls.

Dump Truck, Off Road
Truck with a dump body permanently attached. Equipment is usually used in an off-road situation. Equipment is usually all wheel drive with large mass capacities. It can maneuver in steep, semi-wet conditions and various weather elements. The equipment requires a semi-level surface for dumping. Often used for large mass projects where earth materials are moved within the project area. Often used in airport/road construction and open pit mining.

Dump Truck, On Road
Truck with a dump body permanently attached. Dump body capacities will usually range from 3 yards to 20 yards. This equipment is capable of transporting various aggregates along with construction and demolition debris.

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Electrical Power Restoration Team
The electrical power restoration team is dependent upon event or disaster size and will be supported by various personal expertises. The teams are usually activated through power company mutual aid agreements. The assignment of personnel and equipment will be dependent upon availability of the releasing mutual aid partner, and will have an agreed timeframe for the release of these said resources. The restoration team coordinates and supports resources of energy producers to quickly restore electrical power to afflicted areas. The host recipients will provide or assist with accommodations for the duration of the team stay. Teams should possess the experience and financial capabilities to support equipment, personnel, and to maintain operations for an indefinite period of time.

EMAC Advanced Team (EMAC A-Team)
The EMAC Advance Team is a team (typically comprised of 2 staff) of EMAC trained and experienced personnel designated to deploy to a State to facilitate interState mutual aid assistance under the Emergency Management Assistance Compact (EMAC). The mission of the EMAC Advance Team is to implement EMAC on behalf of the requesting State by coordinating and facilitating the provision of assistance from other member States in accordance with procedures set forth in the EMAC Standard Operating Procedures.

Emergency Medical Task Force
An Emergency Medical Task Force is any combination (within span of control) of resources (Ambulances, Rescues, Engines, Squads, etc) assembled for a medical mission, with common communications, and a leader (supervisor). Self-sufficient for 12 hour operational periods, although it may be deployed longer, depending on need.

Emergency Response Team – Advance Element (ERT-A)
The portion of the ERT-A first deployed to the field, usually the State Emergency Operations Center (EOC), and the disaster site to join State emergency management personnel to coordinate Federal assistance, determine the extent and focus of initial disaster response activities, and identify a suitable DFO site.

Emergency Response Team – National (ERT-N)
Team provides coordination for Federal response and recovery activities within a State. Once the ERT-N is operational at the Disaster Field Office (DFO), it assumes responsibility from the Regional Operations Center (ROC) staff for management of the Federal response and recovery operation. Major organizational elements of the ERT-N include operations, logistics, information and planning, and administration sections. These four sections coordinate at the staff level and provide mutual support to accomplish priority missions. This coordination includes interaction, consultation, planning, information sharing, operational decisionmaking, and commitment of resources.

Emergency Medical Technician (EMT)
A practitioner credentialed by a State to function as an EMT by a State Emergency Medical Services (EMS) system.

EMS Strike Team
A team comprised of five resources or less of the same type with a supervisor and common communications capability. Whether it is five resources or less, a specific number must be identified for the team. For instance, a basic life support (BLS) strike team would be five BLS units and a supervisor or, for example, an advanced life support (ALS) strike team would be comprised of five ALS units and a supervisor.

EMS Task Force
A team comprised of five resources or less of the same type with a supervisor and common communications capability. Whether it is five resources or less, a specific number must be identified for the team. For instance, an EMS task force might be comprised of two ALS teams and three BLS teams and a supervisor.

Engine, Fire (Engine Company)
Any ground vehicle providing specified levels of pumping, water, hose capacity, and staffed with a minimum number of personnel.

Engineering Services
Depending on the type and magnitude of a disaster or terrorist incident, engineering service expertise will be used accordingly based on discipline specialization. In a general sense, the services that could be provided through engineering services include structural, electrical, civil, mechanical, architectural, geotechnical, and environmental/hazardous materials. Emergency management engineering service providers should posses in-depth knowledge of damage assessment, safety evaluation, transportation infrastructure evaluation per Federal Highway Administration damage assessment procedures, cost recovery per the Stafford Act, and debris management. Additional skills of such engineering service providers should encompass evaluation of hazardous materials, traffic management, utility restoration, water and wastewater quality evaluations, telecommunications operations, and support for the FEMA Urban Search and Rescue Task Force. Engineering service providers should have the ability, experience, and knowledge to interact with the Army Corps of Engineers and other Federal agencies such as the Environmental Protection Agency, along with State, territorial, Tribal, or local building and utility inspectors. Other engineering services that can be provided should include strategic planning for technology, programs, concept development and requirements analysis, system design and integration, tests and evaluation, and integrated logistics support for emergency management.

Emergency Operations Center (EOC) Management Support Team
Team provides support to an Incident Commander (IC). An IC is an optional member of the team, because it is assumed that an Incident Command/lead has already been established under which these support functions will operate. Typically comprised of an information officer, liaison officer, safety officer, logistics officer, and administrative aide.

EOC Finance/Administration Section Coordinator
An EOC Finance/Administration Section Coordinator is an individual at the EOC responsible for tracking incident costs and reimbursement accounting, and coordinating/administering support for EOC personnel during disaster operations. This function is part of the standardized ICS structure per the National Incident Management System. If situation warrants, chief/coordinator oversees subunits of this function, including Compensation/Claims, Procurement, Cost, and Time.

EOC Operations Section Chief
An EOC Operations Section Chief is an individual at the EOC responsible for managing tactical operations at the incident site directed toward reducing the immediate hazard, saving lives and property, establishing situation control, and restoring normal conditions; responsible for the delivery and coordination of disaster assistance programs and services, including emergency assistance, human services assistance, and infrastructure assistance; and oversight of subunits of Operations Section, including Branches (up to five), Division/Groups (up to 25) and Resources as warranted.

EOC Planning Section Chief
The EOC Planning Section Chief is an individual at the EOC who oversees all incident-related data gathering and analysis regarding incident operations and assigned resources, develops alternatives for tactical operations, conducts planning meetings, and prepares the IAP for each operational period.

Equipment Transport (Heavy Equipment Transport)
Any ground vehicle capable of transporting a dozer or tractor.

Evacuation Coordination Team
An Evacuation Coordination Team 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 Emergency Support Function (ESF) #1 – Transportation. The mission of the Evacuation Coordination Team is to provide for the protection of life and/or property by removing endangered persons and property form potential or actual disaster areas to areas of less danger through the successful execution of evacuation procedures.

Evacuation Liaison Team
Team 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 Emergency Support Function (ESF) #1 – Transportation.

Evidence Response Team (ERT)
An Evidence Recovery Team (ERT) is capable of providing 24-hour access to specialized decontamination equipment for chemical release and advice to the On-Scene Coordinator in hazard evaluation; risk assessment; multimedia sampling and analysis; on-site safety, including development and implementation of plans; cleanup techniques and priorities; water supply decontamination and protection; application of dispersants; environmental assessment; degree of cleanup required; and disposal of contaminated material.

External Resources
Resources that fall outside a team's particular agency, including other agency resources or commercially contracted resources.

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Field Mobile Mechanic
A motor-driven vehicle designed and constructed to provide specified level of equipment capacity and mechanically trained personnel.

Field Veterinary Medical Officer (Veterinary Medical Field Officer)
A professional veterinarian, who works to implement animal and poultry disease control programs. Duties can include supervising animal and poultry disease control and eradication services; contacting animal and poultry owners and organizations to explain disease control programs and to provide veterinary medicine advice; conducting epidemiologic investigation of disease outbreaks; inspecting health certificates, livestock auctions, and animal and poultry dealer records; monitoring animal and poultry production and marketing activities; and preparing surveys and reports of disease prevalence.

Flash Fire Protective Ensemble
A compliant vapor-protective ensemble that is also certified as being compliant with the additional requirements for limited protection against chemical flash fire for escape only. (National Fire Protection Association [NFPA] Standard # 1991)

Flat Bed Trailer Truck
Truck with a trailer attachment usually used for the transportation of goods and other commodities across long distances. Depending on the payload, some flat bed trucks have expandable tandems for meeting weight requirements. Flatbeds are usually a fifth-wheel mounted assembly. Payloads can be as much as 80,000 pounds and more if permitted.

Food Dispenser Unit (Food Dispenser)
Any vehicle capable of dispensing food to incident personnel.

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Generators
Diesel-fueled engine generators are used to support electrical requirements at facilities of various sizes such as hospitals, housing, plants, and commercial stores. Units are usually mounted on tow behind or trailer mobilized equipment. Deployment and set up can be accomplished within hours.

Geographical Incident Management Teams, Firefighting
A Geographical Incident Management Team is an interagency organization under the auspices of the Geographical Area Coordination Group composed of the Incident Commander (IC), and appropriate general and command staff personnel assigned to an incident, trained and certified to the Type II level. Type II level personnel may lack the degree of training and experience of Type I personnel in managing complex incidents at the type one level.

Ground Ambulance (Medical Transport)
A ground transport vehicle configured, equipped, and staffed to respond to, care for, and transport patients.

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H

Hazardous Materials (HazMat)
Any material that is explosive, flammable, poisonous, corrosive, reactive, or radioactive, or any combination thereof, and requires special care in handling because of the hazards it poses to public health, safety, and/or the environment. Any hazardous substance under the Clean Water Act, or any element, compound, mixture, solution, or substance designated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); any hazardous waste under the Resource Conservation and Recovery Act (RCRA); any toxic pollutant listed under pretreatment provisions of the Clean Water Act; any hazardous pollutant under Section 112 of the Clean Air Act; or any imminent hazardous chemical substance for which the administrator has taken action under the Toxic Substances Control Act (TSCA) Section 7. (Section 101[14] CERCLA)

Hazardous Material Response Team
An organized group of individuals that is trained and equipped to perform work to control actual or potential leaks, spills, discharges, or releases of HazMat, requiring possible close approach to the material. The team/equipment may include external or contracted resources.

Hazardous Materials Company
Any piece of equipment having the capabilities, personal protective equipment (PPE), equipment, and complement of personnel as specified in the Hazardous Materials Company types and minimum capabilities. The personnel complement will include one member who is trained to a minimum level of assistant safety officer – HazMat.

Hazardous Materials Incident
Uncontrolled, unlicensed release of HazMat during storage or use from a fixed facility or during transport outside a fixed facility that may impact public health, safety, and/or the environment.

HazMat Task Force
A group of resources with common communications and a leader. A HazMat Task Force may be preestablished and sent to an incident, or formed at the incident.

HazMat Trained and Equipped
To the level of training and equipment defined by the Occupational Safety and Health Administration (OSHA) and the National Fire Protection Association (NFPA).

Helicopters, Firefighting (Helicopter or Copter)
An aircraft that depends principally on the lift generated by one or more rotors for its support in flight. Capable of the delivery of firefighters, water, or chemical retardants (either a fixed tank or bucket system), and internal or external cargo.

Helitack Crew (Firefighting Crew)
A crew of firefighters specially trained and certified in the tactical and logistical use of helicopters for fire suppression.

Helitanker
A helicopter equipped with a fixed tank, Air Tanker Board certified, capable of delivering a minimum of 1,100 gallons of water, foam, or retardant (current model helicopter certified, Sikorsky S-64 Sky-Crane).

Helitanker (Firefighting Helicopter)
A helicopter equipped with a fixed tank, Air Tanker Board certified, and capable of delivering a minimum of 1,100 gallons of water, retardant, or foam.

High-Angle Rope Rescue (Rope Rescue; Technical Rock)
Rescue in which the load is predominately supported by the rope rescue system.

Hydraulic Excavator (Large Mass Excavation 13cy to 3cy Buckets)
Track undercarriage construction equipment used to excavate and load earth, blasted rock, sands, and other types of aggregate, also used to load or handle demolition materials. Provides rapid excavation for construction and repair of runways, roads and trails, railroads, pipelines, waterways, and quarry operations. Larger hydraulic excavators may require some dismantling in meeting mobilization requirements. Dismantled pieces usually require additional mobilization support. Multiple accessories are available for varying tasks.

Hydraulic Excavator (Medium Mass Excavation 4cy to 1.75cy Buckets)
Track undercarriage construction equipment that is a track-mounted, hydraulic-controlled, excavating system used to excavate and load earth, blasted rock, sands, and other types of aggregate, also used to load or handle demolition materials. Provides rapid excavation for construction and repair of runways, roads and trails, railroads, pipelines, waterways, and quarry operations. Slightly smaller than the larger hydraulic excavator category, these usually do not require dismantling for mobilization requirements. If dismantling is considered, it may require additional mobilization support. Multiple accessories are available for varying tasks.

Hydraulic Truck Cranes
Highly flexible and mobile self-propelled cranes that can be deployed with ease. They usually do not require any setup or special mobilization consideration. Depending on the actual lifting requirements, these cranes come in various sizes and capabilities. Stabilizers include outrigger for stability.

Hyperspectral Imaging Support Team Civil Air Patrol (CAP)
A CAP Hyperspectral Imaging Support Team provides specialized ground support to analyze and interpret data provided by CAP ARCHER Hyperspectral Imaging systems. ARCHER is an airborne reconnaissance asset that is only available through the CAP at the request of Federal, State, and local agencies being fielded in 2004.

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I

Ice Search and Rescue Team (Water Rescue Team; Public Safety Dive Team)
Team locates and rescues individuals trapped under ice-capped water.

Illumination Unit (Lighting Plant)
A portable light-generating unit capable of providing three to six lights of 500 watts each with extension cords from 500 feet to 1,000 feet to provide specified level of illumination capacity.

Incident Management Team
A command team comprised of the Incident Commander (IC), appropriate command, and general staff personnel assigned to an incident. (Source: FIRESCOPE)

Incident Management Team, Animal Protection
An Animal Protection Incident Management Team, when deployed, will asses the emergency situation and determine the number of operational strike teams that will be required for rescuing, transporting, and sheltering of animals.

Incident Management Team, Firefighting
An Incident Management Team is an interagency organization under the auspices of NWCG composed of the Incident Commander (IC) and appropriate general and command staff personnel assigned to an incident, trained and certified to the Type I level. Type I level personnel possess the highest level of training available and are experienced in the management of complex incidents.

Individual Assistance Disaster Assessment Team
An Individual Assistance Disaster Assessment Team is responsible for providing expert assessments of the disaster situation pertaining to claims for individual assistance and other programs.

Individual Assistance Disaster Assessment Team Leader
An Individual Assistance Disaster Assessment Team Leader is the individual responsible for leading the individual assistance disaster assessment team and possesses an administrative knowledge of Individual Assistance areas. (See Individual Assistance Disaster Assessment Team.)

In-House
Assets or expertise specifically owned, possessed, directed, and/or controlled by the responding entity.

Instrument Flight Rules (IFRs)
Set of rules, guidelines, and procedures that the Federal Aviation Administration (FAA) has established for pilots to operate aircraft in marginal weather conditions, usually defined as ceilings below 1,000 feet/ visibility less than 3 miles.

Interagency Buying Team, Firefighting
The Interagency Wildland Fire Community supports a Buying Team. A National Buying Team supports the procurement efforts through the local administrative staff and is authorized to procure a wide range of services, supplies, and land and equipment rentals. In addition, the buying team leader has the responsibility of coordinating property accountability with the supply unit leader.

International Medical Surgical Response Team (IMSuRT), National Disaster Medical System (NDMS)
An IMSuRT is a volunteer group of medical and nonmedical individuals, usually from the same State or region of a State, that has formed a response team under the guidance of the NDMS and the State Department, and whose personnel and equipment give it deployable medical and surgical treatment capability, worldwide. It is the only NDMS medical team with surgical operating room capability. Full team consists of roughly 26 personnel, which is a mix of physicians, nurses, medical technicians, and allied personnel. ***See Annex A: Federal Response Teams for more detailed information on this Federal Resource.***

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L

Lattice Truck Cranes
This is the larger of the wheel cranes. Usually used for long-term applications where significant weights and reaches are a factor. Stabilizers include outriggers for stability. Several mobilization units will be required to transport boom units and counterweights. Set-up time can be accomplished with relative ease and speed once all components are available for assembly.

Law Enforcement Aviation – Fixed-Wing
Fixed-wing aircraft of various sizes used for surveillance, extraditions, personnel, and cargo transportation.

Law Enforcement Aviation – Helicopters – Patrol and Surveillance
Helicopters of various sizes to provide multifunction aerial support for ground operations.

Law Enforcement Canine Teams – Cadaver Detecting Dogs
Patrol dogs trained to find and passively alert on decaying human tissues, bones, and fluids.

Law Enforcement Canine Teams – Explosive Detecting Dogs
Patrol dogs trained to detect and passively alert on a variety of odors indicating the presence of explosive devices.

Law Enforcement Canine Teams – Narcotics Detecting Dogs
Patrol dogs capable of finding and alerting on cocaine, marijuana, methamphetamines, heroin, and their derivatives.

Law Enforcement Canine Teams – Patrol Dogs (K-9s)
Trained canine units providing law enforcement with a nonlethal means of apprehending dangerous criminal offenders; detecting intruders and alerting handlers to their presence; pursuing, attacking, and holding criminal offenders who resist apprehension; searching and clearing buildings and large open areas for criminals; tracking lost children or other persons; detecting the presence of certain narcotics, explosives, and tobacco products; locating deceased subjects, crime scenes, and minute physical evidence; and providing a strong psychological deterrent to certain types of criminal misconduct.

Law Enforcement Dive Teams – Evidence Recovery
Underwater teams used to recover evidence.

Law Enforcement Dive Teams – Recovery
Underwater teams used to recover drowning victims and lost vessels.

Liquid Splash-Protective Ensemble
Multiple elements designed to provide a degree of protection for emergency response personnel from adverse exposure to the inherent risks of liquid-chemical exposure occurring during hazardous materials (HazMat) emergencies and similar operations. The liquid splash-protective ensemble is either an encapsulating or nonencapsulating ensemble. (National Fire Protection Association [NFPA] Standard # 1992)

Low-Angle Rope Rescue (Rope Rescue)
Rescue in which the load is predominately supported by itself and not the rope rescue system.

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M

Management Support Team (MST), National Disaster Medical System (NDMS)
An MST is a command and control team that provides support and liaison functions for other NDMS teams in the field. MSTs are usually staffed by a mix of Federal employees and are constituted on an ad-hoc, mission-specific basis. An MST (perhaps as small as one or two individuals) always accompanies an NDMS unit on a deployment. ***See Annex A: Federal Response Teams for more detailed information on this Federal Resource.***

Mine and Tunnel Search and Rescue Team
A specially trained and equipped team that searches for, rescues, and/or recovers individuals from working or abandoned mines and tunnels.

Mine Rescue Team (Confined Space Rescue)
Team locates and rescues individuals lost or trapped in active or abandoned mine shafts or other below-ground entrapments.

Mobile Communications Center (Mobile Emergency Operations Center [EOC]; Mobile Command Center; Continuity of Operations Vehicle)
A vehicle that serves as a self-sustaining mobile operations center capable of operating in an environment with little to no basic services, facilitating communications between multiple entities using an array of fixed and/or wireless communications equipment, providing appropriate work space for routine support functions, and providing basic services for personnel in short-term or long-term deployments.

Mobile Feeding Kitchen (Mobile Field Kitchen; Rapid Deployment Kitchen)
A containerized kitchen that can be positioned forward in fulfillment of Emergency Support Function (ESF) #11 – Food and Water. The units are used to support feeding operations at emergency incidents.

Mobile Field Force (Crowd Control Teams; Riot Dispersal Team)
Police units trained in handling large crowds and riot situations, including specialized training in crowd dispersal, tactics, and special weapons.

Mobile Kitchen Unit
A unit designed and constructed to dispense food for incident personnel providing a specified level of capacity.

Mountain Search and Rescue Team (Wilderness Rescue Team)
Team searches for and rescues people either above the timberline or in high-angle areas below the timberline, which can include glacier, crevasse, backcountry, alpine search and rescue, and other aspects of the environment.

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N

National Urban Search and Rescue (US&R) Incident Support Team (IST)
ISTs are components of ERT-As that provide Federal, State, and local officials with technical assistance in the acquisition and use of search and rescue resources through advice, Incident Command assistance, management, and coordination of US&R task forces and obtaining logistic support. ***See Annex A: Federal Response Teams for more detailed information on this Federal Resource.***

National Strike Force, U.S. Coast Guard
The U.S. Coast Guard National Strike Force was created in 1973 as a Coast Guard special force under the National Contingency Plan (NCP/see 40 CFR 300.145) to respond to oil and hazardous chemical incidents. The NSF consists of three interoperable regionally based Strike Teams: Atlantic, Gulf and Pacific, and the Public Information Assist Team (PIAT). The NSF supports USCG and EPA Federal On-Scene Coordinators (FOSCs) to protect public health, welfare, and the environment. In recent years, the capabilities have been expanded to include response to weapons of mass destruction (WMD) incidents, as well as incident management assistance.

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O

Occupational Health & Safety Specialists (Occupational Physicians; Occupational Health Nurses; Industrial Hygienists; Occupational Safety Specialists; Occupational Safety & Health Technicians; Health and Safety Inspectors; Industrial Hygienists)
Personnel with specific training in occupational safety and health and topics such as workplace assessment or occupational medicine. Occupational health and safety specialists and technicians help keep workplaces safe and workers in good health unscathed. They promote occupational health and safety within organizations by developing safer, healthier, and more efficient ways of working. They analyze work environments and design programs to control, eliminate, and prevent disease or injury caused by chemical, physical, and biological agents or ergonomic factors. They may conduct inspections and enforce adherence to laws, regulations, or employer policies governing worker health and safety.

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P

Paramedic
A practitioner credentialed by a State to function at the advanced life support (ALS) level in the State Emergency Medical Services (EMS) system.

Personal Protective Equipment (PPE)
Equipment and clothing required to shield or isolate personnel from the chemical, physical, thermal, and biological hazards that may be encountered at a hazardous materials (HazMat) incident. (National Fire Protection Association [NFPA] Standard # 472)

Public Assistance Coordinator (PAC)
The Public Assistance Coordinator (PAC) is a subsection of the Public Assistance Team (PAT). The PAC is assigned to work with a Public Assistance (PA) applicant from declaration to funding approval. The PAC must possess an in-depth working knowledge of disaster relief laws, regulations, PA programs, and recovery roles of government and the private sector.

Public Safety Dive Team
Team assists with location and recovery of drowning victims, evidence in criminal cases, and abandoned vehicles and provides safety divers for special events.

Public Safety Dive Team, Law Enforcement (Dive Team)
A Law Enforcement Public Safety Dive Team is a group of law enforcement divers equipped and trained to perform a variety of functions, including evidence search and recovery.

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R

Radio Direction Finding Team (Electronic Search Team)
Teams use radio direction finding equipment to locate distress beacons (such as emergency locator transmitters, emergency position indicating radio beacons, and personal locator beacons). Beacons may be located in remote or populated areas, as teams can expect to work in varied localities, including airfields, marinas, and geographically secluded areas.

Radiological Material
Any material that spontaneously emits ionizing radiation. (National Fire Protection Association [NFPA] Standard # 472)

Rapid Needs Assessment (RNA) Team
Team 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 RNA Team is responsible for assessing both overall impact of a disaster event and determining Federal and/or State immediate response requirements.

Release
Any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment (including the abandonment or discharging of barrels, containers, and other closed receptacles containing any hazardous substance or pollutant or contaminant). (Section 101[22] CERCLA)

Rescue
To access, stabilize, and evacuate distressed or injured individuals by whatever means necessary to ensure their timely transfer to appropriate care or to a place of safety.

Rope Rescue (High-Angle Rescue; Low-Angle Rescue; Technical Rescue)
To rescue through the use of rigging techniques, anchor systems, belays, mechanical advantages, subject extrication techniques, and low- and high-angle rescue techniques.

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S

Search
To locate an overdue or missing individual, individuals, or objects.

Search Suit
Suit made of Kevlar® and Nomex 3, often used by, but not limited to, bomb squad personnel, significantly lighter than bomb suits; allows user to conduct search with increased mobility.

Shelter Management Team
Team provides managerial and operational support for a shelter during 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.

Sheltering Team, Large Animal, Animal Protection
An Animal Protection Large Animal Sheltering Team will deploy for a minimum of 7 days and will be responsible for advising and supporting local efforts in setting up a large animal shelter.

Sheltering Team, Small Animal, Animal Protection
An Animal Protection Small Animal Sheltering Team will deploy for a minimum of 7 days and will be responsible for advising and supporting local efforts in setting up a small animal shelter.

Special-Needs Shelter
A refuge specifically designed to accommodate individuals with special medical needs who are not ill enough to require hospitalization. These shelters are supported by volunteer doctors and nurses and often have backup electric capability to support those with medical equipment reliant on electricity.

Sustainability
Ability to continue response operations for the prescribed duration necessary.

Special Weapons and Tactics (SWAT)/Tactical Teams
SWAT teams are specially trained to handle high-risk situations and specialized tactical needs. Team members have advanced skills beyond that of typical patrol officers.

Strike Team, Large Animal Rescue, Animal Protection
An Animal Protection Large Animal Rescue Strike Team is a six-member team capable of completing an average of one rescue every 30 minutes in a suburban setting and one rescue every hour in rural settings.

Strike Team, Small Animal Rescue, Animal Protection
An Animal Protection Small Animal Rescue Strike Team is a six-member team capable of completing an average of one rescue every 30 minutes in a suburban setting and one rescue every hour in rural settings.

Swift Water Search and Rescue Team (Flood Search and Rescue; Water Rescue Team)
Team conducts surface search and rescue operations on waterways where the water is moving fast enough to produce sufficient force to present a life and safety hazard to a person entering it.

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T

Tender, Foam (Firefighting Foam Tender)
The apparatus used to mix concentrate with water to make solution, pump, and mix air and solution to make foam, and transport and apply foam.

Tender, Fuel (Fuel Tender)
Any vehicle capable of supplying fuel to ground or airborne equipment.

Tender, Helicopter (Helicopter Tender)
A ground service vehicle capable of supplying fuel and support equipment to helicopters.

Total Containment Vessel (TCV)
A TCV is designed to transport explosive or chemical devices, fully enclosed. Used for explosive and hazardous materials (HazMat).

Tractor Trailer
Truck with a trailer attachment used for mobilization of various goods, supplies, and equipment. Predominately used for moving equipment, either long distances, overweight and over-width equipment, or equipment not permitted for over the road purposes, including track equipment. Trailers are either fifth-wheel mounted or tow behinds, depending on the size of the load. Also used for long- and short-haul needs, including smaller equipment. Loading and off-loading can be accomplished from either the front or the rear. Usually the rear loading will require ramps. If loading is done from the front, the trailer will be detached from the truck allowing use of the small ramps for loading purposes. Front-end loading using a detachable trailer is usually used for oversized equipment. Payloads can be as much as 80,000 pounds and more if permitted.

Transport Team, Large Animal, Animal Protection
An Animal Protection Large Animal Transport Team will deploy for a minimum of 5 days and will be responsible for transporting large animals from a disaster site. All required vehicles will accompany team.

Transport Team, Small Animal, Animal Protection
An Animal Protection Small Animal Transport Team will deploy for a minimum of 5 days and will be responsible for transporting large animals from a disaster site. All required vehicles will accompany team.

