KANSAS SEARCH & RESCUE RESPONSE SYSTEM

OPERATIONS MANUAL

September 2023

FOREWORD

This Operations Manual has been prepared to standardize operations and maximize effectiveness for search and rescue personnel responding to a major emergency or disaster. While this manual serves as a guide and reference, it cannot address all situations. Field personnel must maintain the flexibility to modify their actions to best accomplish the mission, serve the public interest, and save lives.

Another significant purpose of this manual is to provide a reference for other responders such as police, fire, emergency medical services, and emergency managers, as the importance of a coordinated response during all phases of a disaster cannot be overstated. This manual should allow all other responders, both public and private, to gain an understanding of the search and rescue response system that is available in Kansas.

This Operations Manual has been adopted by the Office of the State Fire Marshal to guide search & rescue operations and is intended to be a supplement to the Kansas Search & Rescue Administration Manual.

Questions or comments directed toward improving the overall search & rescue response capability are encouraged and welcomed.

Doug Jorgensen
Kansas State Fire Marshal

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TASK FORCE COMPOSITION AND FUNCTIONS

A search and rescue task force or team is considered an all-hazards resource that can perform search and rescue functions at a disaster site and provide initial medical care and stabilization for survivors and task force/team members. The individual task force/team components and primary functions are outlined below:

Management

Composition: Task Force Leader (TFL); Safety Officer (SO); Planning Team Manager (PTM); Search Team Manager (STM); Rescue Team Manager (RTM); Logistics Team Manager (LTM_; Hazardous Materials Team Manager (HMTM); Medical Team Manager (MTM)

Function: Provide overall leadership and coordination for task force/team operations

Search

Composition: Search Team Manager (STM); Canine Search Specialists (CSS); Technical Search Specialists (TSS)

Function: Use personnel, canines and technical/electronic search equipment to locate trapped survivors.

Rescue

Composition: Rescue Team Manager (RTM); Rescue Squad Officers (RSO); Rescue Specialists (RS); Heavy Equipment & Rigging Specialist (HERS)

Function: Perform the extrication of trapped survivors by personnel skilled in cutting, shoring, lifting, and breaching steel, reinforced concrete and other structural materials.

Medical

Composition: Medical Team Manager – Physician (MTM); Medical Specialists (MS)

Function: Provide pre-hospital and emergency care for task force/team members and survivors, and provide initial treatment for injured search canines. Medical Specialists are trained to treat crush syndrome and provide confined-space medicine for rescued survivors. **The medical component does not provide transport capability.**

Planning

Composition: Planning Team Manager (PTM); Technical Information Specialist (TIS); Structures Specialist – Engineer (StS)

Function: Provide support to the overall search and rescue mission including planning, hazard evaluation, structural integrity assessment, and technical documentation.

Logistics

Composition: Logistics Team Manager (LTM); Logistics Specialists (LS), Communications Specialist (CS); Support Specialist (SS) *(support personnel may be added to interstate missions for specific functions such as driving, fleet maintenance, or other support needs)*

Function: Provide support to the overall search and rescue mission including logistical support, communications, mobilization and demobilization of personnel and equipment, and transportation support.

Hazardous Materials

Composition: Hazardous Materials Team Manager (HMTM); Hazardous Materials Specialists (HMS)

Function: Provide initial and ongoing detection, identification, and monitoring of hazardous materials, including mitigation and decontamination.

Water Rescue

Composition: Water Rescue Specialists (WRS); Boat Operators (BO)

Function: Conduct search and rescue operations in a flood/water environment.

Note: *See organizational charts in the Administration Manual for positions that exist on each US&R resource.*

OPERATIONAL GUIDELINES

MANAGEMENT AND COORDINATION

Each US&R resource is designed to provide a coordinated response to disasters in the urban environment utilizing the basic principles of the Incident Command System (ICS), such as unity of command, span of control, etc. Disasters may require the deployment of a single team or multiple teams and require the close coordination of all task force/team elements for safe and successful victim location and extrication. The central point of coordination of any task force or team lies with the Task Force Leader (TFL). The TFL has the overall responsibility for the personnel, equipment, and operations from the point of activation to demobilization at the home jurisdiction. The TFL, in conjunction with other supervisory personnel, must meld the various elements of the task force/team into an integrated unit during mission assignment. The TFL is responsible for the control of the task force/team at all times and must ensure that an effective command structure exists and is maintained throughout the course of the mission. A task force/team that is well trained, well disciplined, and professional will perform in a safe and effective manner and present a positive image for the entire system.

To ensure that all personnel continuously represent themselves in the most professional manner, the KSAR Code of Conduct should be reinforced throughout the mission. Violations must be documented, and appropriate follow-up action taken either on-site or upon return to the home jurisdiction.

The TFL has the responsibility for the overall safety of all assigned personnel and should voice and demonstrate a strong commitment to safety. The Safety Officer will act as the overall safety monitor for task force/team personnel with oversight from the TFL. Although the Safety Officer provides general safety oversight and monitoring, the enormity of this task makes it the responsibility of every deployed member to monitor the safety of themselves and others around them. All unsafe actions, accidents, or injuries must be reported to the Safety Officer.

It is also the responsibility of the TFL to maintain communications back home through whatever means available. Current status reports on present work locations, general performance of the task force/team, health and morale of deployed members, injuries, and the projected length of stay should be relayed. In addition, matters of interest from the home jurisdiction should be shared with deployed personnel, as appropriate.

Task Force Mobilization

Mobilization policies and procedures must be pre-established, well-planned, and practiced in order for a task force or team to mobilize and respond in a short period of time. Personnel should have all necessary personal equipment pre-staged or pre-packed and ready for deployment. At the Point of Departure (POD), there must be a pre-established system in place to quickly process personnel and equipment for deployment. That system should include procedures for:

- Personnel and vehicle check-in
- Personal/medical information updates
- Medical screening of personnel and canines
- Vehicle and gear inspection
- Location and security of personal vehicles
- Equipment issue if necessary (radios, water, MREs, etc.)

All necessary equipment, tools, and supplies that support the response should either be cached in one location or stored in easily accessible locations. Prior to a mobilization, procedures to procure specific cache items such as water, perishable food supplies, controlled pharmaceuticals, batteries, etc. must be in place, including procedures that allow for the procurement of these supplies outside of normal business hours.

Briefing Prior to Departure

Prior to departure, the Task Force Leader (TFL) should assemble all deploying members for a briefing to include the following:

- Organizational structure and chain of command
- Code of Conduct
- Latest event information
- Weather/Environmental concerns
- Social media procedures
- Travel plan/riding assignments
- Safety issues related to travel
- Communication procedures during travel
- Other last-minute needs
- Estimated departure time

Arrival at the Assigned Location

Upon arrival at the assigned location, the TFL, Planning Team Manager (PTM), and other designated supervisory staff should attend a briefing with the IC/IMT/IST to provide introductions and information on the capabilities and requirements of the task force/team. During this initial briefing, the PTM should be prepared to provide TF Forms 205A, 211, 218.

Information **gathered** during this initial briefing should include:

- The existing Incident Command structure and specifically to whom the TFL reports
- Current and previous Incident Action Plans including current objectives
- Current operations and the status of the local infrastructure
- Any hazardous materials, environmental concerns, or other safety issues in the assigned area of operations
- Rules of Engagement i.e., ability to enter structures, collection points, fatality management, etc.
- Any local support for the task force/team including the status of any shelter for the task force/team Base of Operations (BoO); available food and water; the status of medical facilities, animal control resources, and the status of utilities in the assigned area of operations
- Assignments and locations of other US&R resources on-site, and any local resources that may be available to the task force/team such as heavy equipment, fuel, hazardous materials resources, emergency medical resources, etc.
- The existing communications plan
- The reporting schedule for situation reports, schedule of operational briefings, and other reporting requirements, including the method by which the reports and requests should be transmitted to the IC/IMT/IST
- Specific procedures regarding the evacuation of an injured task force/team member, and general medical procedures, assessments, and patient hand-off information

Locating an Area for the Base of Operations (BoO)

The location of the task force/team Base of Operations (BoO) is essential to the success of the mission and many factors must be considered in locating an area for the BoO. It is the responsibility of the TFL and other management staff, in conjunction with the IC/IMT/IST, to locate a suitable site for the BoO. Refer to Base of Operations Management for specific guidelines.

Size Up/Operational Planning

After the TFL has received the initial briefing and assignment from the IC/IMT/lST, the supervisory personnel must begin to formulate their initial tactical action plan. They should assess the general situation, establish priorities, plan their strategy and tactics, assign resources, manage ongoing operations, follow-up on the progress being made and make any necessary adjustments. Their planning should include immediate search requirements and/or rescue opportunities. If no search or rescue

requirements are immediately identified, search priorities should be determined based upon victim entrapment in high probability occupancies such as schools, hospitals, multi-residential buildings, etc.

Search and Rescue Operations

The top priority during all operations will be the safety of task force/team members. A task force/team may be assigned to a single site, multiple operational sites, or a wide area. The TFL and other supervisory staff must assess the rescue site, evaluate the potential for live rescues, and determine the time and resources needed. The assignment of personnel will be based upon the development of a tactical action plan. It may be necessary to request additional resources at a given location. If additional resources are not available, then a reassignment of personnel may be in order. Refer to Rescue Operations Strategy and Tactics and Search Strategy and Tactics for specific information.

Interaction with Local Command Structure

All US&R resources will operate within the existing local command structure (when established). The local IC/IMT/IST should understand that the task force is a resource, available for their use, under their operational control. The TFL should make every attempt to integrate the local rescue effort with the task force/team operations whenever possible. This cooperation promotes harmony and minimizes any friction between the local effort and outside resources. Management staff must be cognizant of potential problems that can occur when there is a perception that the task force/team will overwhelm the local rescue effort and take over the incident. The TFL should work with the IC/IMT/IST to diffuse any personnel issues that may occur that could impede the rescue effort. However, proper safety equipment and practices should always be emphasized to local rescuers working with task force/team members.

Work Period Scheduling/Rotations

The TFL and other management staff will need to determine how to deploy personnel at the start of mission operations. It may be most appropriate and advantageous to commit all personnel to the rescue effort or it may be better to commence BoO set up, structures triage, building marking, search and reconnaissance activities, etc. While time is of the essence to effect successful live victim extrications, the full-scale commitment of personnel must be balanced by a review of the present and anticipated search and rescue opportunities. Within a matter of hours of initial personnel deployment, the TFL and other management staff must begin some moderate to long term planning. The work schedule will be incident driven, based upon the general conditions present.

If the available information indicates a specific number of viable rescue opportunities that could all be accomplished in a reasonable timeframe, it may be most appropriate to deploy all personnel for a full-scale "blitz" operation. However, this may necessitate the full stand-down of the total task force/team at the conclusion of this blitz to obtain an adequate amount of rest and rehab.

Health and Medical Considerations

The Medical Team will maintain communications with the IC/IMT/IST Medical Unit Leader and keep updated on medical issues. The need for additional medical assistance for civilian injuries will be channeled through the IC/IMT/IST to local authorities, if available. The TFL and the Medical Team will work with the incident Medical and Logistics Units to maintain sufficient quantities of medical supplies. *(Refer to Medical Procedures for additional information)* The medical component of the task force/team is responsible for addressing the health and medical issues and injuries of deployed personnel. All supervisory personnel must continually monitor members for signs of stress-related issues and consider the use of stress management defusing and debriefings if needed. Another area of concern is the nutrition and hydration of personnel. Supervisory personnel should be aware that some rescuers can become so absorbed in the ongoing operation that they may not eat or drink fluids in sufficient quantities to sustain maximum physical efforts. Members may need to be ordered to eat, drink, and rest in sufficient amounts to be able to perform the job safely and effectively. This should also be factored into the planning effort to ensure sufficient provisions are maintained at all times. While the main purpose of the medical component is the care of deployed personnel, canines, and victims encountered during search and rescue operations, other civilians may also seek treatment from the medical team. The TFL cannot allow the medical team to be overwhelmed by civilian injuries so that their ability to treat team members and entrapped victims in a timely manner is compromised.

Planning

Planning is an integral part of the task force/team operations from the receipt of the Alert Notice to the completion of an After-Action Report. The Planning Team Manager and Technical Information Specialist are responsible for collecting, assimilating, analyzing, and processing all information relative to task force/team operations. Additionally, the Planning Team Manager will facilitate task force/team meetings and briefings, develop the Tactical Action Plan (TAP), and interface/exchange information with the IC/IMT/IST Planning Section. The Planning Team Manager will also coordinate demobilization planning with the IC/IMT/IST Planning Section. The TFL and other designated personnel will attend briefings and planning meetings convened by the IC/IMT/IST and/or local authorities. In turn, task force/team personnel can be updated on assignments and important issues that affect them. Refer to Task Force Planning for additional information.