Tub Grinder
Specialized equipment designed to grind heavy brush, pallets, demolition material, land-clearing debris, and yard waste. Units are equipped with hammermills ranging from 26 inches to 36 inches that serve as steel fixed hammers or doubled-edged cutting tools. Tub grinders possess hydraulic tub tilt to provide safe access to the hammermill during maintenance, and have a horsepower range from 157 to 1,050. Tub grinders shrink space requirement by a ratio of 10:1 yards. Feeding the equipment requires either a front-end loader or other hydraulic equipment such as an excavator with a thumb attachment or cherry-picker. Processed materials can be stockpiled using conveyor systems or with stockpiled using a front-end loader. Depending on the size of the equipment's processing capabilities, it may be possible to feed and stockpile with one front-end loader. Equipment operations and controls are remotely managed, usually away from any potential flying debris. Mobilization is required, either with a tractor-trailer hook-up, fifth-wheel only, or pindle-hook option. The processing area should be firm soil with sufficient room for stockpiling pre- and post-products; however, track tub grinders are available for special processing needs. Over-width escort services would be used for wide loads.

Tug Boat
Tug boats are commercial water vessels that move or assist in the movement of propelled and non-propelled water vessels, primarily with ship docking and barge towing. Ship-assist tugs are generally port or harbor related, while barge towing tugs are typically port-to-port transporters up and down rivers, inlets, and the coastline. With different sizes and modifications for varying tasks, tug boats require specially trained operators or captains licensed and subject to jurisdiction of the U.S. Coast Guard, and are also subject to random drug and alcohol testing procedures. Crew manifests generally range from 2 to 6+ individuals, including a captain and an inland waterways river pilot, required by law, who serves as servant to the vessel master. Docking pilots (specialists) should be used where possible, as they serve to enhance communications between the assisted ship and the tug boat in "unfamiliar waters." These crew members will, at times, live on the tug itself or on-call from nearby homes, and have a varying schedule dependent on the tug company. Tug boats also consist of model bows or pointed bows for towing while push tugs have square bows. Specially equipped tug boats can be specialized to serve as spray boats or firefighting boats for the purposes of emergency situations. Tug boats strongly rely on the need for communication as many assisted ships either originate in foreign countries or are unfamiliar with inland or harbor waters. In emergencies, the U.S. Coast Guard houses a master list of tug boats that can be contacted for assistance. Most tug boat owners and operators may belong to their trade association, the American Waterways Operators (AWO).

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U

Urban Search and Rescue (US&R)
US&R involves the location, rescue (extrication), and initial medical stabilization of victims trapped in confined spaces.

Urban Search and Rescue (US&R) Task Force (US&R Team)
Federal asset that conducts physical search and rescue in collapsed buildings; provides emergency medical care to trapped victims; assesses and controls gas, electrical services, and hazardous materials (HazMat); and evaluates and stabilizes damaged structures. ***See Annex A: Federal Response Teams for more detailed information on this Federal Resource.***

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V

Vapor Protective Ensemble
A vapor protective ensemble or garment that is intended for use in an unknown threat atmosphere or for known high health risk atmospheres is vapor tight, and is in compliance with National Fire Protection Association (NFPA) Standard # 1991, "Standard on Vapor-Protective Ensembles for Hazardous Materials Emergencies."

Veterinary Epidemiologist
A practitioner who studies factors influencing existence and spread of diseases among humans and animals, particularly those diseases transmissible from animals to humans. Required to hold degree of Doctor of Veterinary Medicine.

Veterinary Medical Assistance Team (VMAT), National Disaster Medical System (NDMS)
VMATs are volunteer teams of veterinarians, technicians, and support personnel, usually from the same region, that 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. They help assess medical needs of animals, and conduct animal disease surveillance, hazard mitigation, biological and chemical terrorism surveillance, and animal decontamination. Usually includes a mix of veterinarians, veterinary technicians, support personnel, microbiologists, epidemiologists, and veterinary pathologists. ***See Annex A: Federal Response Teams for more detailed information on this Federal Resource.***

Visual Flight Rules (VFRs)
Set of Federal Aviation Administration (FAA) rules, guidelines, and procedures that apply to aircraft when a pilot is conducting flight with visual reference to the ground.

Volcano Search and Rescue Team (Wilderness Rescue Team)
Team provides technical rescue, avalanche rescue, and other aspects of mountain rescue services applicable for search and rescue operations in and around the surface of a volcano.

Volunteer Agency Liaison (VAL)
The Volunteer Agency Liaison serves as the central point between government entities and volunteer organizations in the coordination of information and activities of VOADs (Volunteer Organizations Active in Disasters) responding in times of disaster.

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Water Purification Team (Emergency Water Teams)
A water purification team is a specialized team designed to support the Emergency Water Mission in support of the Federal Response Plan (FRP). Teams provide an emergency supply of potable water, both bottled and bulk, to include procurement, transportation, and distribution to impacted areas for usage by both the general public and response personnel. FEMA, who is the lead agency under the FRP for coordinating all Federal activities following a natural disaster or manmade emergency, assigned the Department of Defense (U.S. Army Corps of Engineers) as the lead agency in support of Emergency Support Function (ESF) #3 – Public Works and Engineering, that includes tasking of emergency potable water. Team members are fully trained and knowledgeable of water certification requirements and daily consumption rates, the procurement process including the Advanced Contracting Initiative (ACI) Water Contract, which is a supply and service contract for procuring bottled and bulk water, transportation, security measures, distribution processes, emergency management, and have previously worked with or able to build rapport with State and local governments. Teams coordinate with FEMA, State and local governments, and other ESF elements to scope the magnitude of the water mission. After mission scoping, teams assist FEMA in writing the mission assignment and tasks, estimating mission-funding requirements, and assessing when all emergency needs have been met and the water mission can be closed out. Emergency water teams are responsible for timely procurement and delivery of potable water to all Staging Areas and distribution sites. Teams are deployed on 30-day rotations, with 3 to 5-day transition periods, however, the average water mission only lasts about 2 to 3 weeks. In events with warning, such as hurricanes, emergency water teams are predeployed to the region and contract for the delivery of a small amount of potable water to predesignated Staging Areas so that water deliveries can begin immediately following the event. Following the event, the teams focus on meeting all post-declaration water mission mandates tasked by FEMA to ESF #3, including mass distribution at appropriate staging areas.

Water Search and Rescue Team
Team conducts surface and subsurface search and rescue operations in all-water environments, including swift water and flood conditions. Water rescue teams come with all team equipment required to safely and effectively conduct operations. Water rescue teams can be assigned to special events to provide for the safety of citizens.

Water Truck
A truck with a permanently mounted water tank with the capabilities of dispensing potable or nonpotable water. The dispensing is handled through gravity or pumped. For pumping action, the truck's engine or transmission is usually used to generate the requirement dispensing energy. Uses can range from delivering potable water to shelter locations, nonpotable form for irrigation, assisting in wildfire situations, dust control, compaction requirements, flushing of storm conveyance sanitary sewer lines, and washing areas of dirt, debris, and dust.

Weapons of Mass Destruction (WMD)
(1) Any destructive device as defined in section 921 of this title ("destructive device" defined as any explosive, incendiary, or poison gas, bomb, grenade, rocket having a propellant charge of more than 4 ounces, missile having an explosive or incendiary charge of more than 1/4 ounce, mine or device similar to the above); (2) any weapon that is designed or intended to cause serious bodily injury through the release, dissemination, or impact of toxic or poisonous chemicals, or their precursors; (3) any weapon involving a disease organism; or (4) any weapon that is designed to release radiation or radioactivity at a level dangerous to human life. (United States Code, Title 18-Crimes and Criminal Procedure, Part I-Crimes, Chapter 113B-Terrorism, Sec. 2332a)

Wheel Dozer
A wheel dozer is a rubber-tired piece of equipment used for spreading and compacting without vibratory means. This equipment can accomplish mass leveling tasks for agriculture, construction, forestry, heavy construction, industrial needs, open pit mining, and similar earth moving requirements. Rubber tires contribute by compacting the earth being moved during the process of leveling. Leveling in layers to maximize density requirements usually performs this action. Layered leveling limits will also be accommodated by the weight and size of the equipment being employed. Equipment can operate on slight slopes. Equipment capacities can vary from 100,000 lbs. at 33 yd^3 to 22,000 lbs. at 3.5 yd^3. Mobilization is usually required. A front-end loading detachable trailer is usually the preferred option. Over-width escort services would be used for wide loads.

Wheel Loaders (Large: 41cy to 8cy)
Rubber-tired equipment used for moving and/or loading large masses of various aggregate materials or demolition debris. Materials are usually loaded into material carrying equipment, such as dump trucks or stockpiled, processed, and/or moved around onsite. Accessories are also available for handling bulky materials/waste. A tractor-trailer unit usually handles the mobilization. Depending on the bucket size, dismantling is usually not an issue. Depending on the width, a transport permit may be required, along with escort services.

Wheel Loaders (Medium to Small: 7cy to 2cy)
Rubber-tired equipment used for moving and/or loading small to large masses of various aggregate materials or demolition debris. Materials are usually loaded into material carrying equipment, such as dump trucks or stockpiled, processed, and/or moved around onsite. Accessories are also available for handling bulky materials/waste. A tractor-trailer unit usually handles the mobilization but is not necessary for some pieces of equipment. Mobilization without a transport usually requires an operator's license. Usually the width of this equipment does not require a transport permit but may still require an escort service.

Wilderness Search and Rescue Team (Ground Search and Rescue)
Team provides response search and rescue services, including all-weather search and rescue of missing persons, search and rescue management capabilities, trained ground search teams of all levels, technical rescue specialists, specialized wilderness medical personnel, and safety and survival education.

Wilderness Search and Rescue Team (Ground Search and Rescue Team)
Team provides ground search and rescue services, including all-weather search and rescue of missing persons, search and rescue management capabilities, evidence collection, trained ground search teams of all levels, technical rescue specialists, specialized wilderness medical personnel, and safety and survival education.

WMD Chem/Bio
A short-hand phrase for "weapons of mass destruction, chemical/biological," in reference to those substances that were developed by military institutions to create widespread injury, illness, or death.

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Z

Zone, Contamination Reduction (Warm Zone)
The area between the Exclusion Zone and the Support Zone. This zone contains the personnel decontamination station. This zone may require a lesser degree of personnel protection than the Exclusion Zone. This separates the contaminated area from the clean area and acts as a buffer to reduce contamination of the "clean" area. (U.S. Coast Guard Incident Management Handbook, 2001 edition)

Zone, Exclusion (Hot Zone)
The area immediately around a spill or release and where contamination does or could occur. The innermost of the three zones of a hazardous substances/material incident. Special protection is required for all personnel while in this zone. (U.S. Coast Guard Incident Management Handbook, 2001 edition)

Zone, Support (Cold Zone)
The "clean" area outside of the contamination control line. In this area, equipment and personnel are not expected to become contaminated. Special protective clothing is not required. This is the area where resources are assembled to support the hazardous substances/materials release operations. (U.S. Coast Guard Incident Management Handbook, 2001 edition)

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A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Annex

Annex A: Federal Response Teams

Annex A: Federal Response Teams includes definitions for 11 Federal Response Teams defined by capability and capacity. Definitions are divided into three subsections for each resource type, including *description, human resources,* and *equipment*. **Click on the below titles to view definitions.** The following Federal Response Teams are defined in Annex A:

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Disaster Medical Assistance Team (DMAT)
Basic Team

Components and Capabilities

Type I

- **Description.** A volunteer group of medical and nonmedical individuals, such as physicians, nurses, nurse practitioners, physician's assistants, pharmacists, emergency medical technicians (EMTs), other allied health professionals, and support staff. These individuals are usually from the same State or region of a State, and have formed a response team under the guidance of the National Disaster Medical System (NDMS), or under similar State or local auspices.

- **Human Resources.** Thirty-five deployable personnel who deploy to site within 24 hours of notification. Staff can function for 72 hours in austere locations without resupply and treat up to 250 victims within 24 hours.

- **Equipment.** Equipment can function for 72 hours in austere locations without resupply. Full complement of equipment.

Type II

- **Description.** A volunteer group of medical and nonmedical individuals, such as physicians, nurses, nurse practitioners, physician's assistants, pharmacists, EMTs, other allied health professionals and support staff. These individuals are usually from the same State or region of a State, and have formed a response team under the guidance of the NDMS, or under similar State or local auspices.

- **Human Resources.** Thirty-five deployable personnel who deploy to site within 24 hours of notification. Deploy to site within 24 hours of notification with all necessary staff. Function in existing facility using facility's equipment and supplies.

- **Equipment.** Limited to none.

Type III

- **Description.** A volunteer group of medical and nonmedical individuals, such as physicians, nurses, nurse practitioners, physician's assistants, pharmacists, EMTs, other allied health professionals, and support staff. These individuals are usually from the same State or region of a State, and have formed a response team under the guidance of the NDMS, or under similar State or local auspices.

- **Human Resources.** Personnel roster only. May be less than full complement.

- **Equipment.** None.

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Disaster Medical Assistance Team (DMAT)
Burn Specialty

Components and Capabilities

Type I

- **Description.** A volunteer group of medical and nonmedical individuals such as physicians, nurses, nurse practitioners, physician's assistants, pharmacists, emergency medical technicians (EMTs), other allied health professionals, and support staff. These individuals are 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 (NDMS) (or State or local auspices), and whose personnel have specific training/skills in the management of burn trauma patients.

- **Human Resources.** Deployment rosters are usually constituted on an ad-hoc basis, depending on situational need. Variable number of personnel. Can deploy to site within 24 hours of notification and function for 72 hours in austere locations without resupply.

- **Equipment.** Equipment can function for 72 hours in austere locations without resupply. Full complement of equipment.

Type II

- **Description.** A volunteer group of medical and nonmedical individuals such as physicians, nurses, nurse practitioners, physician's assistants, pharmacists, EMTs, other allied health professionals, and support staff. These individuals are usually from the same State or region of a State, that have formed a response team under the guidance of the NDMS (or State or local auspices), and whose personnel have specific training/skills in the management of burn trauma patients. Current NDMS burn teams are Type II; they are not fully equipped teams, but rather they usually co-deploy, providing specialized equipment, supplies, and skills on those missions that involve burn casualties.

- **Human Resources.** Deployment rosters are usually constituted on an ad-hoc basis, depending on situational need. Variable number of personnel. Can deploy to site within 24 hours of notification. Function in existing fixed facility using facility's equipment and supplies.

- **Equipment.** Limited to specialized items for burns.

Type III

- **Description.** A volunteer group of medical and nonmedical individuals such as physicians, nurses, nurse practitioners, physician's assistants, pharmacists, EMTs, other allied health professionals, and support staff. These individuals are usually from the same State or region of a State that have formed a response team under the guidance of the NDMS (or State or local auspices), and whose personnel have specific training/skills in the management of burn trauma patients.

- **Human Resources.** Personnel roster only. May be less than full complement.

- **Equipment.** None.

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Disaster Medical Assistance Team (DMAT)
Crush Injury Specialty

Components and Capabilities

Type I

- **Description.** A volunteer group of medical and nonmedical individuals, such as physicians, nurses, nurse practitioners, physician's assistants, pharmacists, emergency medical technicians (EMTs), other allied health professionals, and support staff. These individuals are 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 (NDMS) (or State or local auspices), and whose personnel have specific training/skills in the management of crush injury patients.

- **Human Resources.** Deployment rosters are usually constituted on an ad-hoc basis, depending on situational need. Variable number of personnel. Can deploy to site within 24 hours of notification. Staff can function for 72 hours in austere locations without resupply.

- **Equipment.** Equipment can function for 72 hours in austere locations without resupply. Full complement of equipment.

Type II

- **Description.** A volunteer group of medical and nonmedical individuals, such as physicians, nurses, nurse practitioners, physician's assistants, pharmacists, EMTs, other allied health professionals, and support staff. These individuals are usually from the same State or region of a State that have formed a response team under the guidance of the NDMS (or State or local auspices), and whose personnel have specific training/skills in the management of crush injury patients. Current NDMS crush injury teams are Type II.

- **Human Resources.** Deployment rosters are usually constituted on an ad-hoc basis, depending on situational need. Variable number of personnel. Can deploy to site within 24 hours of notification. Function in existing fixed facility using facility's equipment and supplies.

- **Equipment.** Limited or none.

Type III

- **Description.** A volunteer group of medical and nonmedical individuals, such as physicians, nurses, nurse practitioners, physician's assistants, pharmacists, EMTs, other allied health professionals, and support staff. These individuals are usually from the same State or region of a State that have formed a response team under the guidance of the NDMS (or State or local auspices), and whose personnel have specific training/skills in the management of crush injury patients.

- **Human Resources.** Personnel roster only. May be less than full complement.

- **Equipment.** None.

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Disaster Medical Assistance Team (DMAT)
Mental Health Specialty

Components and Capabilities

Type I

- **Description.** A volunteer group of medical and nonmedical individuals, such as physicians, nurses, nurse practitioners, physician's assistants, pharmacists, emergency medical technicians (EMTs), other allied health professionals, and support staff. These individuals are 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 (NDMS) (or State or local auspices), and whose personnel have specific training/skills in the management of psychiatric patients.

- **Human Resources.** Deployment rosters are usually constituted on an ad-hoc basis, depending on situational need. Variable number of personnel. Can deploy to site within 24 hours of notification. Staff can function for 72 hours in austere locations without resupply.

- **Equipment.** Equipment can function for 72 hours in austere locations without resupply. Full complement of equipment.

Type II

- **Description.** A volunteer group of medical and nonmedical individuals, such as physicians, nurses, nurse practitioners, physician's assistants, pharmacists, EMTs, other allied health professionals, and support staff. These individuals are usually from the same State or region of a State, that have formed a response team under the guidance of the NDMS (or State or local auspices), and whose personnel have specific training/skills in the management of psychiatric patients. Current NDMS mental health teams are Type II.

- **Human Resources.** Deployment rosters are usually constituted on an ad-hoc basis, depending on situational need. Variable number of personnel. Can deploy to site within 24 hours of notification. Function in existing fixed facility using facility's equipment and supplies.

- **Equipment.** Limited or none.

Type III

- **Description.** A volunteer group of medical and nonmedical individuals, such as physicians, nurses, nurse practitioners, physician's assistants, pharmacists, EMTs, other allied health professionals, and support staff. These individuals are usually from the same State or region of a State, that have formed a response team under the guidance of the NDMS (or State or local auspices), and whose personnel have specific training/skills in the management of psychiatric patients.

- **Human Resources.** Personnel roster only. May be less than full complement.

- **Equipment.** None.

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Disaster Medical Assistance Team (DMAT)
Pediatric Specialty

Components and Capabilities

Type I

- **Description.** A volunteer group of medical and nonmedical individuals, usually from the same State or region of a State, that has formed a response team under the guidance of the National Disaster Medical System (NDMS) (or State or local auspices), and whose personnel have specific training/skills in the management of pediatric patients.

- **Human Resources.** Deployment rosters are usually constituted on an ad-hoc basis, depending on situational need. Variable number of personnel. Can deploy to site within 24 hours of notification. Staff can function for 72 hours in austere locations without resupply.

- **Equipment.** Equipment can function for 72 hours in austere locations without resupply. Full complement of equipment.

Type II

- **Description.** A volunteer group of medical and nonmedical individuals, usually from the same State or region of a State, that has formed a response team under the guidance of the NDMS (or State or local auspices), and whose personnel have specific training/skills in the management of pediatric patients. Current NDMS pediatric teams are Type II. They do not deploy as a fully functioning team but generally co-deploy and augment another team.

- **Human Resources.** Deployment rosters are usually constituted on an ad-hoc basis, depending on situational need. Variable number of personnel. Can deploy to site within 24 hours of notification. Function in existing fixed facility using facility's equipment and supplies.

- **Equipment.** Limited or none.

Type III

- **Description.** 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 NDMS (or State or local auspices), and whose personnel have specific training/skills in the management of pediatric patients.

- **Human Resources.** Personnel roster only. May be less than full complement.

- **Equipment.** None.

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Disaster Mortuary Operational Response Team (DMORT)

Components and Capabilities

Type I

- **Description.** A volunteer group of medical and forensic personnel, such as medical examiners, coroners, pathologists, forensic anthropologists, medical records technicians, fingerprint technicians, dental assistants, radiologists, funeral directors, mental health professionals, and support personnel. These individuals are usually from the same geographic region, that have formed a response team under the guidance of the National Disaster Medical System (NDMS) (or State or local auspices), and whose personnel have specific training/skills in victim identification, mortuary services, and forensic pathology and anthropology methods. DMORTs are mission-tailored on an ad-hoc basis, and usually deploy only with personnel and equipment specifically required for current mission. The capability of the team can be expanded to include weapons of mass destruction (WMD) response.

- **Human Resources.** Thirty-one personnel to deploy to site within 24 hours of notification. Provide on-site victim identification and morgue operations. Provide family assistance services.

- **Equipment.** Deployable Portable Morgue Unit (DPMU) add-on available when no local morgue facilities are available.

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International Medical Surgical Response Team (IMSuRT)

Components and Capabilities

Type I

- **Description.** A volunteer group of medical and nonmedical individuals, usually from the same State or region of a State, that has formed a response team under the guidance of the National Disaster Medical System (NDMS) and the State Department, and whose personnel and equipment give it deployable medical and surgical treatment capability, worldwide. This is the only NDMS team with surgical operating room capability. Currently, a single IMSuRT exists as Type I, being a successor to the previous Incident Support Team (IST) specialty DMAT. Two additional teams are being formed.

- **Human Resources.** Full team consists of 26 personnel able to begin deployment to outside the continental United States (OCONUS) location within 3 hours of notification. Staff two operating room suites providing emergency surgery, treatment, and stabilization.

- **Equipment.** Usually deploys with all necessary equipment. Fully equipped to provide freestanding surgical capability, etc., but does not usually function in an austere environment without additional support.

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Management Support Team (MST)

Components and Capabilities

Type I

- **Description.** A command and control team that provides support and liaison and functions for other National Disaster Medical System (NDMS) teams in the field. A mix of Federal employees from NDMS headquarters, the PHS-2 team, or the CCRF usually staffs MSTs. 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. MSTs are mission-tailored on an ad-hoc basis, and usually deploy only with personnel and equipment specifically required for current support mission.

- **Human Resources.** Deploy to site within 24 hours of notification; provide Federal supervision, coordination, and support at site of any NDMS team deployment, including ambulatory care (sick call) for Federal personnel.

- **Equipment.** Full complement.

Type II

- **Description.** A command and control team that provides support and liaison functions for other NDMS teams in the field. A mix of Federal employees from NDMS headquarters, the PHS-2 team, or the CCRF usually staffs MSTs. 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. MSTs are mission-tailored on an ad-hoc basis, and usually deploy only with personnel and equipment specifically required for current support mission.

- **Human Resources.** Deploy to site within 24 hours of notification with limited staff and communications equipment, but no tentage.

- **Equipment.** Communication and administrative only.

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Urban Search and Rescue (US&R) Task Forces

Components and Capabilities

Type I (WMD Level)

- **Description.** Conducts safe and effective search and rescue operations at large or complex Urban Search and Rescue (US&R) operations, including structure collapse incidents involving the collapse or failure of heavy floor, precast concrete, and steel frame construction. Perform or provide high-angle rope rescue (including highline systems); confined space rescue (permit required); advanced life support (ALS) intervention; communications; weapons of mass destruction (WMD)/hazardous materials (HazMat) operations; and defensive water rescue. Conduct safe and effective sustained 24-hour search and rescue operations.

- **Human Resources.** A 70-person response. Multidisciplinary organization of command, search, rescue, medical, HazMat, logistics, and planning functions. Personnel comply with the National Fire Protection Association (NFPA) 1670 Technician Level requirements for the area of their area of specialty or operations level for support personnel.

- **Equipment.** US&R teams come with a substantial amount of equipment. Rescue equipment includes power tools, electrical equipment, technical rope, and safety equipment. Medical equipment includes antibiotics, medication, canine treatment, intubation, eye care supplies, immobilization and extrication equipment, and personal protective equipment (PPE). Technical equipment includes HazMat equipment, canine search and rescue equipment, and technical specialist equipment. Communications equipment includes radios, charging units, power sources, and computers. Logistical equipment includes water, food, shelter, safety, administrative support, and equipment maintenance.

Type II (Light Level)

- **Description.** Conducts safe and effective search and rescue operations at structure collapse incidents involving the collapse or failure of light frame construction and basic rope rescue operations; ALS intervention; HazMat conditions; communications; and trench and excavation rescue. Ability to conduct safe and effective 12-hour search and rescue operations.

- **Human Resources.** A 28-person response. Multidisciplinary organization of command, search, rescue, medical, HazMat, logistics, and planning functions. Personnel comply with the NFPA 1670 Technician Level requirements for the area of their area of specialty or operations level for support personnel.

- **Equipment.** Urban Search and Rescue (US&R) teams come with a substantial amount of equipment. Rescue equipment includes power tools, electrical equipment, technical rope, and safety equipment. Medical equipment includes antibiotics, medication, canine treatment, intubation, eye care supplies, immobilization and extrication equipment, and PPE. Technical equipment includes HazMat equipment, canine search and rescue equipment, and technical specialist equipment. Communications equipment includes radios, charging units, power sources, and computers. Logistical equipment includes water, food, shelter, safety, administrative support, and equipment maintenance.

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Urban Search and Rescue (US&R) Incident Support Teams

Components and Capabilities

Type I US&R Incident Support Team (IST) Full

- **Description.** A fully staffed Urban Search and Rescue (US&R) multifunctional management team activated to provide technical assistance in the acquisition and use of Emergency Support Function (ESF) #9 – Urban Search and Rescue emergency resources through advice, Incident Command assistance, incident response planning, management, and coordination of US&R task forces, and obtaining ESF #9 logistical support. The team is organized according to basic Incident Command System (ICS) guidelines, with a command staff and operations, planning, logistics, and finance/administration sections. A Type 1 IST is a full management team providing staffing to fill all necessary ICS functions for the assigned incident. A Type 1 IST can provide 24-hour operations for a minimum of 14 days before requiring personnel rotations and can provide its own administrative and living support as necessary.

- **Human Resources.** The Federal Emergency Management Agency (FEMA) US&R section, based on experience and training qualifications, selects IST members. The team is comprised of qualified National US&R response system personnel, with the ESF #9 assistants and the administration/finance section staffed by FEMA or other Federal agency personnel.

- **Equipment.** ISTs come with all the equipment necessary to perform the assigned task, including administrative and computer supplies. Communication equipment includes microphone, antenna, fax, satellite telephone, radio, and pager. Tools include screwdriver, chisel, drill, hammer, and shovel. Power supply equipment includes power adapter, generator, surge protector, and grounding wire. Logistical equipment includes water, food, shelter, safety, administrative support, and equipment maintenance.

Type II US&R Incident Support Team (IST) Advance

- **Description.** Activated to provide technical assistance in the acquisition and use of ESF #9 – Urban Search and Rescue emergency resources through advice, Incident Command assistance, incident response planning, management, and coordination of US&R task forces, and obtaining ESF #9 logistical support. The IST is organized according to basic ICS guidelines, with a command and command staff and operations, planning, logistics, and finance/administration sections. The Type 2 is an Advance Element of a Type 1 IST and will required supplemental IST staffing to maintain 24-hour operations. It can provide its own administrative and living support as necessary.

- **Human Resources.** A 22-person US&R multifunctional management team staffing 14 ICS functions, IST members are selected by the FEMA US&R section based on experience and training qualifications. Twenty of the 22 members filling positions will be qualified National US&R Response System personnel, while the ESF #9 assistants will be FEMA staff.

- **Equipment.** ISTs come with all the equipment necessary to perform the assigned task, including administrative and computer supplies. Communication equipment includes microphone, antenna, fax, satellite telephone, radio, and pager. Tools include screwdriver, chisel, drill, hammer, and shovel. Power supply equipment includes power adapter, generator, surge protector, and grounding wire. Logistical equipment includes water, food, shelter, safety, administrative support, and equipment maintenance.

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Veterinary Medical Assistance Team (VMAT)

Components and Capabilities

Type I

- **Description.** Volunteer teams of veterinarians, technicians, and support personnel, such as veterinarians, veterinary technicians, support personnel, microbiologists, epidemiologists, and veterinary pathologists. These individuals are usually from the same region, that have organized a response team under the guidance of the American Veterinary Medical Association and the National Disaster Medical System (NDMS), and whose personnel have specific training in responding to animal casualties and/or animal disease outbreaks during a disaster. 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 the NDMS are considered Type 1. Epidemiologic capabilities are limited.

- **Human Resources.** Sixty personnel plus equipment. Deploy to site within 24 hours of notification. Provide animal care, treatment, and shelter; food and water testing; basic epidemiologic capabilities.

- **Equipment.** Full complement.

Type II

- **Description.** Volunteer teams of veterinarians, technicians, and support personnel, such as veterinarians, veterinary technicians, support personnel, microbiologists, epidemiologists, and veterinary pathologists. These individuals are usually from the same region, that 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. VMATs are usually mission-tailored on an ad-hoc basis, and usually deploy only with personnel and equipment specifically required for the current mission. Epidemiologic capabilities are limited.

- **Human Resources.** Sixty personnel plus equipment. Some mix of capabilities less than Type I.

- **Equipment.** Limited or none.

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Animal Health Resources

RESOURCE: ANIMAL PROTECTION: LARGE ANIMAL RESCUE STRIKE TEAM						
CATEGORY:	Animals and Agriculture Issues			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Personnel	Number of People Per Response	6-member team consisting of: • 1 team leader • 5 team members				
Personnel	Deployment Duration	Deployment of this team would be for 7 days on rotation. A minimum of three teams should be deployed for 24-hour rescue, one team per 8-hour shift			Personnel	Deployment duration
Vehicle		3 vehicles: 2 persons per vehicle				
Equipment		Each vehicle should be equipped with basic animal capture equipment, including, but not limited to, the following: • Small and large live traps (1 each) • 2 catch poles • Leashes (slip leads and clip) • Stretcher • ID bands • Collars and ID tags • Cages, carriers, and cardboard cat transports (at least 1 per animal) • Appropriately graded NFPA or Cordage Institute Ropes • Industrial Lighting Systems and Batteries: (Flashlights to Floodlighting) • Barricade tape • Maps of areas to be serviced • Team communication device (for each team				

RESOURCE: ANIMAL PROTECTION: LARGE ANIMAL RESCUE STRIKE TEAM						
CATEGORY:	Animals and Agriculture Issues			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
		vehicle) (two-way handheld radios with 3-mile transmitting radius) • Home base communication device (for each vehicle) (two-way radios capable of transmitting the required distance) • Cell phone with extra batteries/remote chargers • Human First Aid kit • Emergency Euthanasia Options (Gunshot/Chemical/ Physical) • Animal Rescue Request forms • Animal Impoundment forms • Radio/Activities Log form • Pens, pencils, permanent markers, paper • Clipboards • Plastic garbage bags (for bodies)				
Personal Protection		Note: Each person should have with them the following items: • Appropriate Nomex and wildfire survival gear (must be NFPA approved) • High-visibility vest • Gloves (bite/welding gloves and work gloves) • Properly fitted boots (applicable to situation) • Properly fitted PFD with rescue hookup				

RESOURCE: ANIMAL PROTECTION: LARGE ANIMAL RESCUE STRIKE TEAM						
CATEGORY:	Animals and Agriculture Issues			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
		• Properly fitted helmet (climbing and/or hard hat) • Properly fitted goggles • Wetsuit or Drysuit • Appropriately graded NFPA or Cordage Institute ropes • Flashlight with extra batteries • Dust mask/respirator • Rain gear • Hat for sun protection • Water/snacks • Good Protective Gloves (appropriate types for water and heavy debris) • Good Protective Boots (fire response requires all leather) • Quiet clothing materials and attachments: Avoid Velcro • Personal Basic Livestock Kit, including halter, lead shank, 20-foot rescue rope • Appropriate Nomex protective gear and shelters • Materials for head covers, pressure mats/cushions, ear plugs • Emergency Euthanasia Option (gunshot/chemical) • Other items from the HSUS's equipment list that may be applicable to the situation at hand				

RESOURCE: ANIMAL PROTECTION: LARGE ANIMAL RESCUE STRIKE TEAM						
CATEGORY:	Animals and Agriculture Issues			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Training		Team member requirements: • Swift Water Rescue Basic Course • HSUS/ARC Animal First Aid Course • Certified Knot and Mechanical Advantage Training • Wildland Fire Training S130 and S190 • Emergency Euthanasia Training/Certification • FEMA/EMI Independent Study Course: IS-195 Basic Incident Command • FEMA/EMI Independent Study Course: IS-10 Animals in Disaster – Module A, Awareness and Preparedness • FEMA/EMI Independent Study Course: IS-11 Animals in Disaster – Module B, Community Planning • Technical Animal Rescue Training (Code 3 Associates or other approved training source) • 5 years of professional animal care/control/capture experience • Team leader should have additional training and/or experience in supervision/management level animal care/control/capture				

RESOURCE: ANIMAL PROTECTION: LARGE ANIMAL RESCUE STRIKE TEAM						
CATEGORY:	Animals and Agriculture Issues			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
		• FEMA Livestock in Disasters Correspondence • CODE III Big Useful Livestock Lessons (BULL) • Equine Cruelty or Rescue Short Course • Proper Tailoring and Trailer Extraction Training				
Personal Maintenance Equipment		• Personal Toiletries • Seasonal Clothing • Rx medications • Sunscreen • Other items from the HSUS's suggested list				
COMMENTS:	This six-member team should be capable of completing an average of one rescue every 30 minutes in a suburban setting and one rescue every hour in rural settings. These times would be semi-dependent on uncontrollable factors such as terrain, weather, road conditions, and distance between rescue sites. Number of teams ordered will be based on number of rescues anticipated. Team members should not show up for a disaster wearing camouflage gear. Camouflage gear not only complicates matters if the person needs to be found, but blends in with other response personnel, such as the National Guard. Suggested clothing: Carhart bib overalls. They are indestructible and will protect from bites, scratches, scrapes, and abrasions.					

RESOURCE: ANIMAL PROTECTION: LARGE ANIMAL SHELTERING TEAM						
CATEGORY:	Animals and Agriculture Issues			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Personnel	Number of People Per Response	22-person response team to set up and run a small animal shelter, consisting of: • 1 supervisor • 3 team leaders • 18 members for 3 shifts • 1 veterinarian/veterinarian technician Can deploy for a minimum of 7 days	5-person response team to advise and support local efforts to set up a small animal shelter with the goal for the locals to operate the shelter consisting of: • 1 supervisor: organize and plan • 1 shelter manager: oversee shelter set up • 3 team members • 1 admin/finance team member, tracking animals coming in and logging out • 1 shelter operations member reporting to shelter manager 1 logistics team: get equipment and supplies for shelter member All team members work with and train local resources Shelter manager will assign tasks to local shelter workers Can deploy for a minimum of 5 days	2-person advisory team to support local efforts to set up a small animal shelter Can deploy for a minimum 5 days		

RESOURCE: ANIMAL PROTECTION: LARGE ANIMAL SHELTERING TEAM						
CATEGORY:	Animals and Agriculture Issues			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Equipment		Radio/walkie-talkie system; Cell phones; Pagers; Laptops; Base station; Fresh batteries; Administration/ management kit with forms; Documents; Plans; SOPs; Manuals; Office supplies Basic large animal handling equipment and supplies; Equine and livestock handling equipment (ropes, halters, leads) Basic veterinary and medical supply kit, refer to American Red Cross/HSUS list Portable pens and corrals for livestock	Radio/walkie-talkie system; Cell phones; Pagers; Laptops; Base station; Fresh batteries; Administration/ management kit with forms; Documents; Plans; SOPs; Manuals; Office supplies Basic large animal handling equipment and supplies (ropes, halters, leads)	Basic communication (cell phones) equipment; Laptop; Forms; SOPs		
Vehicle		1 1-ton, 4x4 pickup with goose neck and other hitches 1 box trailer (10,000 lbs GVW) 1 SUV for personnel Plus other four-wheel-drive vehicles	2 large vehicles with four-wheel-drive for supplies	1 vehicle for transport		

RESOURCE: ANIMAL PROTECTION: LARGE ANIMAL SHELTERING TEAM						
CATEGORY:	Animals and Agriculture Issues			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Training and Experience		FEMA EMI/IS classes in Emergency Preparedness; Basic ICS; Animals in Disaster; Module A & B; Livestock in Disasters First Aid/CPR course for large animals (taught by veterinarians, equestrian centers, American Red Cross, HSUS) Full-day emergency animal shelter course Minimum of 2 years of large animal handling and operations experience Crisis animal behavior training as a separate course or as a part of other training course	FEMA EMI/IS classes in Emergency Preparedness; Basic ICS; Animals in Disaster; Module A & B; Livestock in Disasters First Aid/CPR course for large animals (taught by veterinarians, equestrian centers, American Red Cross, HSUS) Full-day emergency animal shelter course Minimum of 2 years of large animal handling and operations experience Crisis animal behavior training as a separate course or as a part of other training course	FEMA EMI/IS classes in Emergency Preparedness; Basic ICS; Animals in Disaster; Module A & B; Livestock in Disasters First Aid/CPR course for large animals (taught by veterinarians, equestrian centers, American Red Cross, HSUS) Full-day emergency animal shelter course Minimum of 2 years of large animal handling and operations experience Crisis animal behavior training as a separate course or as a part of other training course		
Personnel	Lead Time to Deploy	Minimum 72 hours	Minimum 24 hours	Maximum 24 hours		
COMMENTS:	Large animal refers to horses and livestock. Local volunteers can support all types for shelter teams. No sheltering for exotic animals.					

RESOURCE: ANIMAL PROTECTION: LARGE ANIMAL TRANSPORT TEAM						
CATEGORY:	Animals and Agriculture Issues			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Personnel	Number of People Per Response	5-person response team consisting of: • 1 team leader • 4 members • 1 veterinarian on call Can be deployed for a minimum of 5 days				
Equipment		Radio/walkie-talkie system cell phones; Pagers; Laptops; Base station; Fresh batteries; Administration/ management kit with forms; Documents; Plans; SOPs; Manuals; Office supplies				
Vehicle		2 1-ton 4x4 pickups with 10,000 lbs GVW towing capacity 1 SUV 2 livestock trailers				
Training		FEMA EMI/IS classes in Emergency Preparedness; Basic ICS; Animals in Disaster; Module A & B; Livestock in Disasters				
COMMENTS:						

RESOURCE: ANIMAL PROTECTION: SMALL ANIMAL RESCUE STRIKE TEAM						
CATEGORY:	Animals and Agriculture Issues			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Personnel	Number of People Per Response	6-member team consisting of: • 1 team leader • 5 team members				
Personnel	Deploy-ment Duration	Deployment of this team would be for 7 days on rotation; A minimum of 3 teams should be deployed for 24-hour rescue, 1 team per 8-hour shift				
Vehicle		3 vehicles – 2 persons per vehicle				
Equipment		Each vehicle should be equipped with basic animal capture equipment, including, but not limited to, the following: • Small and large live traps (1 each) • 2 catch poles • Leashes (slip leads and clip) • Stretcher • ID bands • Collars and ID tags • Cages, carriers, and cardboard cat transports (at least 1 per animal) • Appropriately graded NFPA or Cordage Institute ropes • Industrial Lighting Systems and Batteries: (Flashlights to Floodlighting) • Barricade tape • Maps of areas to be serviced • Team communication device (for each team				

RESOURCE: ANIMAL PROTECTION: SMALL ANIMAL RESCUE STRIKE TEAM						
CATEGORY:	Animals and Agriculture Issues			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
		vehicle) (two-way handheld radios with 3-mile transmitting radius) • Home base communication device (for each vehicle) (two-way radios capable of transmitting the required distance) • Cell phone with extra batteries/remote chargers • Human First Aid kit • Emergency Euthanasia Options (gunshot/chemical/ physical) • Animal Rescue Request forms • Animal Impoundment forms • Radio/Activities Log form • Pens, pencils, permanent markers, paper • Clipboards • Plastic garbage bags (for bodies)				
Personal Protection		Note: Each person should have with them the following items: • Appropriate Nomex and wildfire survival gear (must be NFPA approved) • High-visibility vest • Gloves (bite/welding gloves and work gloves) • Properly fitted boots (applicable to situation) • Properly fitted PFD with rescue hookup				

RESOURCE: ANIMAL PROTECTION: SMALL ANIMAL RESCUE STRIKE TEAM						
CATEGORY:	Animals and Agriculture Issues			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
		• Properly fitted helmet (climbing and/or hard hat) • Properly fitted goggles • Wetsuit or drysuit • Appropriately graded NFPA or Cordage Institute ropes • Flashlight with extra batteries • Dust mask/respirator • Rain gear • Hat for sun protection • Water/snacks • Other items from the HSUS's equipment list that may be applicable to the situation at hand				
Training		Team member requirements include the following: • Swift Water Rescue Basic Course • HSUS/ARC Animal First Aid Course • Certified Knot and Mechanical Advantage Training • Wildland Fire Training S130 and S190 • Emergency Euthanasia Training /Certification • FEMA/EMI Independent Study Course: IS-195 Basic Incident Command • FEMA/EMI Independent Study Course: IS-10 Animals in Disaster – Module A, Awareness and Preparedness • FEMA/EMI Independent				

RESOURCE: ANIMAL PROTECTION: SMALL ANIMAL RESCUE STRIKE TEAM						
CATEGORY:	Animals and Agriculture Issues			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
		Study Course: IS-11 Animals in Disaster – Module B, Community Planning • Technical Animal Rescue Training (Code 3 Associates or other approved training source) • 5 years of professional animal care/control/capture experience • Team leader should have additional training and/or experience in supervision/management level animal care/control/capture				
Personal Maintenance Equipment		• Personal Toiletries • Seasonal Clothing • Rx medications • Sunscreen • Other items from the HSUS's suggested list				
COMMENTS:	This six-member team should be capable of completing an average of one rescue every 30 minutes in a suburban setting and one rescue every hour in rural settings. These times would be semi-dependent on uncontrollable factors such as terrain, weather, road conditions, and distance between rescue sites. Number of teams ordered will be based on number of rescues anticipated. Team members should not show up for a disaster wearing camouflage gear. Camouflage gear not only complicates matters if the person needs to be found, but blends in with other response personnel, such as the National Guard. Suggested clothing: Carhart bib overalls. They are indestructible and will protect from bites, scratches, scrapes, and abrasions.					

RESOURCE: ANIMAL PROTECTION: SMALL ANIMAL SHELTERING TEAM						
CATEGORY:	Animals and Agriculture Issues			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Personnel	Number of People Per Response	22-person response team to set up and run a small animal shelter, consisting of: • 1 supervisor • 3 team leaders • 18 members for 3 shifts 1 veterinarian/veterinarian technician Can deploy for a minimum of 7 days	5-person response team to advise and support local efforts to set up a small animal shelter with the goal for the locals to operate the shelter, consisting of: • 1 supervisor: organize and plan • 1 shelter manager: oversee shelter set up • 3 team members • 1 admin/finance team member, tracking animals coming in and logging out • 1 shelter operations member reporting to shelter manager • 1 logistics team, get equipment and supplies for shelter member All team members work with and train local resources Shelter manager will assign tasks to local shelter workers Can deploy for a minimum of 5 days	2-person advisory team to support local efforts to set up a small animal shelter Can deploy for a minimum 5 days		
Personnel	Number of Animals Affected					
Equipment		Radio/walkie-talkie system; Cell phones; Pagers; Laptops; Base station; Fresh batteries; Administration/ management kit with forms; Documents; Plans; SOPs; Manuals; Office supplies	Radio/walkie-talkie system; Cell phones; Pagers; Laptops; Base station; Fresh batteries; Administration/ management kit with forms; Documents; Plans; SOPs; Manuals; Office supplies	Basic communication (cell phones) equipment; Laptop; Forms; SOPs		

RESOURCE: ANIMAL PROTECTION: SMALL ANIMAL SHELTERING TEAM						
CATEGORY:	Animals and Agriculture Issues			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
		Basic handling equipment and supplies (gloves, control poles) Basic veterinary and medical supply kit, refer to American Red Cross/HSUS list (Crates and food will need to be supplied through local area procurement)	Basic handling equipment and supplies (gloves, control poles)			
Vehicle		1 four-wheel-drive pickup truck for supplies Plus other four-wheel-drive vehicles	2 large vehicles with four-wheel-drive for supplies	1 vehicle for transport		
Training and Experience		FEMA EMI/IS classes in Emergency Preparedness; Basic ICS; Animals in Disaster; Module A & B Pet First Aid/CPR course (American Red Cross/HSUS) Full-day emergency animal shelter course Minimum of 2 years of animal handling or sheltering experience Crisis animal behavior training as a separate course or as a part of other training course	FEMA EMI/IS classes in Emergency Preparedness; Basic ICS; Animals in Disaster; Module A & B Pet First Aid/CPR course (American Red Cross/HSUS) Full-day emergency animal shelter course Minimum of 2 years of animal handling or sheltering experience Crisis animal behavior training as a separate course or as a part of other training course	FEMA EMI/IS classes in Emergency Preparedness; Basic ICS; Animals in Disaster; Module A & B Pet First Aid/CPR course (American Red Cross/HSUS) Full-day emergency animal shelter course Minimum of 2 years of animal handling or sheltering experience Crisis animal behavior training as a separate course or as a part of other training course		
Personnel	Lead Time to Deploy	Minimum 48 hours	Minimum 24 hours	Maximum 24 hours		

RESOURCE: ANIMAL PROTECTION: SMALL ANIMAL SHELTERING TEAM						
CATEGORY:	Animals and Agriculture Issues			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
COMMENTS:	Small animal refers to dogs, cats, rabbits, hamsters, gerbils, guinea pigs, birds, fish, and reptiles. Local volunteers can support all three types for shelter teams (nonanimal handling tasks, cleaning, and food prep). No sheltering for exotic animals.					

RESOURCE: ANIMAL PROTECTION: SMALL ANIMAL TRANSPORT TEAM						
CATEGORY:	Animals and Agriculture Issues			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Personnel	Number of People Per Response	5-person response team consisting of: • 1 team leader • 4 members Can deploy for a minimum of 5 days				
Equipment		Radio/walkie-talkie system; Cell phones; Pagers; Laptops; Base station; Fresh batteries; Administration/ management kit with forms; Documents; Plans; SOPs; Manuals; Office supplies				
Vehicle		• 1 4x4 pickup • 1 SUV				
Training		FEMA EMI/IS classes in Emergency Preparedness; Basic ICS; Animals in Disaster; Module A & B; Livestock in Disasters				
COMMENTS:						

RESOURCE: INCIDENT MANAGEMENT TEAM ANIMAL PROTECTION						
CATEGORY:	Animals and Agriculture Issues			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Personnel	Number of People Per Response	Federal deployment of 20-50 persons (see Veterinary Medical Assistance Team under Health and Medical Resources discipline) 1 Incident Commander, 1 Liaison to Unified Command, 1 PIO, 1 Safety Officer, 1 Veterinarian (deployed or on call); Operations Section (includes large and small animal rescue, transportation, shelter, and veterinary teams); Planning Section (includes resources, situation, check-in, and check out); Logistics Section (includes facilities, ground support, equipment, communications, and personnel); Finance/Admin Section (includes procurement and timekeeping)	State deployment of 10-100 persons for assessment and surveillance	Local deployment of 10-30 persons for assessment, surveillance, action within 2 to 4 hours		
Personnel	Lead Time to Deploy	Deploy within 12 to 24 hours	Up to 100 persons deploy within 4 to 12 hours	10-200 persons for disaster response within 24 hours		
Personnel	Sustained Operations	Self-sufficient for up to 3 days and can be deployed for up to 14 days or more.	Deployed for up to 7 days	Deployed for up to 5 days		
Training		Incident Commander: should complete ICS 100-, 200-, and 300-level course work. Volunteers: FEMA EMI/IS classes in Emergency Preparedness; Basic ICS; Animals in Disaster; Module A & B; Livestock in Disasters				

RESOURCE: INCIDENT MANAGEMENT TEAM ANIMAL PROTECTION						
CATEGORY:	Animals and Agriculture Issues			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Equipment		Radio/walkie-talkie system; Cell phones; Pagers; Laptops; Base station; Fresh batteries; Admin/ management kit with forms; Documents; Plans; SOPs; Manuals; Office supplies				
Vehicles		Four-wheel-drive vehicle (SUV)				
COMMENTS:	When deployed, an Animal Protection Incident Management Team will assess the emergency situation and determine the number of operational strike teams that will be required for rescuing, transporting, and sheltering of animals. Type I Incident Management Team would be activated in a federally declared disaster and/or for incidents of national significance.					

Emergency Management Resources

RESOURCE: AIRBORNE COMMUNICATIONS RELAY TEAM (FIXED-WING) (SEE DEFINITION BELOW)						
CATEGORY:	Communications (ESF #2)			**KIND:**	Team, Aircraft, Personnel	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Personnel	Crew members capable of at least 8 hours of flying per day and 14-hour duty day; Number of certified pilots, equipment operators, and technicians needed to maintain communications platform depending on size and capability of aircraft	Instrument-rated (IFR) pilot/co-pilot; Trained communicator on board to "in-person" relay communications ("traffic") from sender to receiver on miscellaneous frequencies or channels, including FCC and NTIA controlled frequencies	Noninstrument rated pilot/co-pilot; Trained communicator on board to "in-person" relay communications ("traffic") from sender to receiver on miscellaneous frequencies or channels, including FCC and NTIA controlled frequencies	Instrument rated (IFR) pilot/co-pilot; Trained communicator on board to "in-person" relay communications ("traffic") from sender to receiver on miscellaneous frequencies or channels, including FCC and NTIA controlled frequencies	Noninstrument rated (VFR) pilot/co-pilot; Trained communicator on board to "in-person" relay communications ("traffic") from sender to receiver on miscellaneous frequencies or channels, including FCC and NTIA controlled frequencies	
Equipment	Airborne platform for (voice, data, images) communications relay and airborne repeater traffic enabling VHF/UHF communications where ground-to-ground contact is impossible	Airborne platform capable of operations up to 10,000' MSL; Carries (provided) airborne repeater (or cross-band repeater) for hands-off communications relay	Airborne platform capable of operations up to 10,000' MSL; Carries (provided) airborne repeater (or cross-band repeater) for hands-off communications relay	Airborne platform capable of operations up to 10,000'	Airborne platform capable of operations up to 10,000' MSL; Carries (provided) airborne repeater (or cross-band repeater) for hands-off communications relay	

RESOURCE: AIRBORNE COMMUNICATIONS RELAY TEAM (FIXED-WING) (SEE DEFINITION BELOW)						
CATEGORY:	Communications (ESF #2)			**KIND:**	Team, Aircraft, Personnel	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Aircraft	Fixed-Wing single-engine or twin-engine aircraft (i.e., Cessna C182, C182RG, C206, TU206); Requires access to fuel supply and fueling points, and routine maintenance facilities and supplies for extended deployments	Flight possible through and in overcast conditions	No-overcast and clear-above flight conditions	Flight possible through and in overcast conditions	Flight possible through overcast and clear-above conditions	
COMMENTS:	Definition: Team provides airborne communications relay using fixed-wing platforms to support Federal, State, and local emergency needs. Relays are primarily conducted through aircrews, but can also be accomplished through electronic repeaters carried aboard CAP aircraft. Varying levels of specialized management support and command/control capabilities are included in team structures. Notes: Airborne repeaters and crossband repeaters must be provided by the requesting agency, but team will install. *Source: Washington State Civil Air Patrol*					

RESOURCE: AIRBORNE COMMUNICATIONS RELAY (FIXED-WING) (CAP)						
CATEGORY:	Military Support			**KIND:**	Aircraft	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Vehicle	Fixed-Wing Aircraft	IFR-Capable Fixed-Wing CAP Aircraft	IFR-Capable Fixed-Wing CAP Aircraft	Fixed-Wing CAP Aircraft	Fixed-Wing Aircraft (member owned)	
	Capacity	2-4 passengers with cargo not to exceed design specification of aircraft	2-4 passengers with cargo not to exceed design specification of aircraft	2-4 passengers with cargo not to exceed design specification of aircraft	2-4 passengers with cargo not to exceed design specification of aircraft	
Equipment	Flight Suit	Appropriate level of PPE	Appropriate level of PPE	Appropriate level of PPE	Appropriate level of PPE	
	Communications	Standard FAA FM Radio VHF Radios Airborne Repeater capable of patching across multiple operating radio bands	Standard FAA FM Radio VHF Radios Airborne Repeater supporting Federal frequency assignments	Standard FAA FM Radio VHF Radios	Standard FAA FM Radio	
Aircrews	Training & Ratings	Pilot – Commercial (instrument) or higher certificate and complete unit certification program	Pilot – Private Pilot (instrument) or higher certificate and complete unit certification program	Pilot – Private Pilot or higher certificate and complete unit certification program. Instrument rating desired, but not required	Pilot – Private Pilot or higher certificate and complete unit certification program	
	Crew Availability	Aircrew(s) available for extended operations (greater than 1 week)	Aircrew(s) available for extended operations (greater than 1 week)	Aircrew(s) available for short duration operations (1 week or less)	Aircrew(s) available for short duration operations (1 week or less)	
Management Support	Coordination Capabilities	Incident staff capable of managing air operations branch	Incident staff capable of managing air operations branch	Incident staff capable of supporting independent flight release	Unit-level flight release	
COMMENTS:	Aircrews can work a maximum of 12-hour shifts, depending on individual unit policies and procedures. Aircraft will be maintained in accordance with Federal Aviation Administration Regulations. Aircraft will be expected to operate out of established airfield with paved runways. Aircrews will indicate fueling and runway requirements for the aircraft provided. Crew availability does not require continuous availability of specific personnel, only that crews are available to those specifications.					