After-Action Requirements

After returning home, the TFL and other supervisory staff have a number of responsibilities. The first is to ensure all injury follow-ups and incident stress management issues are addressed. All injury forms must be completed and forwarded to the appropriate agencies. The second area is financial accountability and cost recovery for the incident. It is important that all costs eligible for reimbursement are documented appropriately. A complete accounting of all costs of the mission should be compiled and forwarded according to the OSFM's reimbursement guidelines.

Finally, there should be an after-action process that includes both on-site (Hot Wash) and post mission operational debriefings followed by a written After-Action Report that documents issues, successes, concerns, etc. The documentation of the mission is crucial for the improvement of the task force/team and the search and rescue program overall. The on-site debriefing should occur between the demobilization and the return trip home, if possible, and provide a quick critique of the mission. This session can provide several worthwhile functions for the task force/team while the information is fresh, including general agreement on the chronology of events and the major accomplishments and problem areas. It can also act as an early opportunity for stress defusing. The formal debriefing process after return home should be a thorough, in-depth session or sessions that address a comprehensive list of issues. The pertinent information must be captured in an appropriate format and forwarded to the OSFM for inclusion into the final mission report. For more information on after-action debriefings and reporting refer to Task Force Planning.

PUBLIC INFORMATION MANAGEMENT

The activation and mobilization of search and rescue resources for a large-scale disaster will likely result in significant media attention. This section outlines standard procedures for promoting public awareness and interacting with the media during all phases of a mission assignment.

Individual Guidelines

- Individuals shall not release any information or pictures of the activation or on-scene operations to the media or on social media without permission from the OSFM.
- Any media inquiry made to a deployed member should be directed up the chain-of-command to the Task Force Leader (TFL). The TFL should strive to coordinate media interaction within the constraints of IC/IMT/IST requirements for public information dissemination while on-scene.
- The local ICP should have a Public Information Officer (PIO) assigned who will coordinate these issues at the incident. Information regarding media contacts should also be included in situation status reports to the IC/IMT/IST.
- The OSFM Liaison, or other designee, will coordinate any information exchange or release with the OSFM while enroute or returning from the incident.

At times it may not be feasible to defer media inquiries up the chain-of-command to the local jurisdiction. In those situations, it is in everyone's best interest to provide accurate information to the media, within the confines of one's job knowledge and responsibility.

Pre-Activation

In between events, it is prudent that the OSFM and all Participating Agencies initiate media-related public awareness activities such as interviews, on-site tours, and other activities that will cultivate relationships with local media outlets. Participating Agencies are encouraged to maintain regular communications with their local media outlets to publicize and highlight their local capabilities.

Participating Agencies should:

- Develop internal media procedures to support an agency mobilization including a central point of contact.
- Provide familiarization training for all personnel on general media procedures.
- Provide more in-depth training for supervisory personnel on media interaction.
- Coordinate public information efforts with the OSFM.

Activation

When any part of the Kansas Search & Rescue Response System is activated by the OSFM for an intrastate or interstate event, the OSFM will:

- Coordinate preliminary public information efforts
- Establish a regular process for communications during the incident with the involved organizations.
- Update the media with pertinent information regarding the activation.

Note: After information is posted by the OSFM, it may be shared by any Participating Agency or Affiliated Member.

Once a mission is confirmed, each Participating Agency is authorized to post on social media or provide the media with general information about the agency's response. This information must be confined to the agency personnel and equipment responding. As an example, "*The Manhattan FD has been activated as part of KS-TF1 to assist the State of Texas with Hurricane Harvey response efforts. Five members of the MFD will leave Monday morning with the agency's urban search and rescue equipment and are expected to arrive in Texas by late Monday night.*"

Demobilization and Return Home

When a task force/team is demobilized the OSFM will:

- Continue to coordinate public information efforts including arrival back in Kansas.
- Issue news releases, conduct briefings, or provide other appropriate follow-up public information material detailing activities and results of the response effort.

After arriving back home, each Participating Agency is encouraged to:

- Contact local media outlets to schedule and conduct interviews highlighting the agency's response efforts.
- Review and critique the overall media management and coordination efforts and incorporate lessons learned into future improvements.
- Submit recommendations and concerns to the OSFM.

Interviewing Etiquette

Interviewing "Do's":

- **Ask the reporter's name.** Then use it in your response.
- **Use your full name.** Nicknames are not appropriate.
- **Choose the site (if possible).** Make sure you are comfortable with the location of the interview. Consider what is in the background.
- **Choose the time (if possible).** If you would be more comfortable waiting another five minutes, ask the reporter if that's okay.
- **Be calm.** Your demeanor and apparent control of the situation are very important in establishing the tempo of evolving events.
- **Tell the truth and be factual.**
- **Be cooperative.** There is an answer to most questions, and if you don't know it now, let them know you will work diligently to find the answer.
- **Be professional.** Don't let your personal feelings about the media or a reporter affect your response.
- **Be patient.** Expect silly questions. If the same question is asked again, repeat your answer without irritation.
- **Take your time.** If you make a mistake during a taped or non-broadcast interview, indicate that you would like to start over with your response. If appearing live, just start over.
- **Use wrap-around sentences.** This means repeating the question with your answer for a complete "soundbite."
- **Present a professional appearance.**

Interviewing "Don'ts":

- **Say "no comment."**
- **Give your personal opinion.** Stick to the facts.
- **Go off the record.** Anything you say can be used.
- **Lie, speculate, or promise results.**
- **Be defensive.** The media and their audience recognize a defensive attitude and tend to believe you're hiding something.
- **Be afraid.** Fear is debilitating and is not a characteristic you want to portray.
- **Be evasive.** Be up front on what you know about the situation and what you plan to do to mitigate the incident.
- **Use jargon.** The public is not familiar with much of the language used in the US&R field.
- **Confront.** This is not the time to tell a reporter how much you dislike the media.
- **Try to talk and command an incident at the same time.** You won't do either well.
- **Wear sunglasses.**
- **Smoke, use chewing tobacco, or chew gum during an interview.**
- **Respond to rumors.**

SAFETY

General Considerations

Search and rescue operations constitute one of the most complex and difficult activities emergency responders will encounter. Fundamentally, these operations are dependent on various disciplines working in close concert with each other. If any element fails to carry out their respective assignment in a safe and professional manner, the risk of injury or death to a member is increased.