RESOURCE: AIRBORNE TRANSPORT TEAM (FIXED-WING) (SEE DEFINITION BELOW)						
CATEGORY:	Transportation (ESF #1)			**KIND:**	Team, Aircraft, Personnel	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Personnel	Crew members capable of at least 8 hours of flying per day and 14-hour duty day; Number of certified pilots, equipment operators, and technicians needed depends on size and capability of aircraft	Instrument-rated (IFR) pilot/co-pilot; Maximum 2 additional passengers	Noninstrument rated pilot/co-pilot; Maximum 3 passengers (1 pilot required only)	Instrument-rated (IFR) pilot/co-pilot; Maximum 1 passenger (pilot and co-pilot required)	Noninstrument rated pilot/ co-pilot; Maximum 2 passengers (1 pilot required only)	
Aircraft	Fixed-Wing single-engine or twin-engine aircraft capable of 120 knots (130 mph) at cruise (i.e., Cessna C182, C182RG, C206, TU206); Capable of point-to-point transport into short airfields; Capable of eye-in-the-sky coordination of tactical teams on the ground and photo/imaging; GPS guided; Requires access to fuel supply and fueling points, and routine maintenance facilities and supplies for extended deployments	Airborne transport capable of operations up to 10,000' MSL; Flight possible through and in overcast conditions (instrument meteorological conditions); Carries up to 350 lbs. of cargo	Airborne transport capable of operations up to 10,000' MSL; Visual meteorological conditions only; Carries up to 500 lbs. of cargo	Airborne transport capable of operations up to 10,000' MSL; Flight possible through and in overcast conditions (instrument meteorological conditions); Carries up to 200 lbs. of cargo	Visual meteorological conditions only; Carries up to 350 lbs. of cargo	

RESOURCE: AIRBORNE TRANSPORT TEAM (FIXED-WING) (SEE DEFINITION BELOW)						
CATEGORY:	Transportation (ESF #1)			**KIND:**	Team, Aircraft, Personnel	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
COMMENTS:	Definition: Team provides limited airborne transportation and emergency airlift to support Federal, State, and local agency needs using light fixed-wing platforms owned by CAP. Varying levels of specialized management support and command/control capabilities are included in team structures. *Source: Washington State Civil Air Patrol*					

RESOURCE: COMMUNICATIONS SUPPORT TEAM (CAP)						
CATEGORY:	Military Support			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Personnel	Manning	4 radio operators, 1 unit leader, and 1 dedicated technician	3 radio operators, 1 unit leader, and 1 technician on call	2 radio operators and 1 unit leader	1 radio operator and 1 unit leader	
Equipment	Communications	Mobile FAA FM Radio Mobile and Portable VHF/FM Radios, capable of AES/DES encryption Portable VHF/FM repeater, capable of AES/DES encryption Mobile and Portable UHF/FM Radios, capable of AES/DES encryption Portable UHF/FM repeater, capable of AES/DES encryption Satellite Phone ALE Capable HF Radio HF E-mail Link	Mobile FAA FM Radio Mobile and Portable VHF/FM Radios, capable of DES encryption Portable VHF/FM repeater Mobile and Portable UHF/FM Radios, capable of DES encryption Cell Phone ALE Capable HF Radio	Mobile FAA FM Radio Mobile and Portable VHF/FM Radios Cell Phone HF Radio	Mobile FAA FM Radio Mobile and Portable VHF/FM Radios Cell Phone	
Availability	Duration	Available for extended operations (greater than 1 week)	Available for extended operations (greater than 1 week)	Available for short duration operations (1 week or less)	Available for short duration operations (1 week or less)	
Management Support	Coordination Capabilities	Incident staff capable of managing the communications unit	Incident staff capable of managing the communications unit	Incident staff capable of managing the communications unit	Team management only	
COMMENTS:	Availability does not require continuous availability of specific personnel, only that teams are available to those specifications. Personnel may be rotated in and out of specific team positions. Type IV teams are expected to serve as independent relay points. Type III teams are expected to support local level incident operations. Type II teams are expected to support regional incident operations with multiple agencies. Type I teams are expected to support national incident operations with multiple agencies.					

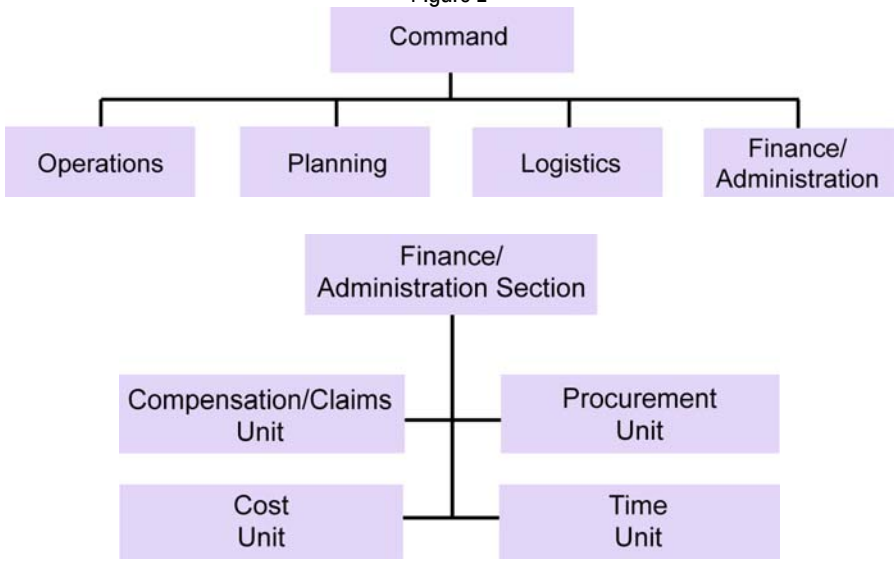
RESOURCE: CRITICAL INCIDENT STRESS MANAGEMENT TEAM (SEE DEFINITION BELOW)						
CATEGORY:	Health and Medical Services (ESF #8)			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Personnel	Experience, Training, and Comprehension	1-2 Team Coordinators – Experience as supervisor of CISM Team in large-scale disaster situations in home and other States. Has extensive experience in CISM team administration and knowledge of ICISF standards. Completed certification from the ICISF. Participated in training approved by the ICISF	1 Team Coordinator – Experience as supervisor of CISM Team in medium- to large-scale disaster situations in home State. Has extensive experience in CISM team administration and knowledge of ICISF standards. Completed certification from the ICISF. Participated in training approved by the ICISF	1 Team Coordinator – Experience as supervisor of CISM Team in small-scale disaster situations in home State. Has experience in CISM team administration and knowledge of ICISF standards. Participated in training approved by the ICISF		
Personnel	Number of team members based on size of incident and effects on emergency responders; experience, training, and comprehension	10-15 Team Members – Experience as part of CISM Team in large-scale disaster situations in home and other States. Has extensive experience in CISM administration and knowledge of ICISF standards. Completed certification from the ICISF. Participated in training approved by the ICISF	2-4 Team Members – Experience as part of CISM Team in medium- to large-scale disaster situations in home State. Has extensive experience in CISM administration and knowledge of ICISF standards. Completed certification from the ICISF. Participated in training approved by the ICISF	1 Team Member – Experience as part of CISM Team in small-scale disaster situations in home State. Participated in training approved by the ICISF		
Equipment		Laptop with wireless Internet capabilities; Satellite/cell phone	Laptop with Internet capabilities; Cell phone			
COMMENTS:	Team is responsible for the prevention and mitigation of disabling stress among emergency responders in accordance with the standards of the International Critical Incident Stress Foundation (ICISF). Team composition, management, membership and governance varies, but can include psychologists, psychiatrists, social workers, and licensed professional counselors. *Source: International Critical Incident Stress Foundation*					

RESOURCE: DONATIONS COORDINATOR (SEE DEFINITION BELOW)						
CATEGORY:	Volunteers and Donations (ESF #15), Mass Care (ESF #6)		**KIND:**	Personnel		
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Personnel	Number based on size and scope of event and public reaction to event	Experience in supervisory role in Donation Coordination in three or more federally declared disaster situations in different States. Has organized and supervised Donation Management in a non-federally declared disaster. Has extensive experience in working with NVOAD agencies and MOUs. Has TTT-Training and has trained donations management and volunteer coordination. Has complete working knowledge of IA & PA and VAL functions under FEMA/State agreement. Understands function of long-term recovery committees	Experience in supervisory role in Donation Coordination in a federally declared disaster. Has worked with a State VOAD on organizing donation management on non-federally declared disaster. Has had training in donations management and volunteer coordination. Aware of IA and VAL functions under FEMA/State Agreement	Experience in working with a federally declared disaster donation coordination effort. Active in VOAD meetings. Has had training in donations management and volunteer coordination	Has had training in donations management and volunteer coordination. Has attended State VOAD meetings	
Equipment		Laptop with wireless Internet capabilities; Satellite or cell phone; Standardized donations management program and form templates for personalizing to disaster	Laptop with wireless Internet capabilities; Satellite or cell phone; Standardized donations management program and forms	Equipment provided by requesting State	Equipment provided by requesting State	
COMMENTS:	Possesses an operational knowledge of all aspects of donations coordination, including management of solicited and unsolicited funds, goods, and services from concerned citizens and private organizations following a catastrophic disaster situation. Interfaces with the other State and local government agencies, the FEMA Donations Coordinator, Non-Governmental Organizations (NGOs), and Volunteer Organizations Active in Disaster (VOAD), such as the American Red Cross, The Salvation Army, and religious organizations as appropriate for the emergency situation. Capable of the physical establishment and operation of the Donations Coordination Center (DCC), which may be part of the Emergency Operations Center (EOC) or other designated location, including facility, data management, and internal operations. Capable of managing donations phone banks, distribution centers, warehousing, and supply systems; and records offers of donated funds, goods, and volunteer services. The Donations Coordination/Management Team Leader determines number of donations coordinators per incident. Note: Donations Coordinator is a subsection of a Donations Management Team. Has working knowledge of the Individual Assistance and Public Assistance functions under FEMA/State agreement. Has working knowledge of establishing long-term recovery committees on local levels following events.					

RESOURCE: DONATIONS MANAGEMENT PERSONNEL/TEAM						
CATEGORY:	Volunteers and Donations (ESF #15); Other Command Support/Management Functions		**KIND:**	Team		
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
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)			
COMMENTS:	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. Donations Specialist/Team Leader: 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. Donations Specialist: 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.					

RESOURCE: EMAC ADVANCE TEAM (SEE DEFINITION BELOW)						
CATEGORY:	Resource Management (ESF #7)			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Personnel	Number determined by requesting State(s); experience; training; certification; knowledge of procedures; deployment abilities	4-member team, consisting of 1 primary point of contact and 3 support staff members. Team members have experience in live EMAC deployments; Participated in exercises; Completed EMAC certification program; Completed standardized EMAC field course training; In-depth knowledge of EMAC procedures; Able to deploy on 24-hours notice for up to 2-week deployment	2-member team, consisting of 1 primary point of contact and 1 support staff member. Team members have participated in exercises; Completed standardized EMAC field course training; knowledge of EMAC procedures; Able to deploy on 24-hours notice for up to 2-week deployment	2-member team, consisting of 1 primary point of contact and 1 support staff member. Team members have participated in exercises; Completed standardized EMAC field course training; knowledge of EMAC procedures; Able to deploy on 48-hours notice for up to 2-week deployment		
Equipment		"Forward" A-Team requires 2 portable "Go-Kits," consisting of: Independent computer system with wireless/ satellite Internet capabilities, mini-cam, fax, printer, copier, cell and satellite phone systems	"Forward" A-Team requires 1 portable "Go-Kits," consisting of independent: Computer system with wireless/satellite Internet capabilities, mini-cam, fax, printer, copier, cell and satellite phone systems	"Forward" A-Team requires 1 portable "Go-Kits," consisting of independent: Computer system with wireless/satellite Internet capabilities, mini-cam, fax, printer, copier, cell and satellite phone systems		
COMMENTS:	The EMAC Advance Team is a team (typically comprised of two staff members) of EMAC trained and experienced personnel designated to deploy to a State to facilitate inter-State mutual-aid assistance under the Emergency Management Assistance Compact (EMAC). The mission of the EMAC Advance Team is to implement EMAC on behalf of the requesting State by coordinating and facilitating the provision of assistance from other member States in accordance with procedures set forth in the EMAC Standard Operating Procedures. "Standing" A-Teams may operate from their home State(s), but in large-scale disasters, the requesting State may require a "Forward" A-Team which is deployed to the requesting State's EOC. A-Teams may also be deployed to FEMA Regional Operations Centers (ROCs) or FEMA HQ as a part of the Emergency Support Team (EST), as requested by FEMA and approved by the EMAC Chair. For a multi-State event, a "Controlling" A-Team will be designated.					

RESOURCE: EOC FINANCE/ADMINISTRATION SECTION CHIEF/COORDINATOR (SEE DEFINITION BELOW)						
CATEGORY:	Command & Control			**KIND:**	Personnel	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Personnel	Experience, Training, and Comprehension	Supervisory role in Finance/Admin in 3 or more federally declared disaster situations in different States. Has organized and supervised subunits of Section in a federally and/or non-federally declared disaster. Has extensive experience and training in IC system	Supervisory role in Finance/Admin in a federally declared disaster situation in home and/or other State. Has organized and supervised subunits of Section in a non-federally declared disaster in home State. Has experience and training in IC system	Training and/or experience in Finance/Admin for non-federally declared disaster situations in home State. Has training in IC system		
Equipment		Laptop with wireless Internet capabilities; Satellite/cell phone; Standardized forms commonly used in the execution of this function	Laptop with Internet capabilities; Satellite/cell phone; Standardized forms commonly used in the execution of this function	Equipment provided by requesting State: Laptop, comm., and standardized forms commonly used in the execution of this function		
COMMENTS:	Individual at the EOC responsible for tracking incident costs and reimbursement accounting, and coordinating/administering support for EOC personnel during disaster operations. This function is part of the standardized ICS structure per the National Incident Management System. If situation warrants, chief/coordinator oversees subunits of this function to include Compensation/Claims, Procurement, Cost, and Time. (See Figure 1.) When there is a specific need for financial reimbursement (individual and agency or department), and/or administrative services to support incident management activities, a Finance/Administration Section is established. Under the ICS, not all agencies will require such assistance. In large, complex scenarios involving significant funding originating from multiple sources, the Finance/Administrative Section is an essential part of the ICS. In addition to monitoring multiple sources of funds, the Section Chief must track and report to the IC the financial "burn rate" as the incident progresses. This allows the IC to forecast the need for additional funds before operations are affected negatively. This is particularly important if significant operational assets are under contract from the private sector. The Section Chief may also need to monitor cost expenditures to ensure statutory rules that apply are met. Close coordination with the Planning Section and Logistics Section is also essential so that operational records can be reconciled with financial documents. Note that, in some cases, only one specific function may be required (e.g., cost analysis), which a technical specialist in the Planning Section could provide. The Finance/Administration Section Chief will determine, given current and anticipated future requirements, the need for establishing specific subordinate units. In some of the functional areas (e.g., procurement), an actual unit need not be established if it would consist of only one person. In such a case, a procurement technical specialist would be assigned in the Planning Section instead. Because of the specialized nature of finance functions, the Section Chief should come from the agency that has the greatest requirement for this support. The Section Chief may have a deputy. *Source: National Incident Management System, March 2004*					

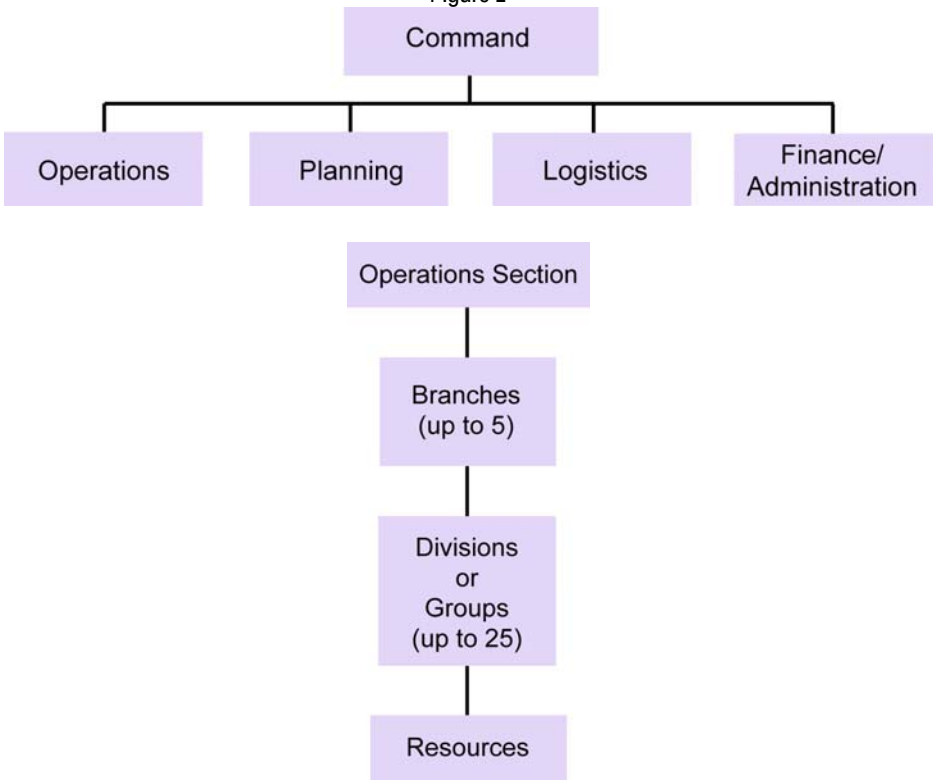
RESOURCE: EOC FINANCE/ADMINISTRATION SECTION CHIEF/COORDINATOR (SEE DEFINITION BELOW)						
CATEGORY:	Command & Control			KIND:	Personnel	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
	Figure 1 					

RESOURCE: EOC MANAGEMENT SUPPORT TEAM						
CATEGORY:	Other: Command & Operations Support/Management Functions			**KIND:**	Team	
Components and Capabilities: 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."						
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
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			
COMMENTS:	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. 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. 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. 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. 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. *Source: FIRESCOPE, California Department of Emergency Services, 2001; Phoenix Fireground, City of Phoenix Fire Department, 2002*					

RESOURCE: EOC OPERATIONS SECTION CHIEF (SEE DEFINITION BELOW)						
CATEGORY:	Command & Control			**KIND:**	Personnel	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Personnel	Experience, Training, and Comprehension	Supervisory role in Operations Section in 3 or more federally declared disaster situations in different States. Has organized and supervised subunits of Section in a federally and/or non-federally declared disaster. Has extensive experience and training in IC system	Supervisory role in Operations Section in a federally declared disaster situation in home and/or other State. Has organized and supervised subunits of Section in a non-federally declared disaster in home State. Has experience and training in IC system	Training and/or experience in Operations for non-federally declared disaster situations in home State. Has training in IC system		
Equipment		Laptop with wireless Internet capabilities; Satellite/cell phone; Standardized forms commonly used in the execution of this function	Laptop with Internet capabilities; Satellite/cell phone; Standardized forms commonly used in the execution of this function	Equipment provided by requesting State: Laptop, comm., and standardized forms commonly used in the execution of this function		
COMMENTS:	Individual at the EOC responsible for managing tactical operations at the incident site directed toward reducing the immediate hazard, saving lives and property, establishing situation control, and restoring normal conditions; responsible for the delivery and coordination of disaster assistance programs and services, including emergency assistance, human services assistance, and infrastructure assistance; and oversight of subunits of Operations Section, including Branches (up to 5), Division/Groups (up to 25) and Resources as warranted. (See Figure 1.) The Operations Section Chief directly manages all incident tactical activities and implements the IAP. The Operations Section Chief may have one or more deputies (preferably from other agencies in multijurisdictional incidents). Deputies will be qualified to a similar level as the Operations Section Chief. An Operations Section Chief should be designated for each operational period and will have direct involvement in the preparation of the IAP for the period of responsibility. *Source: National Incident Management System, March 2004*					

RESOURCE: EOC OPERATIONS SECTION CHIEF (SEE DEFINITION BELOW)						
CATEGORY:	Command & Control			KIND:	Personnel	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					

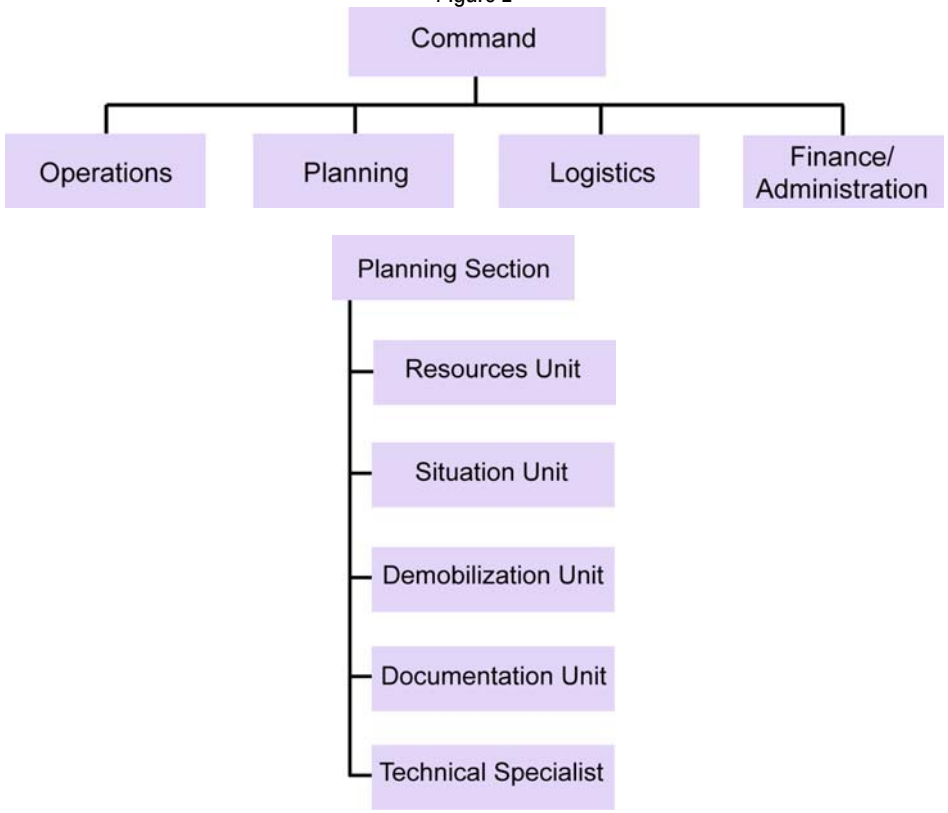
Figure 1



RESOURCE: EOC PLANNING SECTION CHIEF (SEE DEFINITION BELOW)						
CATEGORY:	Command & Control			**KIND:**	Personnel	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Personnel	Experience, Training, and Comprehension	Supervisory role in Planning Section in 3 or more federally declared disaster situations in different States. Has organized and supervised subunits of Section in a federally and/or non-federally declared disaster. Has extensive experience and training in IC system	Supervisory role in Planning Section in a federally declared disaster situation in home and/or other State. Has organized and supervised subunits of Section in a non-federally declared disaster in home State. Has experience and training in IC system	Training and/or experience in Planning for non-federally declared disaster situations in home State. Has training in IC system		
Equipment		Laptop with wireless Internet capabilities; Satellite/cell phone; Standardized forms commonly used in the execution of this function	Laptop with Internet capabilities; Satellite/cell phone; Standardized forms commonly used in the execution of this function	Equipment provided by requesting State: Laptop, comm., and standardized forms commonly used in the execution of this function		
COMMENTS:	Individual at the EOC who oversees all incident-related data gathering and analysis regarding incident operations and assigned resources, develops alternatives for tactical operations, conducts planning meetings, and prepares the IAP for each operational period. (See Figure 1.) The Planning Section is responsible for collecting, evaluating, and disseminating tactical information pertaining to the incident. This section maintains information and intelligence on the current and forecasted situation, as well as the status of resources assigned to the incident. The Planning Section prepares and documents IAPs and incident maps and gathers and disseminates information and intelligence critical to the incident. The Planning Section has four primary units (Resources, Situation, Demobilization, and Documentation) and may include a number of technical specialists to assist in evaluating the situation and forecasting requirements for additional personnel and equipment. *Source: National Incident Management System, March 2004*					

RESOURCE: EOC PLANNING SECTION CHIEF (SEE DEFINITION BELOW)						
CATEGORY:	Command & Control			KIND:	Personnel	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					

Figure 1



RESOURCE: EVACUATION COORDINATION TEAM (SEE DEFINITION BELOW) (SEE ALSO EVACUATION LIAISON TEAM)						
CATEGORY:	Transportation (ESF #1)			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Personnel	Number based on size and scope of evacuation activities	1 Evacuation Coordination Team leader; 2 emergency management specialists; 2 information technology specialists; 2 transportation specialists	1 Evacuation Coordination Team leader; 1 emergency management specialist; 1 information technology specialist; 1 transportation specialist	1 Evacuation Coordination Team leader; 1 information technology specialist; 1 transportation specialist		
Equipment	Scalable based on number of specialists needed	7 laptop computers with wireless/satellite Internet access; HURREVAC preloaded with requesting community clearance times in EVACDATA folder in HURREVAC; Access to ETIS (obtain appropriate State password upon arrival from the local EOC); 2 satellite/cell phones	4 laptop computers with wireless/satellite Internet access; HURREVAC pre-loaded with requesting community clearance times in EVACDATA folder in HURREVAC; Access to ETIS (obtain appropriate State password upon arrival from the local EOC); 2 satellite/cell phones	Equipment provided by requesting State		
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. The mission of the Evacuation Coordination Team is to provide for the protection of life or property by removing endangered persons and property from potential or actual disaster areas to areas of less danger through the successful execution of evacuation procedures.					

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		• Two laptop computers with preloaded 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) • Two telephones (landline or cellular)				
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: 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:	A command team comprised of the Incident Commander, appropriate command and general staff personnel assigned to an incident. (Source: FIRESCOPE) Incident Commander: The Incident Commander's responsibility is the overall management of the incident (to which they are 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. 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. 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. 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. 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. *Source: FIRESCOPE, California Department of Emergency Services, 2001*					

RESOURCE: INDIVIDUAL ASSISTANCE DISASTER ASSESSMENT TEAM (SEE DEFINITION BELOW)						
CATEGORY:	Planning & Recovery			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Personnel	Number based on size and scope of disaster and estimated assistance needs; knowledge	1 IA Disaster Assessment Team leader; 1 Disaster Recovery Center leader and team based on determination of number(s) of DRCs; 1 Voluntary Agency Liaison; 1 Donations Management leader				
Equipment		Laptop with wireless Internet capabilities; Satellite or cell phone; Standardized donations management, unmet needs, resource booklet, and various programs and form templates for personalizing to disaster				
COMMENTS:	Team responsible for providing expert assessments of the disaster situation pertaining to claims for individual assistance and other programs. Disaster Recovery Center leader and team leader must have knowledge of all State programs and how they work with their Federal counterparts, must have worked as DRC State representative in one Federal disaster. Team members must have good knowledge of all State programs. All members must possess the ability to work with the public and understand disaster clients' dynamics in helping them achieve adequate service delivery. This team is not part of the Incident Command System, but rather is a specialty team that may be called on during times of need.					

RESOURCE: INDIVIDUAL ASSISTANCE DISASTER ASSESSMENT TEAM LEADER (SEE DEFINITION BELOW)						
CATEGORY:	Other			**KIND:**	Personnel	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Personnel	Completed Following Trainings: FEMA IA, Vol. Management Donation Management	Completed mission as administrative lead on 2 federally declared disasters as IA Team leader. Extensive knowledge of all programs (see comments for specifics) as well as assisted writing SAP- completed 10 years in EM in Human Services position	Completed mission as administrative lead on federally declared disasters as IA Team leader. Good knowledge on all programs (see comments for specifics), completed 5 years in EM in Human Services position	Completed mission as IA lead team member on federally declared disasters. Working knowledge on all programs (see comments for specifics), completed 3 years in EM in Human Services position	Completed mission as any member of an IA team on federally declared disasters. Attended classes on all programs (see comments for specifics)	
Equipment	Laptop with wireless Internet capabilities	Laptop with wireless Internet capabilities	Equipment provided by requesting State	Equipment provided by requesting State		
COMMENTS:	Individual responsible for leading the individual assistance disaster assessment team. (See Individual Assistance Disaster Assessment Team) Possesses an administrative knowledge of IA areas: Complete understanding of the State's other needs; assistance-State administrative plan, good working knowledge of NEMIS program. Administrative knowledge of the immediate/regular Crisis Counseling program, Manufactured Housing program, IA Housing program. Programmatic/administrative knowledge of SBA disaster loans, IRS disaster program, USDA food stamps/commodities disaster program, legal aid, Farm Services, Administration on Aging Services. Ability to work with personnel issues, as well as work closely with the public information department. This team is not part of the Incident Command System, but rather is a specialty team that may be called on during times of need.					

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 are 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 (4,800 bps)	Cellular system; Faxing through cell or satellite system (4,800 bps)	Via cellular system (portable)	
Video Telecon-ferencing	N/A				--	
High-Speed Fax	Speed				--	
Voice Communi-cations 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: • Operating in environment with little to no basic services, including no electrical service, no phone lines, and no cell towers • Providing own power generation and fuel supply to operate a minimum of 3-4 days without refueling • Sustaining long term deployment as well as short-term responses • Facilitating communications between multiple agencies (Federal, State, county, and municipal agencies) • Operating as forward EOC • Minimal set up time • Serving basic personnel needs such as a bathroom, mini-refrigerator, microwave, and coffee maker where space is available				
COMMENTS:	Radio Frequency Transceivers—Every agency has their assigned RF equipment in use. These frequencies should be distributed throughout the unit along with the most used adjoining agency transceivers. A central Communications rack should be built near the Communications Officer position. This rack should contain less used adjoining agency radios and programmable radios, giving the unit the ability to communicate with as many agencies as possible. Type I & 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. Satellite Systems—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. Microwave Units—Some States and jurisdictions have microwave-capable facilities and equipment installed for quality video transfer. Server Computers—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. Telephone System—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. Cellular PBX System (ML500 or similar)—This unit is used 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.					

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					
	Camera and Video Systems—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. *Source: North American Catastrophe Service, Inc., 2003.*					

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	Number 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. The kitchens may come with a support trailer that carries tables, chairs, additional implements, tents or dining hall facilities as requested. 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: PUBLIC ASSISTANCE COORDINATOR (SEE DEFINITION BELOW)						
CATEGORY:	Information & Planning (ESF #5)			**KIND:**	Personnel	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Personnel	Basic Required Training Recovery Operation I and II; Debris Management and Technology Security Continuing Education (CE) as example Environmental and Historical Preservation 406 Hazard Mitigation; PA Cost Estimating Format On-the-Job Training	Public Assistance Coordinator (PAC) Basic Training, on-the-job training and CE Attending Scoping Meetings and FEMA State PA meetings	Trainee Public Assistance Coordinator (PAC) Basic Required Training, CE and on-the-job training for an average of 2 disasters. Assisted a PAC on the average 2 disasters, attend applicant briefings and kick-off meetings	Project Officer (PO) Basic Training CE, and on-the-job training; prepare PWs; attend applicant briefings and kick-off meetings	Trainee Project Officer (PO) Basic Required Training and on-the-job training for an average of 2 disasters. Assisted a PO on the average 2 disasters, attend applicant briefings and kick-off meetings	
Equipment		Laptop/wireless Internet capabilities; Satellite/or cell phone; GPS; General Office Supplies; Standard Forms; All-weather equipment and clothing	Laptop/wireless Internet capabilities; Satellite/or cell phone; GPS; General Office Supplies; Standard Forms; All-weather equipment and clothing	Laptop/wireless Internet capabilities; Satellite/or cell phone; GPS; General Office Supplies; Standard Forms; All-weather equipment and clothing	Laptop/wireless Internet capabilities; Satellite/or cell phone; GPS; General Office Supplies; Standard Forms; All-weather equipment and clothing	
COMMENTS:	The Public Assistance Coordinator (PAC) is a subsection of the Public Assistance Team (PAT). The PAC is assigned to work with a Public Assistance (PA) applicant from declaration to funding approval. Posses an in-depth working knowledge of disaster relief laws, regulations, and Public Assistance programs and recovery roles of government and the private sector. Must have working knowledge of Project Worksheets preparation and validation, environmental and flood plain regulations, insurance requirements, Preliminary Damage Assessment, and 406 Mitigation. Capable of representing FEMA and officiating at public meetings and managing Project Officers and support staff. Working knowledge of NEMIS. Leadership, management, communication, organizational, interpersonal, and cognitive skills are required. The PAC performs functions of public assistance involving seven categories of eligible work as well as working with public officials on several areas of responsibility. This team is not part of the Incident Command System, but rather is a specialty team that may be called on during times of need.					

RESOURCE: RAPID NEEDS ASSESSMENT TEAM						
CATEGORY:	Other			**KIND:**	Team	
Components and Capabilities: *There is only one type of RNA Team. Variations may exist and/or specialists may be added according to the type and scale of disaster.*						
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 Represen-tative		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		• Personal Kit • Resupply Kit • Team Life Support Kit • Team Admin. Kit • Vehicle Kit • Communications Support Kit • Fly-Away Kit				

RESOURCE: RAPID NEEDS ASSESSMENT TEAM						
CATEGORY:	Other			**KIND:**	Team	
Components and Capabilities: *There is only one type of RNA Team. Variations may exist and/or specialists may be added according to the type and scale of disaster.*						
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
COMMENTS:	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. 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. 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. HazMat 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. 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. 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. Infrastructure Specialist (representing ESF #3)–assesses the status of transportation. Fire/Urban Search & 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. Telecommunications Specialists–installs, operates, and maintains the communications support package and provides technical support to the team during deployment. Logistics Specialist–provides logistical support and services for the team during all phases of team activity. 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*					

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.					

RESOURCE: VOLUNTEER AGENCY LIAISON (SEE DEFINITION BELOW)						
CATEGORY:	Volunteers & Donations			**KIND:**	Personnel	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Personnel	Experience, Training, Knowledge	Experience in supervisory role as a VAL in 3 or more federally declared disaster situations in different States. Has extensive experience in working with NVOAD agencies and MOUs. Broad understanding and great flexibility in possible models of LTRC that could be used. Has TTT-Training and has trained donations management and volunteer coordination. Has complete working knowledge of IA & PA and VAL functions under FEMA/State agreement	Experience in supervisory role as a VAL in a federally declared disaster. Has worked with a State VOAD on organizing donation management on non-federally declared disaster. Has had training in donations management and volunteer coordination. Aware of IA and VAL functions under FEMA/State Agreement	Experience in working with a VAL in a federally declared disaster. Active in VOAD meetings. Has had training in donations management and volunteer coordination	Has had training in donations management and volunteer coordination. Has attended State VOAD meetings	
COMMENTS:	Serves as the central point between government entities and volunteer organizations in the coordination of information and activities of VOADs (Volunteer Organizations Active in Disasters) responding in times of disaster, including those services in execution of ESF # 6 – Mass Care and ESF #15 – Volunteers and Donations. Coordinates responding voluntary agency donations efforts, including handling, storage, and disbursement of donated goods and emergent volunteers who offer assistance in a disaster response. Establishes and maintains systems for emergency need, special needs, and unmet needs referrals from FEMA/State sources to and among the voluntary agencies. Closely coordinates voluntary agency activities with community relations, donations management, PIO/JIC, and other VOLAG agencies. Assist with framework and assignment of agencies to establishing the long-term recovery committees (LTRC). Working with State VOAD's leadership, establish frequent coordination meetings with VOAD agencies during the response phase of the disaster and continued scheduling of meetings to transition to the LTRC.					

Emergency Medical Services Resources

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 a 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 a 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; MICU 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 (I 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.					

RESOURCE: AMBULANCE STRIKE TEAM						
CATEGORY:	Health and Medical (ESF #8)			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Supervisor Must have own vehicle with communications capabilities—both en route and at scene—to all other units under their supervision	Can be deployed to cover 12-hour periods or 24-hour ops depending on number of ambulances needed at one time. Should be self-sufficient for 72 hours	Advanced Life Support: Minimum 2 staff (paramedic and EMT) transport per ambulance, meets or exceeds standards as addressed by EPA, OSHA, and NFP 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) per ambulance, non-HazMat response	Basic Life Support: Minimum 2 staff (EMT and driver) per ambulance, meets or exceeds standards as addressed by EPA, OSHA, and NFP 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: Minimum 2 personnel (1 EMT and 1 driver) per ambulance	
Ambulances	Emergency Medical Services team with equipment, supplies, and vehicle for patient transport (Type I-IV) and emergency medical care out of hospital	5 Type I Ambulances; Capable of transporting minimum of 10 litter patients total (2 per ambulance)	5 Type II Ambulances; Minimum capability of 10 litter patients	5 Type III Ambulances; Minimum capability of 10 litter patients	5 Type IV Ambulances; Minimum capability of 10 litter patients	
Personnel	ICS 100 and 200 Basic MCI Field Operations (8 hours) Strike Team Leader – Ambulance Course (8 hours); 1 year leadership experience in a related field	ICS 300 HazMat FRO Course WMD Awareness Course 3 years of EMS experience				
Supplies	Go-Pack					

RESOURCE: AMBULANCE STRIKE TEAM						
CATEGORY:	Health and Medical (ESF #8)			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
	Equipment and supplies to meet minimum scope of practice (ALS or BLS) Equipment and supplies to meet minimum requirements of State agency that provides regulation					
COMMENTS:	An Ambulance Strike Team is a group of five ambulances of the same type with common communications and a leader. It provides an operational grouping of ambulances complete with supervisory element for organization command and control. The strike teams may be all ALS or all BLS. Support elements needed include fuel, security, resupply of medical supplies, and support for a minimum of 11 personnel (if 2 crew per ambulance) or 16 (if 3 crew per ambulance). Temperature control support may be required for medical supplies in some environments. Vehicle maintenance support required.					

RESOURCE: AMBULANCE TASK FORCE						
CATEGORY:	Health and Medical (ESF #8)			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Supervisor		1	1	1	1	
Ambulances		5 Type I Ambulances; Capable of transporting minimum of 10 litter patients total (2 per ambulance)	5 Type II Ambulances; Minimum capability of 10 litter patients	5 Type III Ambulances; Minimum capability of 10 litter patients	5 Type IV Ambulances; Minimum capability of 10 litter patients	
COMMENTS:	Any combination of ambulances, within span of control, with common communications and a leader. This resource typing is used to distinguish between a Task Force of Ambulances and an Emergency Medical Task Force (any combination of resources).					

RESOURCE: EMERGENCY MEDICAL TASK FORCE						
CATEGORY:	Health and Medical (ESF #8)			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Supervisor		1 Minimum qualifications: Ambulance Strike Team/Medical Task Force Leader				
Resources		Any combination of resources assembled for a medical mission, with common communications and a leader				
Supplies, Equipment, Personnel						
COMMENTS:	Emergency Medical Task Force: Any combination (within span of control) of resources (e.g., Ambulances, Rescues, Engines, Squads) assembled for a medical mission, with common communications and a leader (supervisor). Self-sufficient for 12-hour operational periods, although may be deployed longer, depending on need. Support elements needed include fuel, security, resupply of medical supplies, and support for a minimum of 11 personnel (depending on staffing of individual units). Temperature control support may be required for medical supplies in some environments. Vehicle maintenance support required.					

Fire/HazMat Resources

RESOURCE: AREA COMMAND TEAM, FIREFIGHTING						
CATEGORY:	Firefighting (ESF #4), Command and Control			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Area Commander (ACDR)		Yes				
Asst. Area Commander Planning (ACPC)		Yes				
Asst. Area Commander Logistics (ACLC)		Yes				
Area Command Aviation Coordinator (ACAC)		Yes				
COMMENTS:	Area Command Team To become eligible for participating on a National Area Command Team, any person filling a team position as the Area Commander, Assistant Area Commander Planning, Assistant Area Commander Logistics, or Area Command Aviation Coordinator must complete the Area Command (S-620) training course. Type I Positions: Area Commander: Prerequisite experience includes satisfactory performance as an Assistant Area Commander Planning or Logistics; satisfactory position performance as an Area Commander on a wildland fire incident. Required Training: Area Command (S-620). Assistant Area Commander Planning: Prerequisite experience include satisfactory performance as an Incident Commander or General Staff on a National Type I Incident Management Team. Required Training: Area Command (S-620). Assistant Area Commander Logistics: Prerequisite experience include satisfactory performance as an Incident Commander or General Staff on a National Type I Incident Management Team. Required Training: Area Command (S-620). Area Command Aviation Coordinator: Prerequisite experience include satisfactory performance as an Air Operations Branch Director on a National Type I Incident Management Team. Required Training: Air Operations Branch Director. *Source: National Wildfire Coordination Group (NWCG) Publication, National Interagency Incident Management System, Wildland and Prescribed Fire Qualifications System Guide, January 2000 (PMS 310-1, NFES 1414).*					

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		1,000 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		1,200 ft.	1,000 ft.					
Hose, 1.5 inch		400 ft.	500 ft.	1,000 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		1,000 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		(Known Chemicals, Unknown Chemicals; Known or Suspect Weapons of Mass Destruction Chemical/Biological Substances [WMD Chem/Bio]) 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	(Known Chemicals; Unknown Chemicals) 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	(Known Chemicals) 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		(Basic Confined Space Monitoring Specific Known Gas Monitoring; WMD Chem/Bio Aerosol Vapor and Gas) 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 may incorporate more sophisticated instruments	(Basic Confined Space Monitoring; Specific Known Gas Monitoring) 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 may incorporate more sophisticated instruments that differentiate between two or more	(Basic Confined Space Monitoring; Specific Known Gas Monitoring) 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					
		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	flammable vapors, and may directly identify by name a specific flammable or toxic vapor			
Sampling: Capturing Labeling Evidence Collection		(Known Industrial Chemicals; Unknown Industrial Chemicals; WMD Chem/Bio) 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	(Known Industrial Chemicals; Unknown Industrial Chemicals) 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	(Known Industrial Chemicals) 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		(Alpha Detection; Beta Detection; Gamma Detection) The ability to accurately interpret readings from the radiation-detection devices and conduct geographical survey search of suspected 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	(Alpha Detection; Beta Detection; Gamma Detection) The ability to accurately interpret readings from the radiation-detection devices and conduct geographical survey search of suspected radiological source or contamination spread. Basic criteria include detection and survey capabilities for alpha, beta, and gamma	(Beta Detection; Gamma Detection) The ability to accurately interpret readings from the radiation-detection devices and conduct geographical survey search of suspected radiological source or contamination spread. Basic criteria include detection and survey capabilities for beta and gamma		

RESOURCE: HAZMAT ENTRY TEAM						
CATEGORY:	HazMat (ESF #10)			KIND:	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
		criteria include detection and survey capabilities for alpha, beta, and gamma. Ensure all members of survey teams are equipped with accumulative self-reading instruments (dosimeters)				
Protective Clothing: Ensembles		(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) 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 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-	(Vapor-Protective CPC; Flash Fire Vapor- Protective CPC; Liquid Splash-Protective CPC) 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 option for Vapor-Protective both of which must be compliant with 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	(Liquid Splash-Protective CPC) 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					
		Protective Ensembles and Clothing for Hazardous Materials Emergencies", current edition				
Technical Reference		(Printed and Electronic; Plume Air Modeling; Map Overlays; WMD Chem/Bio) 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-modeling capability	(Printed and Electronic; Plume Air Modeling; Map Overlays) 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-modeling capability	(Printed and Electronic) 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		
Special Capabilities		(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	(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	(Diking; Damming; Absorption; Liquid Leak Intervention; Neutralization; Plugging; Patching; Vapor Leak Intervention)	(Diking; Damming; Absorption) Employment of mechanical means of intervention and control such as plugging,		

RESOURCE: HAZMAT ENTRY TEAM						
CATEGORY:	HazMat (ESF #10)			KIND:	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
		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; 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 and confine incidents involving WMD Chem/Bio substances	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; 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	patching, off-loading, and tank stabilization; Environmental means such as absorption, dams, dikes, and booms		
Decontami-nation		(Known Contaminants Based on Local Risk Assessment; Unknown Contaminants; WMD Chem/Bio) Must be self-sufficient to provide decontamination for members of their team. Capable of providing decontamination for known and unknown contaminants and WMD Chem/Bio.	(Known Contaminants Based on Local Risk Assessment; Unknown Contaminants) Must be self-sufficient to provide decontamination for members of their team. Capable of providing decontamination for known and unknown contaminants.	(Known Contaminants Based on Local Risk Assessment) Must be self-sufficient to provide decontamination for members of their team. Capable of providing decontamination for known contaminants.		

RESOURCE: HAZMAT ENTRY TEAM						
CATEGORY:	HazMat (ESF #10)			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Communi-cations		(In-Suit; Wireless Voice; Wireless Data; Secure Communications) Personnel utilizing CPC shall be able to communicate appropriately and safely with one another and their team leaders	(In-Suit; Wireless Voice; Wireless Data) Personnel utilizing CPC shall be able to communicate appropriately and safely with one another and their team leaders	(In-Suit; Wireless Voice) 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 Responding to Hazardous Materials Incidents," as is appropriate for the specific team type	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 Responding to Hazardous Materials Incidents," as is appropriate for the specific team type	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 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: HELITANKER (FIREFIGHTING HELICOPTER)						
CATEGORY:	Firefighting (ESF #4)			**KIND:**	Aircraft	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Fixed Tank						
1100 gal/min						
COMMENTS:	Helitankers are large capacity helicopters (e.g., Skisorsky model) certified by the Air Tanker Board.					

RESOURCE: INCIDENT MANAGEMENT TEAM, FIREFIGHTING						
CATEGORY:	Firefighting (ESF #4)			KIND:	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Incident Commander (ICT1-5)		Yes	Yes	Yes	Yes	Yes
Safety Officer (SOF1-3)		Yes	Yes	Yes		
Information Officer (IOF1-3)		Yes	Yes	Yes		
Operations Section Chief (OSC1-2)	2 ea.	Yes	Yes			
Division/Group Supervisor	4 ea.	Yes				
Air Operations Branch Director (AOBD)		Yes				
Air Support Group Supervisor (ASG)		Yes				
Air Tactical Group Supervisor (ATG)		Yes				
Planning Section Chief (PSC 1-2)		Yes	Yes			
Situation Unit Leader (SITL)		Yes				
Resource Unit Leader (RESL)	2 ea.	Yes				
Fire Behavior Analyst (FBAN)		Yes				
Logistics Section Chief (LSC 1-2)		Yes	Yes			
Communications Unit Leader (COML)		Yes				
Supply Unit Leader (SPUL)		Yes				
Facilities Unit Leader (FACL)		Yes				
Ground Support Unit Leader (GSUL)		Yes				

RESOURCE: INCIDENT MANAGEMENT TEAM, FIREFIGHTING						
CATEGORY:	Firefighting (ESF #4)			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Finance/Admin Section Chief (FSC 1-2)		Yes	Yes			
Time Unit Leader (TIME)		Yes				
Comp/Claims Unit Leader (COMP)		Yes				
Procurement Unit Leader (PROC)		Yes				

COMMENTS:

Type I Incident Management Team
To become eligible for participating on a National Type I team, any person filling a team position as the Incident Commander, Safety Officer, Information Officer, or general staff must complete the Advanced Incident Management (S-520) training course.

Type II Incident Management Team
To become eligible for participation on a Type II team, any person filling a team position as the Incident Commander, Safety Officer, Information Officer, or general staff must complete the Command and General Staff (S-420) training course.

Type I Positions

Incident Commander Type I: Prerequisite experience includes satisfactory performance as an Incident Commander Type II; satisfactory position performance as an Incident Commander Type I on a wildland fire incident. Required Training: Advanced Incident Management (S-520).

Type II Positions

Incident Commander Type II: Prerequisite experience includes satisfactory performance as an Incident Commander Type III; satisfactory performance as an Operations Section Chief Type II; satisfactory position performance as an Incident Commander Type II on a wildland fire incident. Required Training: Command and General Staff (S-420). Additional Training: Advanced ICS (I-400), Incident Commander (S-400), Advanced Management Concepts (S-481).

Type III Positions

Incident Commander Type III: Prerequisite experience includes satisfactory performance as an Incident Commander Type IV; satisfactory performance as a Task Force Leader; satisfactory position performance as an Incident Commander Type III on a wildland fire incident. Required Training: Introduction to Wildland Fire Behavior Calculations (S-390). Additional Training: Incident Commander Extended Attack (S-300).

Type IV Positions

Incident Commander Type IV: Prerequisite experience includes satisfactory performance as a Single Resource Boss (Crew, Dozer, Engine, Tractor/Plow); satisfactory position performance as an Incident Commander Type IV on a wildland fire incident. Required Training: Fire Operations in the Urban Interface (S-215). Additional Training: Initial Attack Incident Commander (S-200), and Ignition Operations (S-234).

RESOURCE: INCIDENT MANAGEMENT TEAM, FIREFIGHTING						
CATEGORY:	Firefighting (ESF #4)			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
	Type V Positions Incident Commander Type V: Prerequisite experience includes satisfactory performance as an Advanced Firefighter/Squad Boss; satisfactory position performance as an Incident Commander Type V on a wildland fire incident. Required Training: Look Up, Look Down, Look Around (S-133). Additional Training: Intermediate Wildland Fire Behavior (S-290). *Source: National Wildfire Coordination Group (NWCG) Publication, National Interagency Incident Management System, Wildland and Prescribed Fire Qualifications System Guide, January 2000 (PMS 310-1, NFES 1414).*					

RESOURCE: INTERAGENCY BUYING TEAM, FIREFIGHTING						
CATEGORY:	Firefighting (ESF #4), Resource Management (ESF #7)			KIND:	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Personnel		6-member team consisting of a team leader, 4 members and 1 trainee position (used as needed)				
		Personnel from the incident agency or alternate buying team members may be added, as needed, to supplement the primary team				
Training (Recommended)		I-200, Basic Incident Command System (12 classroom hours)				
Training (Recommended)		S-260, Incident Command Business Management (self-study)				
Training (Recommended)		D-110, Dispatch Recorder (16 classroom hours)				
Training (Recommended)		J-252, Ordering Manager				
Training (Recommended)		J-253, Receiving and Distribution				
Training (Recommended)		National Interagency Buying Team Guide (self-study) or Workshop				
Training (Recommended)		On-the-Job Training				
Training (Recommended)		Purchased Card and Convenience Check training				
Training (Recommended)		Procurement Unit Leader Training (S-360 Unit Leader)				
Buying Team Kit		Reference Material (see comments)				
		Internet/Intranet Web site References (see comments)				
		Supplies (see comments)				
		Forms (see comments)				
		Sample of Log Sheets (see comments)				

RESOURCE: INTERAGENCY BUYING TEAM, FIREFIGHTING						
CATEGORY:	Firefighting (ESF #4), Resource Management (ESF #7)			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
COMMENTS:						

The Buying Team works through the local administrative staff to support procurement activities. Therefore, Buying Teams should be sensitive to and strive to operate within local policies and procedures. The members of the Buying Teams follow:

- The Buying Team Leader (BUYL) (1)
- The Assistant or Deputy Buying Team Leader (BUYL-D) (1)
- Buying Team Members (BUYM) (4)

General Roles of the Buying Team include the following:

- Support incident procurement through the administrative staff.
- Transition with the incident agency upon arrival. This includes obtaining status of all resource orders completed and outstanding to date, as well as initiating procedures for the handling of new orders by the Buying Team.
- Fill resource orders for services, supplies, and equipment from established sources (NFES Caches, GSA) and the open market and, for those which are not filled, by the dispatch community or the administrative unit's procurement activity. Reviews resource orders for completeness.
- Check on estimated times of departure and estimated times of arrival for pending resource orders.
- Obtain approval from the administrative staff or the IBA before purchasing any sensitive or questionable property.
- Provide the incident base (Finance Section Chief, Procurement Unit Leader, Logistics Section Chief, and Ground Support Unit Leader) an updated equipment log.
- Establish and maintain good working relationships and lines of communication.
- Update the incident service and supply plan with new sources and other information.