Personnel conducting search & rescue activities are exposed to many risks and hazards when carrying out assignments. Examples include earthquake aftershocks, unstable structures, uneven footing, energized electrical equipment, falling material, flying objects, exposure to hazardous materials, excessive noise and dust, confined space operations, smoke and fire, contaminated air and water, dangerous equipment, heavy lifting, excessive fatigue and stress, adverse weather, armed thieves and looters, and working in unfamiliar surroundings. If safety is compromised at any time, the consequences could be serious.

The Safety Officer has the primary responsibility for monitoring and assessing the overall safety aspects throughout the mission. This is accomplished by ensuring that good safety practices are identified in tactical action plans; reinforcing safe practices during briefings and critiques; and ensuring that all operations are monitored for compliance. However, all members have the responsibility to identify unsafe acts and hazardous conditions, report them to their supervisor, and mitigate such situations if possible. Even with the formal position of Safety Officer, it is essential that all members recognize the high priority that safety and welfare issues command.

Ideally, the way to ensure proper emphasis on safety issues is to establish a strong, positive attitude toward safety during task force/team development, training sessions, and field exercises. Accidents and injuries are prone to occur when there is a lack of safety awareness among members, as well as members conforming to unsafe group norms, tunnel vision, faulty judgment, lack of leadership, lack of safety training, and a general poor attitude about training. It is necessary to evaluate safety concerns during every phase of operations from activation and mobilization through deactivation and demobilization.

Although the risk of injury to task force personnel is greatest during incident operations, injuries can also occur at other times. For this reason, a number of safety considerations associated with each phase of the mission are listed below.

Pre-Activation Phase

This phase can set the tone for the safety of all personnel at training sessions and mission responses. All personnel should be knowledgeable of all position descriptions on the task force/team to ensure a good understanding of all methods of operations. All task force/team members must be physically fit and have been cleared by a physician to perform strenuous activities.

The selection of perishable foods that will be taken on a mission should be reviewed by the Safety Officer and other task force supervisory personnel prior to any mission to ensure it does not adversely affect the performance of the team. Some foods can prolong or act to increase the body's intolerance of stress, such as the continued use of caffeine and high-fat foods. The type and quantity of supplemental food and drink should also be monitored prior to the mission.

Activation

Supervisory personnel should, with input from the Medical Team and Safety Officer, research environmental conditions at the incident site to determine the appropriate clothing for deployment. At the Point of Departure (POD), the Safety Officer should ensure that all personnel check-in with the proper personal protective equipment and appropriate clothing for the environment.

The Safety Officer and the Medical Team must work together to ensure that all members selected for the mission are physically well and meet medical criteria for deployment. In addition, the initial task force briefing should be used to highlight safety concerns and reiterate everyone's responsibility for their own safety.

Point of Departure

The adrenaline generated by a mission assignment may cause personnel to overlook some aspects of their own safety so caution must also be exercised when working around and moving/loading vehicles. Delays can also occasionally cause stress to those waiting to deploy. If necessary, activities should be arranged to defuse excess stress that could create dysfunction among the members while "standing by". This is a good time to ensure that members begin to hydrate. Quality food should be available to deploying members so they can arrive at the incident site ready to work.

During Transport

Medical personnel should have immediate access to their medical treatment supplies during transport. Drivers should be rotated regularly, and vehicles should be checked at every stop. Personnel not driving should attempt to rest as much as possible during the trip. When stopping during the trip, task force/team members should not be allowed to leave the main body of personnel without specific permission from their immediate supervisor.

At Incident Site

When establishing a Base of Operations (BoO) site, there are specific safety considerations that should be factored into the final location decision. It should have good sanitation, good foot traffic flow, and lend itself to proper security. The facility should be setup to provide security to personnel and equipment. No valuables should be stored near the perimeter nor should it be easy for outsiders to enter the facility except by one common, monitored entrance. The BoO should be located in an environmentally safe location with no chance of contaminated runoff entering the site. It should have proper drainage to reduce ground water saturation. The site should also be located to allow for proper rest and relaxation of team members and out-of-sight of the incident work location to reduce stress. A combined effort between the Safety Officer and the Medical Team should ensure an appropriate food preparation protocol is established and garbage is disposed of properly. Facilities must be incorporated to collect and dispose of graywater. Proper hand washing stations and toilet facilities must be put in place. Proper lighting is mandatory at night to reduce the chances of injuries. Any tent rigging or other wires/ropes should be flagged with highly visible tape so they may be easily seen. The Safety Officer should perform a risk analysis on the BoO site, mitigating hazards where possible, and properly marking and advising the task force/team of hazards that cannot be removed.

During Incident Operations

Incident operations provide the most challenging aspect of the safety mission for both the Safety Officer and each individual member. Past incidents have shown that this is where the majority of injuries occur. The Safety Officer's function should be focused on providing for and monitoring safety for the entire operation and addressing the potential causes of accidents and injuries. The Safety Officer should attend all planning sessions with the Task Force Leader (TFL) and other supervisory personnel to offer insight into the safety aspects of a particular course of action.

Planning/Management

The Safety Officer should:

- Ensure that a risk and hazard survey of the assigned work site (s) is conducted, mitigating hazards where possible. Hazards that cannot be eliminated should be identified and marked appropriately.
- Liaison with local jurisdiction's Safety Officer to ensure continued coordination and information exchange on safety issues within the disaster area.
- Gather current information on weather forecasts.
- Ensure escape routes are preplanned, clearly identified, and understood by all assigned personnel, for each individual work site, as well as for the BoO.
- Ensure infectious disease control measures are adhered to.
- Monitor safety equipment supplies to ensure adequate stock is available.
- Investigate all accidents, collect data on how an accident occurred, and take steps to prevent recurrence. Include generic accident data in the tactical action plans and situation reports.
- Fill out accident and injury forms as required.