Buying Team Kit: Each Buying Team should have a kit containing the following items to take along when dispatched to an incident:

Reference Materials

- Interagency Incident Business Management Handbook, NWCG Handbook 2, NFES 1139
- National Interagency Mobilization Guide, NFES 2091 (NFES 2092 for half-size)
- Activity Calendar (Optional Form 67 or similar)
- NWCG National Fire Equipment System Catalog, Part I, Fire Supplies & Equipment (NFES 0362, Part I & Part II when using order #0362)
- NWCG National Fire Equipment System Catalog, Part II, Publications (NFES 3362)

Internet/Intranet Web site References

- NWCG Internet homepage: http://www.nwcg.gov
- Forest Service Fire & Aviation Internet homepage: http://www.fs.fed.us/fire/
- Forest Service Acquisition Management Intranet homepage: http://fsweb.wo.fs.fed.us/aqm/
- BLM Intranet: http://webtst.nifc.blm.gov/Sascher/blmintranet/Index.htm
- NIFC and related governmental agency links (BLM, BIA, FWS, NPS, NWS): http://www.nifc.gov

RESOURCE: INTERAGENCY BUYING TEAM, FIREFIGHTING						
CATEGORY:	Firefighting (ESF #4), Resource Management (ESF #7)			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
	Supplies • Battery powered or solar powered handheld calculator • Spare batteries • Highlighters • Stapler and staple remover • Other supplies as needed • (Optional) First Aid kit and a bloodborne pathogens barrier kit Forms • See exhibits to the National Interagency Buying Team Guide and the Interagency Incident Business Management Handbook for sample forms. Sample of Log Sheets • Resource Order Log (Leader and Deputy Only) • Purchase Card Log Sheets • Convenience Check Log Sheets *Source: National Wildfire Coordinating Group (NWCG) Publication, National Interagency Buying Team Guide, December 1999 (PMS 315).*					

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 Extensions				
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: U.S. COAST GUARD NATIONAL STRIKE FORCE						
CATEGORY:	HazMat (ESF #10)			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
NSF Specialized Response Equipment	Chemical Release					Chemical Response Trailers; Level A, B, and C PPE suits
Portable Chemical Detection Instruments	Air, Liquids, and Solids					Flame and Photo Ionization Detectors
						Fluorometers
						Particulate Meters
						Soil and Sludge Sample Kits
						pH meters
						Decontamination Equipment
						Portable Weather stations
						Drum lifters
						EMT kits
						Chlorine kits
NSF Specialized Response Equipment	Small Boats					32-foot and 24-foot Munsons
						15-foot Inflatable boats
						18-foot John boats
NSF Specialized Response Equipment	Lighting/ Pumping Equipment					Ready Pump Loads
						High-capacity, hydraulically driven, centrifugal submersible pumps capable of transferring oil and chemicals or dewatering
						Nonsubmersible diaphragm and peristaltic pumps capable of transferring oil and chemicals (medium/small capacity)
						Hydraulic prime movers and support equipment

RESOURCE: U.S. COAST GUARD NATIONAL STRIKE FORCE						
CATEGORY:	HazMat (ESF #10)			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
NSF Specialized Response Equipment	Communications Equipment					Communications support equipment ranges from handheld radios to portable satellite communications repeater systems
NSF Specialized Response Equipment	Oil Discharges					Vessel of Opportunity Skimming System (VOSS)
						Inflatable (45-inch) boom (6,000 feet)
						Temporary Storage Devices
NSF Specialized Response Equipment	Damage Control and Support					Oil/water interface meter
						Plugging and patching equipment
						Generators (3.0 KW to 10 KW)
NSF Specialized Response Equipment	Special Monitoring Equipment					Radiological detection capabilities
						Dispersant operations
NSF Specialized Response Equipment	Photographic Equipment	35 mm and digital cameras	35 mm and digital cameras	35 mm and digital cameras	35 mm and digital cameras	35 mm and digital cameras
		Video cameras and players	Video cameras and players	Video cameras and players	Video cameras and players	Video cameras and players
NSF Specialized Response Equipment	Vehicle Command Post					Tractor/trailer units
						Mobile Incident Command Posts
						All-terrain vehicles
COMMENTS:	*There are only three National Strike Force teams in the Nation. All three National Strike Force teams have the same level of capability, which exceeds the standards set in the Mutual Aid definition of a Type I Hazardous Materials Entry Team. However, because of their deployment capabilities and versatility, they are simply classified as "Other." The U.S. Coast Guard National Strike Force (NSF) was created in 1973 as a Coast Guard special force under the National Contingency Plan (NCP/see 40 CFR 300.145) to respond to oil and hazardous chemical incidents. The National Strike Force is comprised of three 40-member Strike Teams and the National Strike Force Coordination Center (NSFCC), which manages, supports, and set standards for the three teams. The three teams are: the Atlantic Strike Team in Fort Dix, NJ; the Gulf Strike Team in Mobile, AL; and the Pacific Strike Team in Novato, CA.* The NSF is recognized worldwide as an expert in preparedness and response to mitigate the effects of oil discharges and hazardous substance releases. Its mandate is to assist and support USCG and EPA Federal On-Scene Coordinators (FOSCs) with their response and preparedness activities to protect the public health and welfare and the environment. Although its three primary missions are pollution response, training, and planning, the NSFCC also houses a Public Information Assist Team (PIAT), which is capable of providing public affairs support as well as crisis communication and Joint Information Center (JIC) expertise to FOSCs during a response.					

RESOURCE: U.S. COAST GUARD NATIONAL STRIKE FORCE						
CATEGORY:	HazMat (ESF #10)			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
	NSF Qualification Program: The NSF Qualification Program includes four levels. Although these levels are unique to the NSF, our personnel meet training and skill requirements similar to those established in 29 CFR 1910.120 (g) (6). Response Member (RM): Is trained in more than 50 areas of oil and HazMat response operations and attains an awareness level of all NSF Equipment. This allows the RM to perform a number of vital functions in a pollution response, primarily assisting the RT. Response Technician (RT): Is a significant level beyond the RM and is the position reached by most Strike Team members. An RT is qualified to operate all NSF equipment. An RT has also attended pollution response specialist courses and obtained significant field experience on oil and HazMat incidents. Response Supervisor (RS): Is a level beyond RT and supervises the technical aspects of NSF response operations at oil or HazMat incidents. This includes the preparation, deployment, and operation of all NSF equipment. The RS helps a response in many areas, including directing operations, response planning, resolving site safety issues, and solving technical problems. Response Officer (RO): Is a senior leadership position filled by a commissioned or warrant officer. An RO manages all aspects of any size NSF response, including response planning, mobilization, and operations. An RO receives significant resident and unit training, and field experience. An RO can fill key positions in a spill management team, direct operations, liaise with senior officials, resolve safety issues, recommend alternative countermeasures, explain policies, and solve crisis management problems.					

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		2,000 gallon	1,000 gallon	1,000 gallon		
Pump		300 GPM	120 GPM	50 GPM		
COMMENTS:						

Health and Medical Resources

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 locations 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 locations 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 locations 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 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. 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 mental health teams are Type II.					

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 locations 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:	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. 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. NOTE 2: DMORTs are mission tailored on an ad hoc basis, and usually deploy only with personnel and equipment specifically required for current mission. NOTE 3: There are currently two Portable Morgue Units within NDMS.					

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, Communi-cations, 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:	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. NOTE 1: Usually includes a mix of veterinarians, veterinary technicians, support personnel, microbiologists, epidemiologists, and veterinary pathologists. 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.					

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 X-Ray Devices	(3) Portable X-Ray Devices	(1) Portable X-Ray 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						
CATEGORY:	Law Enforcement/Security			**KIND:**	Team	
MINIMUM CAPABILITIES:		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 asgnmt to unit Maint. Staff—Full-time asgnmnt, 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. Definitions					

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)						
CATEGORY:	Law Enforcement/Security			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					

COMMENTS:

Type I – A predesignated 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.

Type II – A predesignated 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.

Type III – A nondesignated 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.

Definitions

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: PUBLIC SAFETY DIVE TEAM						
CATEGORY:	Law Enforcement/Security			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
	Air Compressor	Recommended ability to refill air bottles onsite				
Equipment	Scuba	1 for each diver, including: full face mask, regulator, 1 additional air bottle, wetsuit, fins, and light	Same as Type I, plus at least 1 additional air bottle per diver	Same as Type I, plus at least 1 additional air bottle per diver	Same as Type I, plus at least 1 additional air bottle per diver	
	Deep Water Scuba	Each diver will be equipped with backup air source and regulator			Each diver will be equipped with backup air source and regulator	
	Surface Supply System	Capable of sustaining divers for deep water dives (more than 60') or dives of extended lengths of time, including 2, 300' umbilical hoses to support primary and backup divers, and 1 positively pressured full face mask with communications system for each diver; Underwater video monitoring/recording capabilities			Capable of sustaining divers for deep water dives (more than 60') or dives of extended lengths of time, including 2, 300' umbilical hoses to support primary and backup divers, 1 positively pressured full face mask with communications system for each diver; Underwater video monitoring/recording capabilities	
	Remote Operating Vehicle (ROV)	Available only for a Type I Team				
	Towable Motorized Vessel	Capable of transporting the entire team and its equipment	Capable of transporting the entire team and its equipment	Capable of transporting the entire team and its equipment	Capable of transporting the entire team and its equipment	
	Electronic Communications Systems	Each diver equipped with underwater communications system	Recommended same as Type I	Recommended same as Type I	Same as Type I	
	Portable Sonar	Aides in locating objects from surface, allowing diver to be directed by support team				
	Drysuits/Wetsuits	Drysuits: Vulcanized-Rubber, 1 for each diver, necessary to have available for potential biological or HazMat diving	Same as Type I	Wetsuit, recommend drysuit	Same as Type I	
	Lift/Salvage	Bags with minimum lift capacity	Bags with minimum			

RESOURCE: PUBLIC SAFETY DIVE TEAM						
CATEGORY:	Law Enforcement/Security			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
		of 6,000 lbs. and rigging equipment	lift capacity of 4,000 lbs. and rigging equipment (recommended)			
	Evidence Collection/Search Tools	Including: body recovery bags (fine nylon mesh), underwater metal detectors, sealing plastic containers, 200' of search lines and marker buoys	Same as Type I	Sealing plastic containers	Same as Type III, plus explosives handling equipment	
Personnel	Divers	Minimum 6, at least 4 for deep water diving (capability and training to dive a minimum of 100', low visibility overhead and cold-water environments)	Minimum 4	Minimum 3	2+ specially trained in explosives and underwater demolition	
	Dive Team Leader	1 per 4 divers	Same as Type I	Same as Type I (if available)	Recommended	
	Rescue Diver	1 rescue diver trained in First Aid/CPR and hyperbaric recognition	1 rescue diver trained in First Aid/ CPR and hyperbaric recognition (recommended)	1 rescue diver trained in First Aid/CPR and hyperbaric recognition (recommended)	1 rescue diver trained in First Aid/CPR and hyperbaric recognition (recommended)	
Vehicles		Support vehicle for transportation of personnel/ equipment	Support vehicle for transportation of personnel/ equipment	Support vehicle for transportation of personnel/ equipment	Support vehicle for transportation of personnel/ equipment	
Training		Minimum Physical Fitness Qualification with recurrent annual certification**; Scuba Certification; Public Safety Certification** – 100 hours minimum, including the use of full face masks and lift bags, surface supplied air systems, diving in polluted environments, use of lift bags for salvage operations, evidence recovery and preservation, low visibility, and overhead environment; (Recommended: aircraft deployment and tactical)	Scuba Certification; Public Safety Certification** – 60 hours minimum, including the use of full face masks and lift bags; Certification of 6 training dives per year	Scuba Certification; Public Safety Certification** – 60 hours minimum, including the use of full face masks and lift bags; Certification of 6 training dives per year	Same as Type I, plus explosives training	

RESOURCE: PUBLIC SAFETY DIVE TEAM						
CATEGORY:	Law Enforcement/Security			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
		operations; Certification of 6 training dives per year, including 1 training dive to maximum depth				

COMMENTS:

All teams are described for law enforcement purposes. Many of these teams will be trained and prepared for search and rescue as well. All divers and dive operations will be compliant with current NFPA. 1670 and 1006 guidelines.
** A national training standard needs to be developed.

Description of Type

Type I – A team of divers and a support team with necessary diving experience as well as law enforcement experience. Teams should be able to respond with all outlined equipment to handle evidence recovery and deep water diving. Team should be self-contained for 24 hours. A dive team leader with experience and training in risk/benefit analysis should be assigned to each dive team. Capable of conducting rescue dives.

Type II – A team capable of responding with all outlined equipment to handle evidence recovery.

Type III – A team with Scuba certification and Public Safety Diving Certification.

Type IV – A team of divers and support team with necessary diving experience as well as explosive/underwater demolition experience. Teams should be able to respond with all outlined equipment to handle evidence recovery and deep water diving. Team should be self-contained for 24 hours. A dive team leader with experience and training in risk/benefit analysis should be assigned to each dive team.

Definitions of Acronyms

NFPA	National Fire Protection Agency
Scuba	Self-Contained Underwater Breathing Apparatus
Sonar	Sound Navigation and Ranging – uses sound to identify objects, allowing divers to be directed by surface support team

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 Resources

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 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: Cooling only 260 Amps at 460 volts, 3 phase, 60 hz; Heat only (250 kW) 368 Amps at 460 volts, 3 phase, 60 hz; (8) 20" Flex duct connections for air supply (4)/ return (4); Potential application examples: Airports, Universities, Malls, Moisture removal from wet buildings & materials (weather / temperature permitting). 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.	60 Ton 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: Cooling only 160 Amps at 460 volts, 3 phase, 60 hz; Heat only (125 kW) 200 Amps at 460 volts, 3 phase, 60 hz; (8) 20" Flex duct connections for air supply (4)/ return (4); Potential application examples: Airports, Retail stores, Schools, Moisture removal from wet buildings & materials (weather / temperature permitting). 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.	25 Ton 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: Cooling only 60 Amps at 460 volts, 3 phase, 60 hz; Heat only (72 kW) 100 Amps at 460 volts, 3 phase, 60 hz; (4-6) 20" Flex duct connections for air supply (2)/ return (2-4); Potential application examples: Tents, Small retail stores, Libraries, Moisture removal from wet buildings & materials (weather / temperature permitting). 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.	10 Ton 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: Cooling only 24 Amps at 460 volts, 3 phase, 60 hz; Heat only (54 kW) 71 Amps at 460 volts, 3 phase, 60 hz; (3) 20" Flex duct connections for air supply (1)/ return (2); Potential application examples: Tents, Computer rooms, Small office (2,000 sq. ft.), Moisture removal from wet buildings & materials (weather / temperature permitting). 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.	
Equipment	Ton					
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	Dimensions: Overall L×W×H: 37'4"×11'10"×9'7" Firebox: 27'2"×8'5"×8'1" 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	Dimensions: Overall L×W×H: 31'4"×11'10"×9'7" Firebox: 21'2"×8'5"×8'1" 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	Dimensions: Overall L×W×H: 30'2"×8'6"×8'6" Firebox: 19'8"×6'2"×7'1" 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	Dimensions: Overall L×W×H: 27'×8'6"×8'6" Firebox: 16'5"×6'2"×7'1" 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	Dimensions: Overall L×W×H: 27'×7'5"×7'8" Firebox: 16'×5'×6' 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	Dimensions: Overall L×W×H: 21'6"×7'5"×7'8" Firebox: 11'×5'×6' 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
		Application: Wood Waste Reduction & Animal Carcass Disposal (needs wood waste to support carcass combustion)	Application: Wood Waste Reduction & Animal Carcass Disposal (needs wood waste to support carcass combustion)	Application: Wood Waste Reduction & Animal Carcass Disposal (needs wood waste to support carcass combustion)	Application: Wood Waste Reduction & Animal Carcass Disposal (needs wood waste to support carcass combustion)	Application: Wood Waste Reduction & Small Animal Carcass Disposal (needs wood waste to support carcass combustion)	Application: 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)	

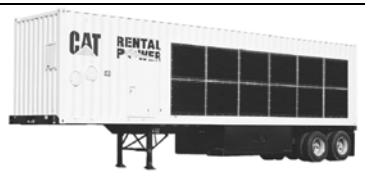
RESOURCE: AIR CURTAIN BURNERS (TRENCH BURNER, IN-GROUND)						
CATEGORY:	1 Public Works and Engineering (ESF #3)			**KIND:**	Equipment	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric	T-400	T-200	T-350		
Equipment	Tons/HR	Dimensions: Overall L×W×H: 28'×8'1"×6'10" Pit or 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	Dimensions: 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	Dimensions: 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		
		Application: Wood Waste Reduction & Animal Carcass Disposal (needs wood waste to support carcass combustion)	Application: Wood Waste Reduction & Animal Carcass Disposal (needs wood waste to support carcass combustion)	Application: 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	210-175 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	50-120 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	110-90 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	22.5 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: BACKHOE LOADER						
CATEGORY:	Public Works and Engineering (ESF #3)			KIND:	Equipment	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Example		446B – Cat 3114T Diesel	420D – Cat 3054T Diesel	420D IT with Quick Coupler – Cat 3054T Diesel	416D – Cat 3054B Diesel, Gross Power	
Gross Power	kw/hp	82/110	66/88	66/88	58/77	
Operating Weight (max)	lbs	19,630	15,772	15,772	15,257	
Dig Depth Standard Stick	ft/in	14'5"	14'5"	14'5"	14'5"	
Extended Stick	ft/in	18'1"	18'1"	18'1"	18'1"	
Loading Height	ft/in	11'10"	11'10"	11'10"	11'10"	
Loading Reach	ft/in	5'8"	5'8"	5'8"	5'8"	
Bucket Capacity	yd^3	1.25	1.25	1.25	1.25	
Dump Height (max angle)	ft/in	8'4"	8'4"	8'1"	8'4"	
Dump Reach (max angle)	ft/in	2'9"	2'9"	2'10"	2'9"	
Lift Capacity (full height)	lbs	6,385	6,385	(w/QC) 6,970	5,292	
Bucket Breakout Force	lbs	10,131	10,131	10,564	8,524	
Fuel Capacity	gal	34	34	34	34	

RESOURCE: BACKHOE LOADER						
CATEGORY:	Public Works and Engineering (ESF #3)			**KIND:**	Equipment	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
COMMENTS:	Caterpillar is used as an example only. 420 IT tools include the following: Backhoe Work Tools: Buckets – Standard, Heavy Duty, Heavy Duty Rock, High Capacity, Coral, Ditch Cleaning; Hydraulic Hammer; Vibratory Plate Compactor; Ripper. Loader Work Tools: Buckets – General Purpose, Multipurpose, Side Dump, Light Material, Penetration; Loader Forks; Material Handling Arm; Angle Blade; Broom; Rake; Asphalt Cutter; Bale Spear.  446B  420D  420D IT  416 D					

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	500/450 Ton Chiller 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	300 Ton Chiller 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	150 Ton Chiller 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	50 Ton Chiller 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	Custom Rental Air Handling Units: 50, 75, & 100 Tons 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	4,850	7,935	5,730	3,970	
Weight With housing	Pounds	12,785	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	2,865	2,205	1,430	
Max Op Pres Hyd. Cylinder	Pressure Per Square Inch	5,075	5,075	5,075	5,075	
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	2,030	2,030	2,030	2,030	
Maximum Oil Flow Rotator	Gallons per minute	22	11	11	11	

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)	
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:	Multiprocessors 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 Multiprocessor model attachment to Hydraulic Excavator.					

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	200 (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.	100 (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.	80 (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	General Manager (GM) 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	Project Manager (PM) 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 Federal record keeping			

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	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 SITE REDUCTION TEAM						
CATEGORY:	Public Works and Engineering (ESF #3)			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Storage Area Capabilities		Ability to establish lined temporary storage areas for ash, household hazardous waste, fuels, and other materials that can contaminate soils, runoff, or ground water				
Control Capabilities		Ability to establish traffic control, dust control, erosion control, fire protection, on-site roadway maintenance, and safety measures				
Debris Reduction		Ability to burn debris through air curtain incineration; Use of tub grinders to reduce disaster debris waste, and other source reduction applications to be site/disaster-specific				
Sorting and Stockpiling		Ability to sort and stack debris at the site				
Disposal		Ability to dispose nonburnable debris and ash residue				
Clearance		Ability to clear site of all debris				
Equipment		Ability to supply, support, and maintain an inventory of varying equipment specialties to facilitate and coordinate the removal, collection, and disposal of debris				
Personnel		Trained and experienced in the field of debris management procedures; Understanding of equipment leasing contracts, various types of equipment, and unit price contracts; Ability to comply with Federal, State, and local authority, and OSHA regulations to which services are being applied; Ability to be fully mobilized and equipped;				

RESOURCE: DEBRIS MANAGEMENT SITE REDUCTION TEAM						
CATEGORY:	Public Works and Engineering (ESF #3)			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
		Engineering background with a background in site development and proven skills in construction; Knowledge of soil and water sampling and other environmental impacts; Knowledge and ability to ensure environmental justice protocols are upheld; Knowledge and expertise to perform varying debris reduction separation techniques, including, at minimum, 4 categories: woody vegetative debris, construction or building rubble, hazardous materials, and recyclable materials (e.g., aluminum, cast iron, steel, or household white goods or appliances); Appropriate education and training in managing inspection stations located at such debris reduction sites, recycling locations, or temporary debris staging reduction sites				
COMMENTS:	Debris Management Site Reduction Teams should possess the experience and financial capabilities to support equipment, disaster debris waste reduction capabilities, and personnel, and to maintain operations for an indefinite period of time. As only one type, the makeup of the Debris Management Site Reduction Team will be dependent on the site and impact specifics of the disaster.					

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	Long & Short Term 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%	Long & Short Term 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%,	Long & Short Term 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: DISASTER ASSESSMENT TEAM						
CATEGORY:	Public Works and Engineering (ESF #3)			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Team Personnel		Institutional Services Manager	Assessment Director	Assessment Team Leader		
Description		Responsible for seeing that the building is safe, damage to the building is evaluated, and measures are formulated and implemented to remedy or correct problems; Upon notification of a problem, establishes that no threat exists to personnel safety, secures the affected area and/or building, and alerts Assessment Director; Establishes priorities for facility repairs, and follows the progress of repairs once begun	Organizes and manages the process by which damage is evaluated; Responsible for notifying and instructing Assessment Team Leaders, and enlisting the assistance of in-house or outside experts/resource people as required; Evaluates findings and recommendations, and contacts the Recovery Director with recovery recommendations	Selects and assembles the team members and directs their operations; Instructs the team on what to do and how to do it, including methods of inspection and sampling, assessing damaged material, and documenting the process; Monitors the damage investigation, reporting recommendations to the Assessment Director		
Training or Requirements		Must be multidisciplinary and familiar with health personnel, engineering specialists, logisticians, environmental experts, and communications specialists; Must also be able to record observations and decisions made by the team, photograph and record disaster site damage, and investigate where damage exists; Able to analyze the significance of affected infrastructure, estimate the extent of damages, and establish initial priorities for recovery	Must be multidisciplinary and familiar with health personnel, engineering specialists, logisticians, environmental experts, and communications specialists; Must also be able to record observations and decisions made by the team, photograph and record disaster site damage, and investigate where damage exists; Able to analyze the significance of affected infrastructure, estimate the extent of damages, and establish initial priorities for recovery	Must be multidisciplinary and familiar with health personnel, engineering specialists, logisticians, environmental experts, and communications specialists; Must also be able to record observations and decisions made by the team, photograph and record disaster site damage, and investigate where damage exists; Able to analyze the significance of affected infrastructure, estimate the extent of damages, and establish initial priorities for recovery		
Crew Availability		Incident Specific and Site Specific	Incident Specific and Site Specific	Incident Specific and Site Specific		

RESOURCE: DISASTER ASSESSMENT TEAM						
CATEGORY:	Public Works and Engineering (ESF #3)			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
COMMENTS:	There is only one type of Disaster Assessment Team because it is a specialty and based on level of devastation; however, the team possesses different personnel types/roles. The team members should be equipped with their own laptops, cell phones, and vehicles, and should be able to stay based on severity of incident (i.e., "Site-Specific" and "Incident-Specific"). Team size, expertise, and functional requirements will be determined at the disaster location.					

RESOURCE: DISASTER RECOVERY TEAM						
CATEGORY:	Public Works and Engineering (ESF #3)			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Team Personnel		Recovery Director	Recovery Secretary	Conservator	Recovery Team Leader	
Description		Organizes and manages the recovery process; Sets priorities based on information received from the Assessment Director, and assigns recovery teams, reports on progress, actions taken, problems encountered, and future risks; In many cases, the Assessment Director and Recovery Director may be the same person	Keeps a record of all purchases and orders placed, assists in coordinating requests for materials, information, and provides other assistance; This position will require immediate access to a telephone	Works with the Recovery Director to advise on recovery priorities concerning collections and materials, and recommends appropriate techniques and procedures; Assists in choosing and locating supplies, equipment, and services necessary for recovery; In many cases, the Conservator and Recovery Director may be the same person	Appoints team members, instructs the team on what they will be doing and how they will do it; Monitors the recovery process, and updates the Recovery Director	
Training or Requirements		Must be multidisciplinary and familiar with health personnel, engineering specialists, logisticians, environmental experts, and communications specialists; Must also be able to record observations and decisions made by the team, photograph and record disaster site damage, and investigate where damage exists; Able to analyze the significance of affected infrastructure, estimate the extent of damages, and establish initial priorities for recovery	Must be multidisciplinary and familiar with health personnel, engineering specialists, logisticians, environmental experts, and communications specialists; Must also be able to record observations and decisions made by the team, photograph and record disaster site damage, and investigate where damage exists; Able to analyze the significance of affected infrastructure, estimate the extent of damages, and establish initial priorities for recovery	Must be multidisciplinary and familiar with health personnel, engineering specialists, logisticians, environmental experts, and communications specialists; Must also be able to record observations and decisions made by the team, photograph and record disaster site damage, and investigate where damage exists; Able to analyze the significance of affected infrastructure, estimate the extent of damages, and establish initial priorities for recovery	Must be multidisciplinary and familiar with health personnel, engineering specialists, logisticians, environmental experts, and communications specialists; Must also be able to record observations and decisions made by the team, photograph and record disaster site damage, and investigate where damage exists; Able to analyze the significance of affected infrastructure, estimate the extent of damages, and establish initial priorities for recovery	
Crew Availability		Incident Specific and Site Specific	Incident Specific and Site Specific	Incident Specific and Site Specific	Incident Specific and Site Specific	
COMMENTS:	There is only one type of Disaster Recovery Team because it is a specialty and based on level of devastation; however, the team possesses different personnel types/roles. The team members should be equipped with their own laptops, cell phones, and vehicles, and should be able to stay based on severity of incident (i.e., "Site-Specific" and "Incident-Specific"). Team size, expertise, and functional requirements will be determined at the disaster location.					

RESOURCE: DUMP TRAILER (ONE TYPE/EXAMPLE ONLY)						
CATEGORY:	Public Works and Engineering (ESF #3)			KIND:	Equipment	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Example		DYNAHAULER/DT Dump Trailer				
Length	ft	24-40				
Side Height	ft	54-72				
Overall Height Variable (max)	ft/in	13'6"				
Gate Height	ft	54-72				
Tire to End of Floor	in	4				
King Pin to Front of Trailer	in	18+				
Center of Hinge Pin to End of Floor	in	6				
Side Panels	in	3/16				
Side Panels PSI (min yield)	lbs	175,000				
Bulkhead	in	3/16				
Bulkhead PSI (min yield)	lbs	175,000				
Dog Box	in	3/16				
Dog Box PSI (min yield)	lbs	175,000				
Floor	in	5/16				
Floor PSI (min yield)	lbs	175,000				
Top Rail	in x in	4 x 4				
Vertical Side Posts	in	on 24 centers				
Rear Posts	in x in	4 x 4				
Understructure I-Beam Crossmembers	lbs/ft on in	7.7 on 12 centers				
Understructure Longitudinals	in x in x in	6 x 6 x 3/8				

RESOURCE: DUMP TRAILER (ONE TYPE/EXAMPLE ONLY)						
CATEGORY:	Public Works and Engineering (ESF #3)			**KIND:**	Equipment	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Tailgate	in	1/4				
Tailgate PSI (min yield)	lbs	175,000				
Dana' D22	lbs/in round	25,000/5				
Brakes (with ABS 4S2M)	in x in	16 x 7				
Frame Depth	in	16				
Frame Wide Flange Beam	lbs/ft	31				
Suspension	lbs	60,000				
Landing Gear	in	7/8				
King Pin Plate	in	3/8				
Wheels		24.5 x 8.25				
Tires		11R24.5, 14 ply				
COMMENTS:	There will be one type of dump trailer. It will have generally the same configuration but will be capable of hauling more or fewer materials because of varying length and depth. DYNAHAULER/DT dump trailer is used only as an example. 					