Personnel Safety/Well-being

- Ensure that all personal protective equipment is being used properly.
- Ensure that briefings reinforce proper sanitation and hygiene procedures.
- Ensure that all personnel recognize the alerting and evacuation signals.
- Ensure that all personnel are decontaminated prior to leaving the site and returning to the BoO.
- Ensure that personnel do not operate alone, and accountability is maintained.
- Ensure that all personnel have adequate means of communications both on and off site with the Task Force Command Center (TFCC).
- Ensure adequate rest, rotation, and hydration/feeding of personnel.
- Ensure personnel are constantly alert for new hazards in the work area.
- Ensure proper food preparation techniques are adhered to.

Safety Considerations during Operations

- Establish a hot zone and operational working area around assigned work sites in order to avoid injury from falling objects, overcrowding, etc. Ensure that these zones are properly identified.
- In order to minimize any further collapse, ensure that a structural stability assessment and required mitigation is completed before search and rescue operations are started.
- Ensure that Hazardous Materials Specialists check the work area (s) for hazardous materials and air quality prior to and during operations.
- Ensure monitoring of atmospheric conditions in confined spaces, including adequate ventilation when working in confined spaces.
- Ensure that utilities are shut off, tagged, and secured before beginning operations.
- Ensure that shoring and cribbing is of proper size/type and is correctly installed. These should be reviewed periodically and after any breaching or lifting operation.
- Ensure adequate lighting is provided inside voids or at night.
- Ensure tools and equipment are used properly.
- Ensure helicopter over-flights are restricted to avoid excessive vibrations and down-wash on unstable structures.
- Restrict the use of heavy equipment on or adjacent to the structure where SAR activities are occurring.
- Reinforce the use of LCES-Lookouts, Communications, Escape Routes, and Safety for each work site.

The Safety Officer should ensure compliance with the items listed by reinforcing basic safety considerations at daily briefings, ensuring that safety resources and equipment are available for each site, and ensuring that each operation has a site-specific Safety Officer.

Demobilization

Personnel returning from the mission may be extremely exhausted, not properly nourished, and may lose their focus on safety when loading and unloading equipment. It is especially important to reiterate safety procedures during this time.

Return to Point of Departure

The Participating Agencies should ensure that sufficient non-deployed personnel are available to support the unloading and moving of equipment and vehicles once task force/team personnel arrive home. In the days following the return home, the Safety Officer should participate in the development of the After-Action Report and ensure all safety concerns are incorporated. It is imperative that the safety findings and lessons learned are highlighted and incorporated into future training sessions, field exercises, and operational procedures. Each agency should ensure that all personal safety equipment is restocked to original levels.

SEARCH OPERATIONS

Task force personnel must conform to an accepted system for victim search strategies and tactics in order to be effective. All personnel must have a solid understanding of the general search protocols and supervisory personnel must tailor the general strategy and tactics to fit the specific problems encountered.

Organizational Structure

A task force may be divided into several search squads, generally consisting of a Search Squad Officer, a Technical Search Specialist, a Hazardous Materials Specialist, Rescue Specialists, and a Medical Specialist. If available, Canine Search Teams (Handler/K9) can be assigned to each search squad. If two or more Search Squads are deployed, they should be managed by a Search Team Manager.

Safety

Search squad personnel shall carry equipment to monitor and mitigate utilities, as well as monitor air quality. All appropriate PPE shall be worn. Structure stability and the potential for secondary collapse should also be closely monitored.

Search Operations

One of the initial decisions that supervisory personnel may have to make will be what area should be searched first, as there may be many structures damaged that need attention. There are two general strategies that can be used to decide how to deploy search resources. An area may be sectored by city block or other easily definable criteria. Available search resources would then be divided and assigned to each sector for search operations. The sector strategy may work well for smaller areas but would most likely be impractical for larger areas, because of limited search resources on the scene initially.

Another method is to determine the search priorities based on the type of occupancies affected. Those that present the highest likelihood of survivability in terms of type of construction and the number of potential victims would receive priority. Occupancies such as schools, hospitals, nursing homes, high rise and multi-residential buildings, office buildings, etc., would be searched first.

General Considerations

- Blend physical, technical, and canine capabilities.
- Establish whether or not the team is involved in a rescue or recovery**.**
- Use every available search method to locate viable victims before committing rescue resources to any prolonged operation.

- Use Structures Specialist (building engineer) to provide initial and ongoing assessments of building stability and safety.
- Repeat the various search procedures as necessary after debris removal by heavy equipment or after a secondary collapse.

Search Phases

There are generally six phases of organized search and rescue operations at collapse incidents:

- Recon
- Hasty (Rapid)
- Primary
- Secondary High
- Secondary Low
- Targeted Search

Search Phase Definitions

Recon is the preliminary survey of the affected area and/or assigned area of operations for the purpose of determining the scope and magnitude of the incident and identifying the resources needed to manage the incident.

Recon Considerations:
Recon is an initial and fast visual check of the damaged area and/or assigned area of operation. For single structure collapse incidents, the primary goal is structural assessment and hazardous materials assessment. Recon can be accomplished by air, watercraft, vehicles, or walking. Known locations of live or deceased victims will be recorded and appropriate evacuation/rescue resources will be called up. The size and makeup of recon teams are incident driven and flexible. Recon teams should not engage in extrication/rescue operations. Timely reporting of information is critical to the health and safety of responders, survivability of victims, and effective management of the incident.

Hasty Search (Rapid) is a fast paced and methodical search of the assigned area of operation in an attempt to locate victims that are in immediate need of evacuation from harm.

Hasty Search Considerations:
Size and make up of Hasty Search teams are incident driven and flexible. If live victims are located and can be easily evacuated, they will be immediately moved to the identified casualty collection point (CCP). If live victims are located, and cannot be easily evacuated, additional resources will be requested to conduct extrication and/or evacuation. Documentation of areas searched must be recorded and reported. Rapid searches can be accomplished by aircraft, watercraft, ground vehicles, or walking.

Primary Search is a quick search of the structures likely to contain victims. These searches are ground or waterborne operations looking for victims. This is accomplished by looking into every window or opening, knocking on doors and hailing for live victims. If there are signs of victims (dead or alive), appropriate action will be taken based on the Rules of Engagement (ROE) identified by the IC/IMT/IST.