RESOURCE: DUMP TRUCK-OFF ROAD						
CATEGORY:	Public Works and Engineering (ESF #3)			KIND:	Equipment	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Example		(Caterpillar Off-Highway) 769D Caterpillar 3408E engine	(Caterpillar Quarry) 771D Caterpillar 3408E engine			
Gross Power	kw/hp	386/518	386/518			
Flywheel Power	kw/hp	363/487	363/487			
Net Power	kw/hp	363/486	363/487			
Maximum Torque	N/m/1,618 lb ft	2,194	2m186			
Gross Machine Weight	kg/lbs	71,400/157,000	75,700/166,500			
Operating (Empty) Weight	kg/lbs	11,100/24,471.28				
Chassis Weight	kg/lbs		23,000/50,600			
Body Weight	kg/lbs		10,350/23,000			
SAE Capacity	m^3/yd^3	17/22.24 to 24.2/31.7	27.5/36			
Payload Capacity	tonnes/tons	36.4/40 to 36.58/40	41/45			
Transmission (Forward 1 to 6)	kph/mph	12.6/7.8 to 77.7/48.3	12.6/7.8 to 57.3/35.6			
Transmission (Reverse)	kph/mph	16.6/10.3	16.6/10.3			
Fuel Tank	L/gal	530/140	530/140			
Cooling System	L/gal	113.5/30	113.5/30			
Crankcase	L/gal	45/12	45/12			
Differentials and Final Drives	L/gal	83/22	83/22			
Steering Tank	L/gal	34/9	34/9			
Steering System with Tank	L/gal	56/15	56/15			
Brake Hoist with Tank	L/gal	277/73	277/73			
Torque Converter and Transmission with Sump	L/gal	72/19	72/19			
Inside Body Length	mm/in	5,275/207.68	5,275/207.68			

RESOURCE: DUMP TRUCK-OFF ROAD						
CATEGORY:	Public Works and Engineering (ESF #3)			**KIND:**	Equipment	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Overall Length	mm/in	8,039/316.5	8,039/316.5			
Wheelcase	mm/in	3,713/146.18	3,713/146.18			
Ground Clearance	mm/in	627/24.68	627/24.68			
Loading Height (Empty)	mm/in	3,143/123.74	3,143/123.74			
Operating Width	mm/in	5,069/199.57	5,069/199.57			
Centerline Front Tire Width	mm/in	3,102/122.13	3,102/122.13			
Front Canopy Height	mm/in	3,952/155.59	3,952/155.59			
Tires		Standard: 18.00-R33 (E4)	Standard: 18.00-R33 (E4)			
COMMENTS:	Caterpillar was used only for example purposes. 					

RESOURCE: DUMP TRUCK-ON ROAD						
CATEGORY:	Public Works and Engineering (ESF #3)			KIND:	Equipment	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Equipment		Triple Axle	Tandem Axle	Single Axle		
		DOT Class 8; GVW rating 80,000; Capacities 16-20 yards of aggregate material and demolition debris; Diesel powered with choice of Manual or Automatic Transmission; Air Brakes; Limited off-road service; Medium to long haul; Wide turning radius; CDL license required	DOT Class 8; GVW rating 60,000; Capacities 10-14 yards of aggregate material and demolition debris; Diesel powered with choice of Manual or Automatic Transmission; Air Brakes; Limited off-road service; Medium to long haul; Wide turning radius; CDL license required	DOT Class 7; GVW rating 32,000; Capacities 5-8 yards of aggregate material and demolition debris; Diesel or gas powered with choice of Manual or Automatic Transmission; Air or Hydraulic Brakes; Limited off-road service; Short to medium haul; Short turning radius; CDL license required		
COMMENTS:						

RESOURCE: ELECTRICAL POWER RESTORATION TEAM (EXAMPLE)						
CATEGORY:	Public Works and Engineering (ESF #3)			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Personnel		• 5 overhead (2 person) crews with material handlers • 1 overhead (2 person) crew • 2 designers • 1 team leader • 1 safety specialist • Fleet services support				
Equipment		• Digger derrick/pole trailer • Auxiliary bucket (material handler or 36' bucket)				
COMMENTS:	Electrical Power Restoration Teams coordinate and support resources of energy producers to quickly restore electrical power to afflicted areas. Members should possess the experience and financial capabilities to support equipment and personnel, and to maintain operations for an indefinite period of time. Teams are "Site-Specific" and dependent on personnel and equipment deployment. The above type is only one example of said resource.					

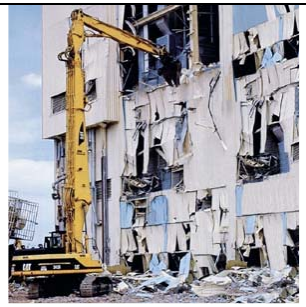
RESOURCE: ENGINEERING SERVICES						
CATEGORY:	Public Works and Engineering (ESF #3)			**KIND:**	Services	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Damage Assessment Capability		Ability to determine the safety of buildings for occupancy purposes per the Applied Technology Council ATC-20 criteria; Ability to evaluate buildings using the ATC-20 Rapid Evaluation Safety Assessment Form; Ability to evaluate buildings using the ATC-20 Detailed Evaluation Safety Assessment Form; Ability to support the need for an owner-provided Engineering Evaluation; Ability to evaluate safety of transportation structures per Federal Highway Administration Damage Assessment procedures and forms; Ability to evaluate damage for Stafford Act cost recovery purposes	Damage Assessment Capability			
Support		Ability to support USAR teams, debris management, HazMat evaluation, traffic management, utility restoration, and water and wastewater quality evaluations	Support			
Training		Knowledge of the ATC-20 criteria, Stafford Act cost recovery procedures, and Federal Highway Damage Assessment procedures; Extensive backgrounds in chemical, civil, electrical, and mechanical engineering, as appropriate	Training			
COMMENTS:	Engineering services encompass small firms to large national firms, and private to government-managed offices. Personnel must be certified and capable of handling assigned tasks, proven successes, and licensed, must have worked with public sector, and must be familiar with the Stafford Act, the Federal Highway Administration, and other Federal, State, Territorial, Tribal, and local agencies (and familiar with their requirements) for recording purposes. Engineering Services is one type based on the need to create the necessary engineering services based on "Incident-Specifics." The makeup of the engineering services will be based on the discipline specialization of the disaster.					

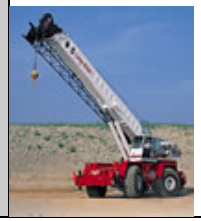
RESOURCE: FLAT BED TRAILER TRUCK (ONE TYPE/EXAMPLE ONLY)						
CATEGORY:	Public Works and Engineering (ESF #3)			KIND:	Equipment	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Equipment		Example Only				
Trailer Length	ft	18				
Bed	in	96				
Slope	ft	2				
Axles	lbs	6,000				
GVWR		12,000				
Ramp with Adjustable Height Pintle	in	60				
Ground Clearance	in	56				
Weight	tons	6 to 25				
Transport	tons	25 to 100				
Air Operated Breaks	in x in	16.5 x 7				
Wide Spread	in	122				
Marker Lights Per Side		5				
Stop, Tail, and Turn Lights Per Side/Rear		3				
COMMENTS:	There is one type because of the generality of the flat bed trailer; however, the capacity and hauling function of the trailer will vary with differing length and configurations. The above is only an example.					

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	XQ2000 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)	XQ1500 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)	XQ600 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)	XQ400 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)	XQ125 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 (LARGE MASS EXCAVATION 13 CY TO 3 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	5130B ME 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	385B–L 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)	375–L, 365B—L Series II 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-11.11ft); 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.					
						
	5130B	*385B & L*	*375 & L*	*365B L Series II*		

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	345B L Series II 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)	330C-325C L 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)	322C L-320C L **Note 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)	321B L-320C L Utility Models **Note 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 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	75-70 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	65-60 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	40-35 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: TRACK DOZER						
CATEGORY:	Public Works and Engineering (ESF #3)			KIND:	Equipment	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Example		D10R – Cat 3412E Turbo Charged Diesel	D6N – Cat 3126B Diesel	D3G – Cat 3046 Diesel		D10R WHA (Waste Handling) – Cat 3412E Turbo Charged Diesel
Gross Power	RPM	1,900	2,100	2,400		1,900
Gross Power	kw/hp	457/613	127/170	57/77		457/613
Operating Weight	lbs	144,191	34,209	16,193		144,986
Blade Capacity	yd^3	24.2	5.6	1.88		63.9
Digging Depth	in	26.5	20.5	21.8		26.5
Height	ft/in	6'11"	4'1"	3'.8"		10'5"
Ground Clearance	ft/in	4'11"	3'2.7"			4'10"
Total Tilt	ft/in	3'3"	2'2.2"	1'2.5"		3'6.3"
Width Over End Bits	ft/in	15'11"	10'6"	8'.9"		17'3"
Blade Lift Height	in			27.1		
Digging Depth	in			21.8		
Multishanks Arrangements		1-3	3			1 to 3
Ground Clearance Under Tip	in	35	19.9	16.2		35"
Machine Ground Clearance	in			14.7		
Max Penetration	in		14.2			3'1"
Max Reach at Ground Line	in		29.1	29.1"		
Width	ft/in	9'7"	7'2.7"	8'.9"		9'7"
Winch-Drum Capacity	ft	226	371	371		226
Fuel Capacity	gal	293	79	43.6		293

RESOURCE: TRACK DOZER						
CATEGORY:	Public Works and Engineering (ESF #3)			**KIND:**	Equipment	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Max Line Pull Bare Drum	lbs			40,000		
Full Drum	lbs			25,000		
COMMENTS:	Caterpillar is used as an example only. The major difference for D10R WHA (Waste Handling) – Cat 3412E Turbo Charged Diesel is that it contains a larger blade and protection guards to prevent landfill type debris from tangling its drives.					

General Example


D10R


D10R WH


D6N


D3G

RESOURCE: TRACTOR TRAILER (EXAMPLE ONLY)						
CATEGORY:	Public Works and Engineering (ESF #3)			**KIND:**	Equipment	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Example		TE70FG-2 Folding Gooseneck Trailer	TE18AH (D9AH) General Duty Hydraulic Tail Trailer (with Fifth-Wheel Hookup)			
Capacity	lbs	70,000	18,000			
Overall Length	ft/in	40'-53'	34'11"			
Main Deck Length (Double Drop)	ft	17-28	8			
Hydraulic Deck Plate	in		18			
Arch Hitch Length	ft/in		7'9"			
Arch Hitch Height	in		32-40			
Main Deck Length (Single Drop)	ft	20-32				
Upper Deck Length	ft	8				
Rear Deck Length	ft/in	7'-10'				
Slope	degrees	60				
Width	ft/in	8'6"	8'			
Swing Clearance	in	84				
King Pin Setting	in	16				
Deck Height (Unloaded Single Drop)	in	39.5				
Deck Height (Loaded)	in		36			

RESOURCE: TRACTOR TRAILER (EXAMPLE ONLY)						
CATEGORY:	Public Works and Engineering (ESF #3)			**KIND:**	Equipment	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Ground Clearance (Single Drop)	in	19.5				
Platform	in	1.375	1.375			
Axles (2)	lbs	25,000	9,000			
Brakes (Air)	in x in	16.5 x 7	12.25 x 3.375			
Wheels (Disc-Pilot Mounted)		8.25 x 22.5				
Wheels (8-Hole)			6.75 x 16.5			
Tires (Low Profile)		255/70R x 22.5				
Tires (10-Ply)			8.75 x 16.5			
Suspension		Spring-type	18,000 lbs			
Jack (Crank Style with Pin Drop Base)	lbs		12,000			

RESOURCE: TRACTOR TRAILER (EXAMPLE ONLY)						
CATEGORY:	Public Works and Engineering (ESF #3)			**KIND:**	Equipment	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
COMMENTS:	Rail-EZE Trailers are used only as an example.					

TE70FG-2 Folding Gooseneck Trailer

TE18AH (D9AH) General Duty Hydraulic Tail Trailer (with Fifth-Wheel Hookup)

RESOURCE: TUB GRINDER						
CATEGORY:	Public Works and Engineering (ESF #3)			**KIND:**	Equipment	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Output Capability	cy/hr	> 400	300-400	100-300	Up to 100	
Tub Size (opening)	ft/in	14'-15'	12'-13'	8'4"-11'	Up to 8'4"	
Towing Arrangement (i.e., Tow-Behind and Fifth-Wheel Trailer Hookup)		Fifth-wheel	Fifth-wheel	Fifth-wheel	Pintle hitch	
Horsepower	hp	>1000	630-1000	200-575	Up to 200	
Example		Mobark 1500	Morbark 1300/1200XL	Morbark 1100/1000	Mobark 950	
COMMENTS:	Morbark is used as an example only. 					

RESOURCE: TUG BOAT						
CATEGORY:	Public Works and Engineering (ESF #3)			**KIND:**	Equipment	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Vessel Personnel		Tug Boat Captain	Inland River Pilot	Docking Pilot		
Description		Term used on the inland waterways to describe a vessel operator who holds a Master license	Term used on the inland waterways that equates to "Mate" in the coastal sector; A pilot is the second operator onboard an inland towing vessel; The pilot has similar navigation duties and credentials to the Captain/Master, although the Captain/Master has the ultimate authority onboard the vessel	A docking pilot is an individual with specific expertise in maneuvering large, deep sea vessels in confined spaces (e.g., alongside a pier); The docking pilot boards the ship, takes the conn, and brings the vessel into port; Most docking pilots are licensed by the Coast Guard (except in Maryland and New Jersey, where they are licensed by the State) and are employed by tug companies		
Training or Requirements		Requires a tug boat captain's licensure issued by the U.S. Coast Guard; Increasingly, 2-month schools are available for captain licensure	Requires licensure issued by the U.S. Coast Guard	Requires special licensure issued by the U.S. Coast Guard or New Jersey/ Maryland		
Crew Availability		Generally live on the boat during working times, as schedule depends on the tug boat companies (e.g., 4 days on, 4 days off)	Required by law and on an on-call basis	Specialty position on an on-call basis		

RESOURCE: TUG BOAT						
CATEGORY:	Public Works and Engineering (ESF #3)			**KIND:**	Equipment	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
COMMENTS:	Tug boats are typed as one resource as modifications and enhancements are based on boat-to-boat, location, and working task specialty bases. Tug boats and operators are subject to licensure and jurisdiction of the U.S. Coast Guard, and are required by law to make use of river pilots on inland waterways. The docking pilot specialist is becoming more used in current times. Horsepower will be the first determining factor in tug boat requisitioning, as tractor tugs are the preferred equipment type. Equipment is usually requisitioned from a U.S. Coast Guard or harbor-master matrix based on the closest and largest available tug boat. The matrix will assign the tug type, size, and how many units may be available to assist in the emergency situation. 					

RESOURCE: WATER PURIFICATION TEAM (USACE EMERGENCY WATER TEAMS)						
CATEGORY:	Public Works and Engineering (ESF #3)			KIND:	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Team Personnel		ESF Action Officer (AO)	Mission Manager	Mission Specialist	Logistics Manager	Contract Specialist
Description		Coordinates the mission requirements on all levels with FEMA, State, local, and other ESF elements to determine scope of mission; Is the USACE liaison with FEMA, DFO, and ERRO, and provides tasking to the ERRO/District; Works with Mission Manager to ensure actions are accomplished	Serves as the Project Manager for mission execution and is responsible for team coordination and timely procurement and delivery of water to all staging areas and distribution sites; Prepares scopes of work, cost estimates, schedule and tracking of water deliveries, and upward reporting	Works with the ERRO and assists the Mission Manager, while serving as the MM backup (same relative duties)	Works at the staging operations area and provides support for the MM; Responsible for receiving, inventory management, and distribution of emergency water in coordination with the MM; Ensures the quality control and accounting necessary for upward reporting and contractor payments; Provides status reports of deliveries and inventories	Works for the Chief of the Contracting Division of the supported District and ERRO, and contract support to the MM; Responsible for all contracting for the procurement, transportation, storage, security, testing, and distribution of water during emergency operations; Provides copies of all ACI Contract actions and delivery orders
Training or Requirements		Must have full knowledge of the Federal Response Plan, FEMA operations, PL 84-99 authorities, and operational dynamics of a DFO	Must be familiar with the procurement process and able to communicate mission requirements to contracting, resource management, emergency management, and other impacted districts; Trained and fully knowledgeable of the current ACI Water Contract, and familiar with the ENGLink Interactive and the preparation of SITREPS, CEFMS, and the PR&C process (requires an alternate to be designated)	Must be familiar with the procurement process and able to communicate mission requirements to contracting, resource management, emergency management, and other impacted districts; Trained and fully knowledgeable of the current ACI Water Contract, and familiar with the ENGLink Interactive and the preparation of SITREPS, CEFMS, and the PR&C process (requires an alternate to be designated)	Must possess special training for receiving and accountability process; Must be able to effectively work with emergency managers to solicit support for Logistics PRT (requires an alternate person be designated)	Must be able to act as liaison between Water PRT and the Contracting Division of supported District, while scoping contract requirements for mission execution and procurement; Must be fully knowledgeable of the current ACI Water Contract, delivery orders, preparing sealed bids, negotiate actions, simplified acquisition procedures, and must be proficient in the Standard Procurement System, Procurement Desktop Defense, and CEFMS

RESOURCE: WATER PURIFICATION TEAM (USACE EMERGENCY WATER TEAMS)						
CATEGORY:	Public Works and Engineering (ESF #3)			KIND:	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Crew Availability		Deployed for 30-day rotations, with a 3- to 5-day transition period between consecutive missions; Average missions last 2-3 weeks	Deployed for 30-day rotations, with a 3- to 5-day transition period between consecutive missions; Average missions last 2-3 weeks	Deployed for 30-day rotations, with a 3- to 5-day transition period between consecutive missions; Average missions last 2-3 weeks (nightshift availability if required)	Deployed for 30-day rotations, with a 3- to 5-day transition period between consecutive missions; Average missions last 2-3 weeks; multiple deployments required (nightshift availability if required)	Deployed for 30-day rotations, with a 3- to 5-day transition period between consecutive missions; Average missions last 2-3 weeks
Water Sources		ACI Water Contract	Commercial Water Sources	Reverse Osmosis Water Purification Units (ROWPUs)		
Description		A service and supply contract which can be used to provide bottled and bulk water: Area of Coverage: Continental U.S. (CONUS) and Outside Continental U.S. (OCONUS) Time Requirement: Within 24 hours Bottle Size: 12 ounce to 1.5 liter Conversion Factor: 1 gallon = 3.79 liters Price: 0.38/liter for CONUS Bulk Water: Scope and cost to be negotiated based on water source and transportation method	Commercial water sources can be located by contacting the International Bottled Water Association	Able to purify 3,000 gallons of potable water an hour; Detachments are typically equipped with a 2-million-gallon storage capability to pump this water approximately 20 miles		

RESOURCE: WATER PURIFICATION TEAM (USACE EMERGENCY WATER TEAMS)						
CATEGORY:	Public Works and Engineering (ESF #3)			KIND:	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Water Distribution	Recommendation (Note: emergency water is for drinking purposes only, and initial distributions should be based on 1 gallon/ person per day and limited to no more than 2 days supply per visit to ensure all residents have minimum amount for survival)	1 gallon/person per day				
COMMENTS:	USACE – Emergency Water Team Staffing is designed to provide the minimum number of personnel to effectively manage and support the execution of the water mission in concert with the responding Emergency Response and Recovery Office command and control structure. The team configuration is designed to staff the three operational functions required to execute a major Federal Response Plan mission: Emergency Support Function #3 (Public Works and Engineering) element at the Disaster Field Office, Emergency Response and Recovery Office, and the Staging Operations area(s). The preferred method of providing water to disaster victims is by bottled water because the containers are usually stronger and easier to carry, and reduce opportunity for disease transmission as the water is consumed in a shorter period of time.					

RESOURCE: WATER TRUCK (EXAMPLE ONLY)						
CATEGORY:	Public Works and Engineering (ESF #3)			**KIND:**	Equipment	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Example		Tandem Axle				
		DOT Class 8; GVW rating 60,000; Capacity 4,000 gallons of potable water; Gas or diesel powered with choice of Manual or Automatic Transmission; Air Brakes; Limited off-road service; Medium to long haul; Wide turning radius; CDL license required				
COMMENTS:	   					

RESOURCE: WHEEL DOZER						
CATEGORY:	Public Works and Engineering (ESF #3)			KIND:	Equipment	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Example		854G – Cat 3508B EUI Diesel All-Wheel-Drive	824G – Cat 3406C Turbo Charged Diesel All-Wheel-Drive			
Gross Power	RPM		2,100			
Gross Power	kw/hp	656/880	254/340			
Weight	lbs	212,230	58,697			
Blade Height	ft/in	6'11"	4'10"			
Width	ft/in	21'8"				
Moldboard Length	ft/in		13'9"			
Maximum Depth of Cut	ft/in	1'4"	1'5"			
Maximum Lift Above Ground	ft/in	3'6"	3'6"			
Maximum Clearance Under Skid Plate	ft/in	5'6"	3'2"			
Total Tilt	ft/in	3'10"	3'11"			
Width Over End Bits	ft/in	20'7"	14'9"			
Fuel Capacity	gal	413	166			

RESOURCE: WHEEL DOZER						
CATEGORY:	Public Works and Engineering (ESF #3)			**KIND:**	Equipment	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
COMMENTS:	Caterpillar is used as an example only.					

General Example

854G

824G

RESOURCE: WHEEL LOADERS (LARGE 41 CY TO 8 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	994D 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)	992G 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)	990 Series II 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)	988G 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 that 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.					
						
	994D	992G	990 Series	988G		

RESOURCE: WHEEL LOADERS (MEDIUM 7 CY 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	980G, 972G 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 (7.5-5 yd3); Fuel Tank (124-100 gal)	966G Series II 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)	962G Series II, IT62G, 950G Series II 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)	938G, IT38G 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

962G

950G

938G

IT62G

IT38G

RESOURCE: WHEEL LOADERS (SMALL 7 CY TO 2 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	928G, IT28G 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)	924G, 924Gz 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)	IT14G, 914G 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 Resources

RESOURCE: AIR SEARCH TEAM (FIXED-WING)						
Search & Rescue (ESF #9)			KIND:	Aircraft		
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Vehicle	Fixed-Wing Aircraft	IFR Capable Fixed-Wing Observation Aircraft	IFR Capable Fixed-Wing Observation Aircraft	Fixed-Wing Observation Aircraft	Fixed-Wing Observation Aircraft	
	Capacity	4-8 passengers with cargo not to exceed design specification of aircraft	2-4 passengers with cargo not to exceed design specification of aircraft	2-4 passengers with cargo not to exceed design specification of aircraft	2-4 passenger with cargo not to exceed design specification of aircraft	
Equipment	Flight Suit	Appropriate level of PPE	Appropriate level of PPE	Appropriate level of PPE	Appropriate level of PPE	
	Communications	Standard FAA FM Radio; VHF Radios; Satellite Phone	Standard FAA FM Radio; VHF Radios	Standard FAA FM Radio; VHF Radios	Standard FAA FM Radio	
	Video/ Electronic	Electronic Direction Finding; Capable; Capable of Airborne Video Transmission	Electronic Direction Finding Capable; Capable of flying back video or still imagery	Electronic Direction Finding Capable	None	
Aircrews	Training & Ratings	Pilot – Commercial (instrument) or higher certificate and complete unit certification program Observer – Complete unit certification program	Pilot – Private Pilot (instrument) or higher certificate and complete unit certification program Observer – Complete unit certification program	Pilot – Private Pilot or higher certificate and complete unit certification program Observer – Complete unit certification program	Pilot – Private Pilot or higher certificate and complete unit certification program Observer – Complete unit certification program	
	Crew Availability	Aircrew(s) available for extended operations	Aircrew(s) available for 8 to 14 days of operations	Aircrew(s) available for 3 to 7 days of operations	Aircrew(s) available for at least 2 days of operations	
Management Support	Overhead Incident Management	Full incident command staff capable of managing all phases of air search operations	Incident staff capable of managing air operations branch	Incident staff capable of supporting independent flight release	Unit level flight release; No search management capabilities	
COMMENTS:	Aircrews can work a maximum of 12-hour shifts, depending on individual unit policies and procedures. Aircraft will be maintained in accordance with Federal Aviation Administration Regulations. Aircraft will be expected to operate out of established airfield with paved runways. Aircrews will indicate fueling and runway requirements for the aircraft provided. Crew availability does not require continuous availability of specific personnel, only that crews are available to those specifications.					

RESOURCE: AIRBORNE RECONNAISSANCE (FIXED-WING)						
CATEGORY:	Search & Rescue (ESF #9)			**KIND:**	Aircraft	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Vehicle	Fixed-Wing Aircraft	IFR Capable Fixed-Wing Observation Aircraft	IFR Capable Fixed-Wing Observation Aircraft	Fixed-Wing Observation Aircraft	Fixed-Wing Observation Aircraft	
	Capacity	4-8 passengers with cargo not to exceed design specification of aircraft	2-4 passengers with cargo not to exceed design specification of aircraft	2-4 passengers with cargo not to exceed design specification of aircraft	2-4 passengers with cargo not to exceed design specification of aircraft	
Equipment	Flight Suit	Appropriate level of PPE	Appropriate level of PPE	Appropriate level of PPE	Appropriate level of PPE	
	Communications	Standard FAA FM Radio; VHF Radios; Satellite Phone	Standard FAA FM Radio; VHF Radios	Standard FAA FM Radio; VHF Radios	Standard FAA FM Radio	
	Video/Electronic	Capable of flying back video or still imagery; Capable of High Resolution Airborne Video Transmission; Desired: FLIR or other infrared capabilities; Desired: Capable of supporting Hyperspectral Imaging Requests	Capable of flying back video or still imagery; Capable of Low resolution Airborne Video Transmission; Desired: FLIR or other infrared capabilities	Capable of flying back video or still imagery	None	
Aircrews	Training & Ratings	Pilot – Commercial (instrument) or higher certificate and complete unit certification program Observer – Complete unit certification program	Pilot – Private Pilot (instrument) or higher certificate and complete unit certification program Observer – Complete unit certification program	Pilot – Private Pilot or higher certificate and complete unit certification program Observer – Complete unit certification program	Pilot – Private Pilot or higher certificate and complete unit certification program Observer – Complete unit certification program	
	Crew Availability	Aircrew(s) available for extended operations	Aircrew(s) available for 8 to 14 days of operations	Aircrew(s) available for 3 to 7 days of operations	Aircrew(s) available for at least 2 days of operations	
Management Support	Overhead Incident Management	Full Incident Command staff capable of managing all phases of air search operations	Incident staff capable of managing air operations branch	Incident staff capable of supporting independent flight release	Unit level flight release; no incident management capabilities	

RESOURCE: AIRBORNE RECONNAISSANCE (FIXED-WING)						
CATEGORY:	Search & Rescue (ESF #9)			**KIND:**	Aircraft	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
COMMENTS:	Aircrews can work a maximum of 12-hour shifts, depending on individual unit policies and procedures. Aircraft will be maintained in accordance with Federal Aviation Administration Regulations. Aircraft will be expected to operate out of established airfield with paved runways. Aircrews will indicate fueling and runway requirements for the aircraft provided. Crew availability does not require continuous availability of specific personnel, only that crews are available to those specifications.					