Primary Search Considerations:
Primary Search is a well-established fire ground incident benchmark and, as such, is the stated objective until accomplished. Primary Search is a fast paced, quick scan of surface debris in and around structures and selected voids. Size and makeup of the search team is incident driven and flexible. Detection resources may include physical, canine, and technical. If live victims are located, additional resources are called to extricate the victim while the search team continues to complete the Primary Search in the assigned area. Actions necessary to immediately correct life-threatening injuries may be performed by the search team. Victim locations will be marked with the standard victim identification marking system unless the rules of engagement established by the IC/IMT/IST indicate otherwise.

Secondary Search is the systematic search of every room of every structure in the assigned area of operation. Forced entry of structures may need to occur in order to accomplish this objective but will only occur at the direction of the IC/IMT/IST. This may involve extensive debris removal of building materials depending on the desired level of coverage and thoroughness. Secondary Search can be divided into two levels of coverage:

> **Low Coverage Secondary Search**: Systematic search of every room and void space in every structure in the assigned area of operation. Size and makeup of search teams is incident driven and flexible. Location/detection resources may include physical, canine, and technical. If live victims are located, additional resources may be called up to extricate the victim while the search team continues to complete the assigned search objective. Victim locations will be marked with the standard victim identification marking system unless the rules of engagement established by the IC/IMT/IST indicate otherwise.
> **High Coverage Secondary Search**: Exhaustive search of every room and void space in every structure in the assigned area of operation. This will include complete de-layering and removal of collapsed debris to ensure thoroughness and may include the use of heavy equipment. The size and makeup of the search and extrication teams is incident driven and flexible. Location/detection resources may include physical, canine, and technical. If live victims are located, additional resources may be called up to extricate the victim while the search team continues to complete the assigned search objective. Victim locations will be marked with the standard victim identification marking system unless the rules of engagement established by the IC/IMT/IST indicates otherwise.

Targeted Searches are searches of specific locations. Targeted Search is employed when the IC/IMT/IST has identified specific sites or conditions that may take priority over others within an assigned region or sector. Subsequent to an event such as a hurricane, emergency managers should be able to identify and prioritize facilities. These locations may be based on critical needs of the jurisdiction (e.g. unanswered 911 requests for help), high occupancy loads (e.g. schools or malls) or due to specific evacuation requirements necessary to limit loss of life for individuals

with special needs. These facilities will likely have a significant number of survivors who may not be capable of providing for themselves if the event causes a complete disruption of services. Targeted Searches may be performed to any level of detail (Hasty, Primary, Secondary Low, and Secondary High) per the Rules of Engagement. Targeted searches can include but are not limited to searches based on:

- Unanswered 911 calls
- Health & wellness concerns received via third parties
- Shelter locations
- High Occupancy locations:
    - Schools
    - Malls
    - Office Buildings
- Critical Infrastructure Facilities
- Areas of last refuge:
    - Fire Stations
    - Police Stations
- Locations of Special Needs Individuals or At-Risk Persons
    - Hospitals
    - Nursing Homes
    - Location Lists Maintained by the AHJ

<u>Work Site Search Prioritization</u>

at

- Search Team Manager (STM) meets with the Search Squad
- STM briefs squad with Rules of Engagement (ROE) and mission details
- Determine a specific work area
- Determine search tactics to be used
    - Canine (most rapid; can be verified with a secondary canine team)
    - Physical search (hasty, primary, secondary)
    - Technical search (cameras and listening devices)
- Conduct just in time training if needed
- Gather Minimum Equipment
    - Voltage detector
    - GPS unit / Data Collection Device with spare batteries
    - Compass
    - Maps
    - Radio
    - FOG Manual
    - Backpack or vest
    - Notepad
    - Camera
    - Pens, pencils, markers
    - Cell phone
    - Search labels

    - Spray paint
    - Flagging tape
    - Gas monitor
    - Grease pencil / lumber crayon
    - ICS Form 214
    - ICS Follow-Up Form
- Gather mission specific technical equipment
- Don appropriate PPE for the mission

Post Mission Task Priorities

- ☐ Hand over GPS units or Data Collection Devices and 214s to Planning Team
- ☐ Report back to the STM
- ☐ Check in / Rehab equipment with Logistics
- ☐ Search squad rehab

STRUCTURE TRIAGE, ASSESSMENT, & MARKING SYSTEMS

Significant damage and disruption to the existing infrastructure would be expected following an event like a tornado and as such, a task force/team may be confronted with responsibility for a general area affected by the event that encompasses multiple buildings, with little or no search and reconnaissance information. The Structure Triage, Assessment, and Marking Systems have been designed to help identify, select, and prioritize the buildings with the highest probability of success with respect to locating and rescuing live victims. Information relative to building identification, conditions and hazards, and victim status is posted in a standardized fashion in order to maintain consistency with federal and state US&R resources across the country.

Initial Size-Up

A task force/team may need to perform the following activities prior to beginning search and rescue operations:

- Identify buildings individually by address, physical location, unique design, etc.
- Provide general area triage, i.e. identify separate buildings from many in a given area that offer the highest potential for viable rescue opportunities.
- Provide hazard assessment and marking of buildings.
- Apply appropriate markings to identify buildings, search progress, and victim location.

When a task force/team arrives at their assigned location, local emergency response personnel may have already identified viable search or rescue opportunities. The location and/or identification of separate buildings may also be clearly identified. Many of the general size-up issues may have been conducted by the local personnel and the task force can base their initial actions and assignment of resources on this information. However, information provided by local sources must always be reviewed for validity.

In other cases, there may be little or no reconnaissance information when the task force/team arrives. They may be faced with a geographic area (several buildings, part of a block, several block area, etc.) with no tangible information as to where to concentrate initial efforts. In this case, the decision-making process and size-up of the situation becomes much more complex.

General Structure/Area Recon

When a task force/team arrives at their assigned work area, it is imperative that the general layout and condition of the area be determined. This will speed operations, ensure efficiency, and prevent a duplication of efforts. Maps or floor plans obtained enroute or on arrival will be valuable in this process. It may be necessary to deploy one or more Recon Teams to do a quick assessment of the affected area and/or buildings. Recon, while generally done by Search Squads, may be assigned to any task force/team personnel. The size and scope of the incident may require additional squads, or even the splitting of squads into smaller units.

This rapid assessment should determine the general structural condition in an area, the probable occupancy, hazards, potential rescue opportunities, etc. During this assessment, the Recon Team (s) will prepare a rough sketch of the general area and identify each building with GPS coordinates. Information & sketches can be quickly recorded on a Site Assessment form, on existing maps, or on blank paper.

Search squads will mark all structures, victims and anything else deemed necessary by the IC/IMT/IST in accordance with the FEMA marking system.

Field Data Collection

Task force personnel assigned to conduct search operations must be competent in the use of the Search and Rescue Common Operating Platform (SARCOP), a platform being used around the country by state and federal US&R teams to conduct search operations. SARCOP is a multiagency platform designed to share information and intelligence throughout all levels of incident response – from the first responder in the field to a decision maker in the Emergency Operations Center. The platform is used for mapping out where search and rescue operations have occurred and provides detailed search coverage analysis to prevent a duplication of efforts and ensure no survivors are left behind.

Usernames and passwords are maintained by the SAR Coordinator and the Planning Team in each region for assignment to each squad prior to search operations.

Search Icons, Names, and Descriptions

Search Icons, Symbol Name, and Symbol Description

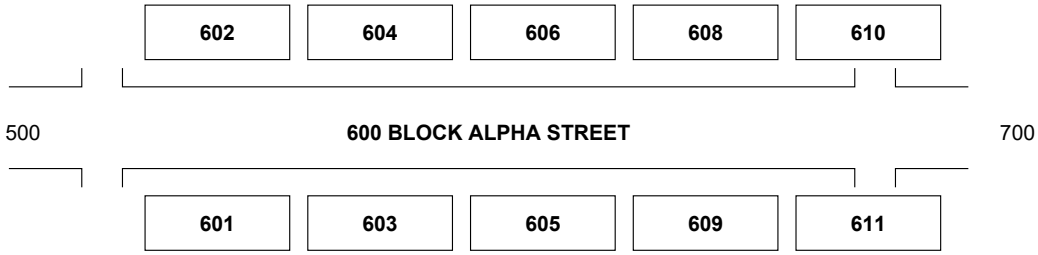
Number	Symbol	Name	Description
&01		Structure No Damage	Low Risk, low probability of further collapse
&02		Structure Damaged	Medium Risk, structure is moderately damaged
&03		Structure Failed	High Risk, may be subject to sudden collapse
&04		Structure Destroyed	Complete destruction of structure
&05		Assisted	Material assistance provided to residents
&06		Evacuated	Survivors transported to collection point
&07		Rescued	Technical rescue that required physical intervention
&08		Follow-Up Form	Additional information required not adequately described by symbol set
&09		Victim Detected	Potential victim detected (including canine alert or intelligence)
&10		Confirmed Victim	Confirmed live survivor (visual, audible, physical confirmation)
&11		Human Remains	Confirmed victim determined to be deceased
&12		Human Remains Removed	Human remains removed from specific location
&13		Shelter in Place	Survivors have chosen to remain at location
&14		Animal Issue	Issue including aggression, location, assistance needed, etc
&15		Fire Incident	General fire occurrence
&16		Hazardous Material Incident	Nuclear, biological, or chemical incident
&17		Targeted Search	Specific location or condition requiring increased search effort
&18		Flood/Water Level	Predetermined site for documentation of water line
&19		Helicopter Landing Site	Appropriate site for landing zone
&20		Route Blocked	Inaccessible route by land or water
&21		Extra 21	Mission specific placeholder to be determined (e.g. abandoned vehicle, commercial structure, evidence)
&22		Extra 22	Mission specific placeholder to be determined
&23		Extra 23	Mission specific placeholder to be determined
&24		Extra 24	Mission specific placeholder to be determined

Structure Identification within a Geographic Area

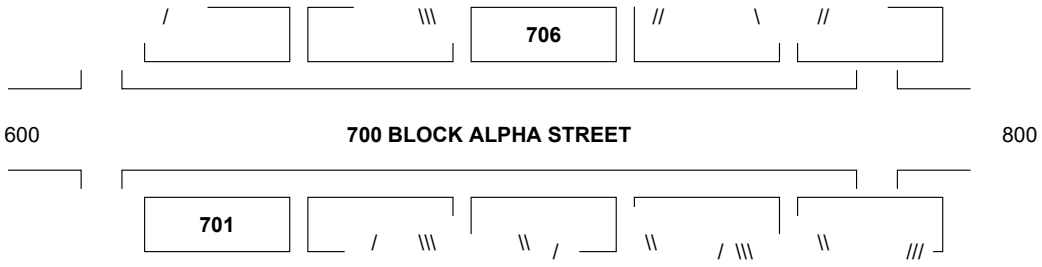
The Recon Team (s) needs to clearly differentiate buildings in groupings by blocks or areas/sectors. It is also imperative that each structure within a geographic area is clearly identified. This may occur during this quick assessment or during a more detailed assessment later. Either way, this identification is important from a technical documentation perspective, for preventing the duplication of efforts, and for maximizing safety. The primary method of identification should be the existing street name, hundred blocks, and building numbers. However, destruction often eliminates any or all of these. In these

situations, it is important that the task force/team personnel implement the following system for structure identification. This system should build upon the normal pre-disaster street name, hundred blocks, and building numbers whenever possible. Structures and streets should be clearly marked with orange spray paint. As task force personnel establish a need to identify a structure within a given block they will:

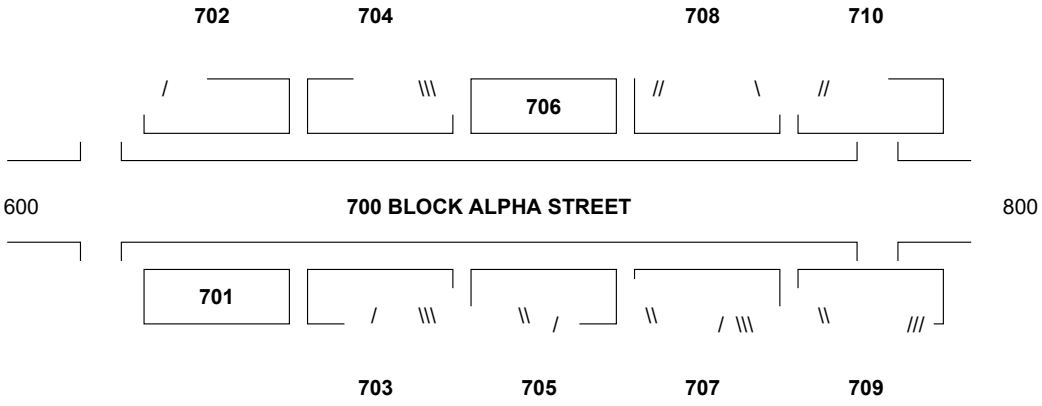
Identify each structure by existing street name or building number.