RESOURCE: CANINE SEARCH AND RESCUE TEAM – AVALANCHE SNOW AIR SCENT						
CATEGORY:	Search & Rescue (ESF #9)			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Dog Team: 1 Dog 1 Handler 1 Support Person	Search Capabilities	Capable of self-sustaining and searching for 24 hours in extreme weather and terrain conditions through avalanche debris fields	Capable of self-sustaining and searching for 24 hours in snow-covered environments in extreme weather conditions and moderate terrain			N/A
Knowledge and Equipment for Avalanche/Snow Search Dog Teams		Personal snow travel equipment and gear to self-sustain for 24 hours; Equipped to include cross-country skis or snow shoes, poles, probe poles, snow shovel, and avalanche beacon; Training, including avalanche safety and winter survival, including building snow cave, First Aid for both human and dog, personal/ dog safety, and radio communications	Personal snow travel equipment and gear to self-sustain for 24 hours; Equipped to include cross-country skis or snow shoes, poles, probe poles, snow shovel, and avalanche beacon; Training, including avalanche safety and winter survival, including building snow cave, First Aid for both human and dog, personal/ dog safety, and radio communications			N/A
COMMENTS:	Note: Many of these resources are capable of searching in a disaster environment, such as a wilderness team in outlying areas of a tornado zone, etc. It is critical that canine management personnel, knowledgeable in multiuse of canine resources, are available to Incident Command. This will not necessarily be reflected in this document.					

RESOURCE: CANINE SEARCH AND RESCUE TEAM – DISASTER RESPONSE						
CATEGORY:	Search & Rescue (ESF #9)			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Dog Team: 1 Dog 1 Handler 1 Support Person	Search Capabilities	A disaster search canine that has successfully completed the DHS/FEMA Disaster Search Canine Readiness Evaluation for both Type II and Capable of national and international responses	A disaster search canine that has successfully completed the DHS/FEMA Disaster Search Canine Readiness Evaluation for Type II only; Capable of national and international responses	A disaster search canine that has successfully completed Disaster Search Canine Readiness Evaluation through an organized disaster task force – non-FEMA; Capable of national and international responses	A search canine with minimal exposure to disaster search; Capable of local/regional response only; No task force participation	
Knowledge and Equipment for Search Dog Teams		All requirements as set forth by DHS/FEMA National US&R Response System	All requirements as set forth by DHS/FEMA National US&R Response System	All requirements as set forth by organized task force for availability for national/international response	Agility; Obedience; First Aid-Human/Dog; HazMat; Disaster; Environment Exposure minimal; Initial responder readiness through local agency	
COMMENTS:	Please note that many of these resources are capable of searching in a disaster environment, such as a wilderness team in outlying areas of a tornado zone, etc. It is critical that canine management personnel, knowledgeable in multiuse of canine resources, are available to Incident Command. This will not necessarily be reflected in this document.					

RESOURCE: CANINE SEARCH AND RESCUE TEAM – LAND CADAVER AIR SCENT						
CATEGORY:	Search & Rescue, Other			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Dog Team: 1 Dog 1 Handler 1 Support Person	Search Capabilities	Capable of locating less than 15 grams of human remains during disaster ops; Capable of self-sustaining for 24 hours	Capable of locating deceased persons (greater than 15 grams) in disaster ops; Capable of self-sustaining for 24 hours	Capable of locating less than 15 grams of human remains buried, hanging, ground level, or in vehicles, nondisaster	Capable of locating less than 15 grams of human remains buried, hanging, ground level, nondisaster	Capable of locating deceased persons (greater than 15 grams) buried, hanging, ground level, nondisaster
Knowledge and Equipment for Land Cadaver Search Dog Teams		Training and equipment for biohazard environment, including OSHA guidelines, scene preservation, documentation, collection, chain of custody, and scene security; First Aid for both human and dog, personal/ dog safety, and radio communications; Disaster ops training and capabilities	Training and equipment for biohazard environment, including OSHA guidelines, scene preservation, documentation, collection, chain of custody, and scene security; First Aid for both human and dog, personal/ dog safety, and radio communications; Disaster ops training and capabilities	Training and equipment for biohazard environment, including OSHA guidelines, scene preservation, documentation, collection, chain of custody, and scene security; First Aid for both human and dog, personal/ dog safety, and radio communications	Training and equipment for biohazard environment, including OSHA guidelines, scene preservation, documentation, collection, chain of custody, and scene security; First Aid for both human and dog, personal/ dog safety, and radio communications	Training and equipment for biohazard environment, including OSHA guidelines, scene preservation, documentation, collection, chain of custody, and scene security; First Aid for both human and dog, personal/ dog safety, and radio communications
COMMENTS:						

RESOURCE: CANINE SEARCH AND RESCUE TEAM – WATER AIR SCENT						
CATEGORY:	Search & Rescue (ESF #9)			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Dog Team: 1 Dog 1 Handler 1 Support Person	Search Capabilities	Capable of working swiftwater/stillwater environments; Trained and equipped to perform search ops on foot and from any type of watercraft	Capable of working stillwater environments; Trained and equipped to perform search ops on foot and from any type of watercraft	Capable of working swiftwater and stillwater ops from shore only	Capable of working swiftwater ops from shore only	Capable of working stillwater ops from shore only
		Type VI Capable of working salt-water and very large fresh water environments from both boat and shore	Type VII Capable of working salt-water and very large fresh water environments from shore only			
Knowledge and Equipment for Water Search Dog Teams		Type I, III, IV, VI, VII Water Helmet; Class V Water Vest; Throw Rope; Swiftwater lifesaving skills; Knowledge of water rescue and boat operations; First Aid for both human and dog; Personal/dog safety; Radio communications	Type II, V Water Helmet; Class III-V Water Vest; Throw Rope, Stillwater lifesaving skills; Knowledge of water rescue operations in stillwater environment; First Aid for both human and dog; Personal/dog safety, Radio communications equipment			
COMMENTS:	Note: Many of these resources are capable of searching in a disaster environment, such as a wilderness team in outlying areas of a tornado zone, etc. It is critical that canine management personnel, knowledgeable in multiuse of canine resources, are available to Incident Command. This will not necessarily be reflected in this document.					

RESOURCE: CANINE SEARCH AND RESCUE TEAM – WILDERNESS AIR SCENT						
CATEGORY:	Search & Rescue (ESF #9)			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Single Resource	Search Capabilities	Capable of search and self-sustaining for 72 hours in all weather and low angle wilderness terrain or larger areas of 60+ acres	Capable of searching and self-sustaining for 48 hours in all weather and low angle wilderness terrain or larger areas of 60+ acres	Capable of searching high probability local wilderness terrain for short durations (24 hours or less) or small areas 40-60 acres	Capable of searching high probability local wilderness terrain for short durations (12 hours or less) or small areas 40-60 acres	Human discriminating (scent source necessary)
Single Resource	Search Capabilities	Capable of searching and self-sustaining for 72 hours in all weather and low angle wilderness terrain or larger areas of 120+ acres	Capable of searching and self-sustaining for 48 hours in all weather and low angle wilderness terrain or larger areas of 120+ acres	Capable of searching high probability local wilderness terrain for short durations (24 hours or less) or small areas of 60-120 acres	Capable of searching high probability local wilderness terrain for short durations (12 hours or less) or small areas of 40-60 acres	Nondiscriminating (locate all human indication in area)
COMMENTS:	There are significant differences in the training required for urban versus wilderness environments, both in air scent/area and trailing/tracking. Because of the vast differences, often a resource highly skilled in one environment may not function as well in the other environment because of a lack of continuous training in the environment. Teams may be cross-trained in both environments, depending on the team training criteria. Note: Many of these resources are capable of searching in a disaster environment, such as a wilderness team in outlying areas of a tornado zone, etc. It is critical that canine management personnel, knowledgeable in multiuse of canine resources, are available to Incident Command. This will not necessarily be reflected in this document.					

Resource: Canine Search and Rescue Team – Wilderness Tracking/Trailing						
Category:	Law Enforcement/Security, Search & Rescue (ESF #9)			**Kind:**	Team	
Minimum Capabilities:		Type I	Type II	Type III	Type IV	Other
Component	Metric					
Dog Team: 1 Dog 1 Handler 1 Support Person	Search Capabilities	Capable of trailing in wilderness terrain; Aged 24+ hours; 1 mile or longer; Heavy contamination	Capable of trailing in wilderness terrain; Aged 4-12 hours; 1 mile or longer; Heavy contamination	Capable of trailing in wilderness terrain, Aged 1.5-4 hours; .5-1 mile; Heavy contamination	Capable of trailing in wilderness terrain; Aged 0-1.5 hours; .25-.5 mile; Heavy contamination	Discriminating (scent source must be available)
Knowledge and Equipment for Search Dog Teams		Personally equipped for 24 hours for dog/handler; Wilderness survival skills; Capable of establishing and maintaining direction of travel; First Aid for both human and dog; Personal/ dog safety; Radio communications; Skill in collection of scent articles	Personally equipped for 24 hours for dog/handler; Wilderness survival skills; Capable of establishing and maintaining direction of travel; First Aid for both human and dog; Personal/ dog safety; Radio communications; Skill in collection of scent articles	Personally equipped for 24 hours for dog/handler; Wilderness survival skills; Capable of establishing and maintaining direction of travel; First Aid for both human and dog; Personal/ dog safety; Radio communications; Skill in collection of scent articles	Personally equipped for 24 hours for dog/handler; Wilderness survival skills; Capable of establishing and maintaining direction of travel; First Aid for both human and dog; Personal/ dog safety; Radio communications; Skill in collection of scent articles	N/A
Comments:	As these dogs use scent articles, they are commonly referred to as trailing dogs. However, occasionally, a unit may refer to such dogs as tracking dogs. They do have the capability of human discrimination between sources with the aid of a provided scent source. Care should be taken to determine if a tracking dog requires the use of an article or not. Note: Many of these resources are capable of searching in a disaster environment, such as a wilderness team in outlying areas of a tornado zone, etc. It is critical that canine management personnel, knowledgeable in multiuse of canine resources, are available to Incident Command. This will not necessarily be reflected in this document.					

RESOURCE: CAVE 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; 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	
Personnel Training	Cave Training	Same as Type II, plus: Proficiency in cave and surface search; Proficiency in high- and low-angle technical rescues and evacuations from dry, wet, and multidrop caves	Same as Type III, plus: Proficiency in vertical environments greater than 100 feet in depth; Ability to safely traverse multidrop caves; Ability to rapidly ascend a rope next to a litter during a litter raise	Same as Type IV, plus: Ability to carry additional rescue-related equipment to and through the cave	Basic understanding of the cave environment, including regional differences in ambient cave temperature, normal hazards such as risk of flooding, hypothermia, and potential changes in cave environment because of seasonal variations and outside weather; Proficiency in crawling, climbing and moving over uneven surfaces and breakdown areas covered in mud, sand, or water; Familiarity with chimneying, bridging, and other basic climbing techniques used in moving through caves; Ability to move comfortably and efficiently in small spaces; Ability to rappel and ascend 66' of static line using standard single rope techniques; Proficiency in changing over from ascent to rappel and rappel to ascent; Ability to carry personal equipment to and through the cave; Ability to identify fragile cave environments and take measures to protect them; Ability to maintain primary light sources	
	Navigation Training	Same as Type II	Same as Type III, plus: Proficiency in back-country navigation and route finding with a map and compass, use of GPS and UTM	Same as Type IV, plus: Knowledge of common symbols present on cave maps; Proficiency in reading cave maps; Ability to use	Familiar with cave maps and topographic maps	

RESOURCE: CAVE SEARCH AND RESCUE TEAM						
CATEGORY:	Search & Rescue (ESF #9)			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
			coordinate system	topographic maps to locate caves		
	Basic Training	Same as Type II, plus; Ability to plan, organize, and direct cave rescue and search missions using ICS; Experience with ICS Unified Command	Same as Type III, plus: Ability to direct activities according to ICS; Technical proficiency in single person rope rescue techniques; Proficiency in crack and crevice rescue; Proficiency in creating load distributing and artificial anchors in-cave	Same as Type IV, plus: Capable of operating within ICS; Proficiency in edge tending for the vertical environment; Proficiency in preparing and rigging basket and flexible litters for haul and lower operations; Proficiency in patient packaging for extrication; Familiarity with the basic techniques for crack and crevice rescue; Ability to improvise patient packaging	Familiarity with basic cave search techniques; Familiarity with the NIIMS ICS of incident management; Proficiency in establishing simple anchors and fixing lines for personal rappels and ascents; Awareness of the psychological and physical patient considerations in rescue extrications of long duration; Proficiency in basic in-cave litter movement techniques; Ability to assist in patient packaging for extrication; Specialized training required to safely and appropriately use communication and technical rescue equipment	
	Technical Training	Same as Type II, plus: Proficiency in the use, placement, and analysis of mechanical anchors and anchor systems; Proficiency in use of highlines and guiding lines; Proficiency in the organization and direction of technical cave rescue searches and rescues; <u>For regions/caves with swiftwater</u>: Proficiency in working in and around moving water underground; Swiftwater/flatwater technician	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 at estimating component and system load ratios and assessing safety factors; Ability to rig and operate simple and compound 4:1, 6:1, and 9:1 mechanical advantage systems; Proficiency in rigging and use of counterbalance systems; Proficiency in technical litter evacuations and transport	Same as Type IV, plus: Proficiency in tying common knots and knowledge of their applications and strength efficiencies; Proficiency in establishing simple anchors for haul and lower systems; Ability to establish 2:1 and 3:1 haul systems, fixed brake lowering systems, and belay systems; Familiarity with basic search techniques and nomenclature; Ability to maintain scene integrity in case of crime; Proficiency in establishing and operating in-cave wired	Ability to serve as a member of a haul or lower team and familiarity of appropriate commands; Ability to serve as a member of an evacuation team; Other skills or abilities as identified by the team's operations leader	

RESOURCE: CAVE SEARCH AND RESCUE TEAM						
CATEGORY:	Search & Rescue (ESF #9)			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
		For regions/caves with bad air: Proficiency in the use of a 3-gas monitor (oxygen, hydrogen sulfide and carbon monoxide) and ability to understand its output	including litter raises and lowers on breakdown, in free-fall and other vertical environments, in narrow or waterfall situations, and in multidrop caves	communications systems; Ability to operate a handheld radio; Proficiency in choosing appropriate in-cave litter movement techniques		
	Survival Training	Same as Type III	Same as Type III	Same as Type IV, plus: Experience in wet and vertical caves	Operational proficiency in the cave environment for the region	
Medical Specialist	Training	National Standard EMT-B, with BTLS or PHTLS	National Standard EMT-B, or advanced wilderness first responder; BTLS	Same as Type IV	Basic First Aid/CPR	
Team	Sustained Operations	48 hours or more	36 hours	24 hours	24 hours	
Team	Search and Rescue Capabilities	Same as Type II with experience complex rescue environments as appropriate for region of activity	Same as Type III with experience in wet and vertical caves and crack/crevice situations	Same as Type IV	Trained cave rescue and cave search personnel with experience in relatively dry caves with moderate vertical situations	
Team Equipment	Supplies and Materials	Same as Type III, plus: Ability to support more than 2 patients at 2 separate incidents; Sufficient rope and hardware to support complex rigging, multiple drops, highline, etc. In regions/caves with swiftwater: Appropriate floatation equipment for patient(s) and other necessary swiftwater-specific rigging equipment In regions/caves with bad air: 3-gas monitors	Same as Type III, plus: Ability to respond to two in-cave patients simultaneously	Same as Type IV	Harnesses, Helmets; Basic hardware (including: 7/16 or .5" static kernmantle rope, webbing, pulleys, carabiners, lowering devices, etc.); Field telephones and wire; Radio communications on a common frequency; Patient packaging materials; Litters appropriate for situation; Entrance control materials; Edge protection	
Personal Equipment	Supplies and materials	Same as Type II, plus: Food for 48 hours	Same as Type III, plus: Food for 36 hours	Same as Type IV, plus: Wetsuit where appropriate	Personal protective equipment including: Footwear, underwear, and	

RESOURCE: CAVE SEARCH AND RESCUE TEAM						
CATEGORY:	Search & Rescue (ESF #9)			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
		In regions/caves with swiftwater: Appropriate swiftwater gear, PFD, personal throwbags, and waterproof light sources			outerwear suited to the particular cave environment; Sewn seat harness; Personal descending and ascending equipment with 2 points of attachment above the waist; Helmet (with 3- or 4-point chinstrap suspension system); Gloves with leather palms; 3 independent sources of light, each capable of exiting the cave; 2 of which must be helmet-mountable; Batteries (carbide if appropriate); Quantity of water appropriate for the conditions; Food for 24 hours; Knife/multitool; Personal first aid kit; Waterproof pen/pencil and paper; Appropriate pack to carry personal gear; food for 24 hours	
Medical Equipment	Supplies and Materials	As appropriate for level of training, as applied in wilderness/cave environment and meeting local protocols and requirements	As appropriate for level of training, as applied in wilderness/cave environment and meeting local protocols and requirements	As appropriate for level of training, as applied in wilderness/cave environment and meeting local protocols and requirements	As appropriate for level of training, as applied in wilderness/cave environment and meeting local protocols and requirements	
COMMENTS:						

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 of 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); Handheld 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: MINE AND TUNNEL SEARCH AND RESCUE TEAM						
CATEGORY:	Search & Rescue (ESF #9)			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric	Inactive or Abandoned Mines or Tunnels	Active mines or tunnels under construction			
Team	Personnel	8 members (at least 5 qualified on breathing apparatus)	8 members (at least 5 qualified on breathing apparatus)			
Personnel	Training	Same as Type II, plus: Understanding forces involved in technical rope systems; Proficiency in the selection and set up of rescue anchors; Ability to construct and operate simple and compound mechanical advantage systems, belay systems and lowering systems; Proficiency in technical litter evacuations in a vertical environment	20 hour MSHA initial training on use of breathing apparatus; Refresher training sessions underground with breathing apparatus at least every 6 months; Use and care of auxiliary mine rescue equipment; Mine searching and mapping; Mine ventilation procedures and equipment; Mine firefighting; Any advanced mine rescue training and procedures, as described by MSHA; Basic First Aid/CPR			
Team	Equipment	Same as Type II	6 4-hour self-contained oxygen breathing apparatus and any necessary equipment for testing such breathing apparatus before putting it into service			
Team	Equipment	Same as Type II	1 extra, fully charged, oxygen bottle and 6 spare coolant canisters compatible with the breathing apparatus			
Team	Equipment	Same as Type II	1 oxygen pump or cascading system with portable supply of pressurized oxygen to compatible with the breathing apparatus			
Team	Equipment	Same as Type II	10 permissible cap lamps and charging rack			
Team	Equipment	Same as Type II	2 gas detectors capable of			

RESOURCE: MINE AND TUNNEL SEARCH AND RESCUE TEAM						
CATEGORY:	Search & Rescue (ESF #9)			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric	Inactive or Abandoned Mines or Tunnels	Active mines or tunnels under construction			
			reading oxygen levels, and any flammable or poisonous gases encountered or anticipated at the rescue location			
Team	Equipment	Same as Type II	1 portable mine rescue communications system at least 1,000 feet in length			
Team	Equipment	Same as Type II	Necessary spare parts and tools for repairing the breathing apparatus or communications system			
Team	Equipment	Sufficient rope and hardware to support complex rigging				
Personnel	Equipment	Same as Type II, plus full body harness	Head protection compatible with cap lamps; Gloves; Flame protective outerwear; Footwear appropriate to the environment			
Equipment	Transportation Resources	Same as Type II	Transportation for all personnel and equipment to mine site			
COMMENTS:						

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						
CATEGORY:	Search & Rescue (ESF #9)			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
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 footgear 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; 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						
CATEGORY:	Search & Rescue (ESF #9)			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
COMMENTS:	Mountain Search and Rescue Team: 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. Definitions 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: RADIO DIRECTION FINDING TEAM						
CATEGORY:	Search & Rescue (ESF #9)			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
Team	Personnel	Team leader and team members to support at least 2 operational field units (at least 1 team member must be a medical specialist – EMT or higher); Management staff following ICS model	Team leader and team members to support at least 2 operational field units; Management staff following ICS model	Team leader; Team member(s)	Team	
	Crew Availability	Available for more than 1 full day of operations	Available for more than 1 full day of operations	Available for at least 1 full day of operations		
	Training	Must be able to operate the team's equipment; Team is expected to be able to triangulate a distress beacon to its source; Team members must be experienced in coordinating with other search teams and aircrews; Team members must have training for operations in remote locations for extended periods; One member of each team must have advanced medical training to the EMT level	Must be able to operate the team's equipment; Team is expected to be able to triangulate a distress beacon to its source; Team members must be experienced in coordinating with other search teams; Team members must have training for operations in limited remote locations for extended periods	Must be able to operate the team's equipment; Team is expected to be able to triangulate a distress beacon to its source in moderate terrain; Team members are not expected to operate in remote field locations for extended periods		
	Transportation	4x4 vehicles that can transport each team throughout the search area	Vehicles that can transport each team throughout the search area; 4x4s are not required, but recommended	1 vehicle that can transport the team throughout the search area; 4x4s are not required, but recommended		
Equipment	Clothing	Appropriate level of PPE for working environment	Appropriate level of PPE for working environment	Appropriate level of PPE for working environment	Equipment	
	Communications	VHF Radios; Cell Phone	VHF Radios; Cell Phone	Cell Phone		
	Electronic	At least one Handheld Portable Electronic Direction Finder per team	At least one Handheld Portable Electronic Direction Finder per team	At least one Handheld Portable Electronic Direction Finder		

RESOURCE: RADIO DIRECTION FINDING TEAM						
CATEGORY:	Search & Rescue (ESF #9)			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
	Rescue	Equipment to support remote extrication and field transport of aircraft crash survivors	None required	None required		
Management Support	Overhead Incident Management	Incident staff capable of managing electronic direction-finding operations	Incident staff capable of managing electronic direction-finding operations	Unit level mission release; No search management capabilities	Management support	
COMMENTS:	Team members will usually only work a maximum of 12-hour shifts, depending on individual unit policies and procedures. Crew availability does not require continuous availability of specific personnel, only that crews are available to those specifications. Medical support and technical rescue equipment is expected to be provided by local EMS for Type II and III teams.					

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.					

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 Specializa-tion	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; 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; 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 Command Staff and Operations, Planning, Logistics, Finance and Administration	Organized based on ICS guidelines, Command and Command Staff 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;	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;			

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					
		Staple remover; Stationery; Stenopad; Tape; Tape dispenser; Three hole punch; White out; Writing pad	Staple remover; Stationery; Stenopad; Tape; Tape 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 Specializa-tion	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; Planning	Multidisciplinary organization of Command; Search; Rescue; Medical; HazMat; Logistics; 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	Communi-cations 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: WILDERNESS 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	Rescue Capabilities	Same as Type II	Backcountry, low-angle evacuation	Same as Type IV	Trained rescue personnel with experience in nontechnical backcountry evacuation/carryouts supported by local technical experts	
Team	Search Capabilities	Capable of conducting self-sustaining full search operations for 72 hours in all weather and low-angle wilderness terrain; Competent and experienced Incident Command staff	Capable of conducting self-sustaining full search operations for 48 hours in all weather and low-angle wilderness terrain; Competent and experienced Incident Command staff	Same as Type IV	Capable of searching high-probability local wilderness terrain for short durations (24 hours or less)	
Team	Personnel	At least 6 team leaders and 48 team members to support at least 6 operational field units (at least 1 member of each team must be a medical specialist – see below); Management staff following ICS model	At least 4 team leaders and 28 team members to support at least 4 operational field units (at least 1 member of each team must be a medical specialist – see below); Management staff following ICS model	At least 2 team leaders and 6 team members to support at least 2 operational field units; Must be supported by local EMS and technical rescue personnel	At least 1 team leader and 3 team members; Must be supported by local EMS and technical rescue personnel	
	Medical Specialist	National standard EMT curriculum; ACLS, BTLS	National standard EMT-B curriculum or wilderness first responder; BTLS	Not required – supported by local EMS	Not required – supported by local EMS	
	Overhead Incident Management	Incident staff capable of managing wilderness search operations	Incident staff capable of managing wilderness search operations	Unit level mission release; No search management capabilities	Unit level mission release; No search management capabilities	
	Crew Availability	Available for more than 1 full day of operations	Available for more than 1 full day of operations	Available for at least 1 full day of operations	Available for at least 1 full day of operations	
	Sustained Operations	72 hours	48 hours	24 hours	24 hours	
	Training	Same as Type II, plus: Personnel demonstrate proficiency in mantracking and working with expert mantrackers	Same as Type III, plus: 1 member of each team must be current to the requirements of the medical specialist (see above); Must also be knowledgeable of procedures involved with helicopter	Same as Type IV, plus: Proficiency in backcountry navigation (including the ability to triangulate a position, ascertain a UTM, use GPS, and follow a route to a new location using a	Must be able to operate the team's equipment; Team members are not expected to operate in remote field locations for extended periods; Must have basic navigation training using a map and compass; Must have	

RESOURCE: WILDERNESS SEARCH AND RESCUE TEAM						
CATEGORY:	Search & Rescue (ESF #9)			**KIND:**	Team	
MINIMUM CAPABILITIES:		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER
Component	Metric					
			transport and coordination with search crews, both ground and air; Must have the ability to operate in an ICS structure, and be able to plan, organize, and direct search and rescue missions; Team members must have training for operations in remote locations for extended periods	topographical map and compass); Must be proficient at conducting and directing search lines	technical proficiency in personal survival in local wilderness terrain; Must have awareness of mantracking and maintaining site integrity; Must have a basic understanding of the ICS; Must have proficiency in hasty search techniques	
	Transportation	4x4 vehicles that can transport each team throughout or to the search area	Vehicles that can transport each team throughout or at least to the search area; 4x4s are not required, but recommended	1 vehicle that can transport each team throughout or at least to the search area; 4x4s are not required, but recommended	1 vehicle that can transport the team throughout or at least to the search area; 4x4s are not required, but recommended	
Equipment	Clothing	Same as Type II	Same as Type III	Same as Type IV	Appropriate level of PPE for working environment	
	Communications	Same as Type II	Same as Type III, plus VHF capability to communicate with aircraft	Same as Type IV, plus VHF communications capability with other teams	VHF Radios for team communications; Cell Phone	
	Search & Rescue	Same as Type II	Equipment to support remote extrication and field transport of survivors	None required	None required	
	Supplies	Equipped to be self-sustaining for 72 hours in local wilderness environments	Equipped to be self-sustaining for 48 hours in local wilderness environments	Same as Type IV	Equipped to be self-sustaining for 24 hours in local wilderness environments	
	Medical	Same as Type II	Same as Type III, plus ability to support survivors	Same as Type IV	As appropriate for level of training, as applied in wilderness environment and meeting local protocols and requirements for support of the team	
COMMENTS:	Team members will usually only work a maximum of 12-hour shifts, depending on individual unit policies and procedures. Crew availability does not require continuous availability of specific personnel, only that crews are available to those specifications, though some personnel may have extended assignments in the field. Medical support and technical rescue equipment is expected to be provided by local EMS and other technical rescue personnel for Type III and IV teams.					