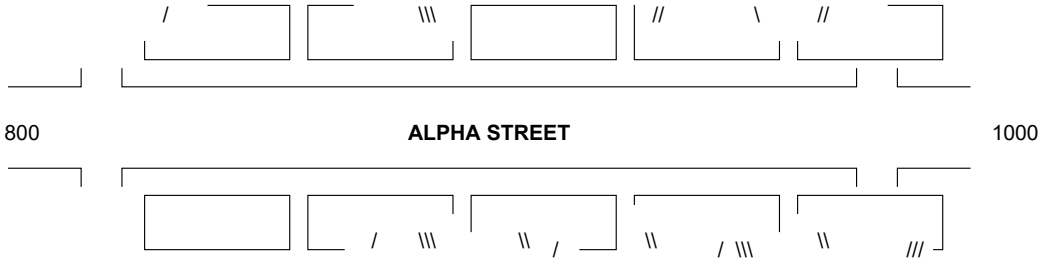
If some previously existing numbers have been obliterated, an attempt should be made to reestablish the numbering system based upon one or more structures that still display an existing number.



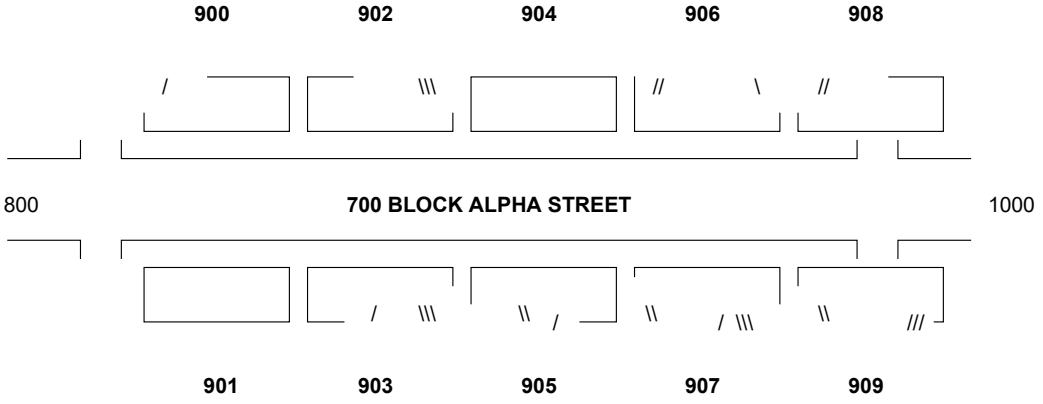
The damaged buildings would be assigned numbers to separately identify them as indicated. The front of the structures in question should be clearly marked using International Orange spray paint with the new number being assigned.



If no number is identifiable in a given block, then task force personnel will identify the street name and the hundred blocks for the area in question, based on other structures in proximity to the site in question.



Structures should be assigned the appropriate numbers to designate and differentiate them. The front of the structures in question should be clearly marked using International Orange spray paint with the new number being assigned.



It is also important to identify locations around and within a single structure. The address side of the structure (typically street/front) shall be defined as Side A-Alpha. Other sides of the structure shall be assigned going clockwise as Side B-Bravo, Side C-Charlie, and Side D-Delta.

The interior of the structure can be divided into QUADRANTS. The quadrants should be identified numerically in a clockwise manner starting at the A/B corner. The center core, where all four quadrants meet can be identified as Quadrant 5 (i.e., central core lobby, etc.).

Multi-story buildings must have each floor clearly identified. If not clearly discernable, the floors should be numbered as referenced from the exterior. The grade level floor would be designated Floor 1. Conversely, the first floor below grade level would be Basement 1.

If a structure contains a grid of structural columns, they should be marked with 2’ high, orange letters/numbers and used to further identify enclosed areas. If plans are available, use the existing numbering system. If plans are not available, search personnel should number the columns for future reference.

Detailed Structure Assessment

Once a general sweep and rapid assessment of the assigned area has been completed, supervisory personnel should identify a priority for a more detailed analysis of potential rescue work sites/buildings. Any identifiable structure should be given a more detailed assessment to determine risk, accessibility, potential victims, etc. If not already completed, this detailed structure assessment can be performed by Search Squads assigned to a specific area, prior to conducting further search operations. A Structures Specialist (building engineer) should also be included, if one is available. The Rapid Structure Triage form may be used to facilitate this detailed assessment.

In general, the following factors should be considered in determining priorities for search and rescue operations:

- Occupancy – refers to building use, not the number of occupants.
- Collapse Mechanism – how the building failed will provide an indication of the potential for voids wherein a victim could survive.
- Time of Day – refers to the time of the event that caused the collapse.
- Information from the general public relating to known trapped victims.
- Search and Rescue Resources Available – does the particular building require resources beyond what is readily available?
- Structural Condition of the Building – Can search and rescue operations proceed with minimal stabilization effort?
- Condition of voids - Open, survivable voids are often found under wooden floor panels that are collapsed into angular, interlocking planes, and in reinforced concrete structures where floors have projecting beam elements, parts of columns/walls and furnishings that hold the slabs apart. Partially collapsed structures may have large triangular blocked avenues or exits. These large voids have the best chance of having survived entrapped victims.
- Time required to access victims - this will be an estimate of the time required to get to the first victim. It should include the time it would take to mitigate hazards, cut through floors, walls, roofs, etc., and to shore and brace the access route as well as appropriate adjacent structures.
- Chance of secondary collapse – This may indicate that shoring or bracing may be required before beginning operations.
- Special occupancy information - increased attention will be given to certain types of target hazards, especially those involving children, schools, day care centers, hospitals, etc.
- "NO GO" conditions - these would include structures that are on fire, have significant hazardous material spills or exposures, or otherwise have conditions that would make search and rescue operations too perilous.

Marking Systems

Information gathered by task force/team personnel must be represented in a standardized fashion to ensure uniformity and clarity. A standardized US&R Marking System is identified and divided into two sections:

- Structure/Hazards Evaluation Marking
- Search Assessment Marking

CAUTION: Use common sense when marking structures. As an example, don't spray paint structures or surfaces that are undamaged or minimally damaged, such as garage doors or brick veneers. In these cases, opt to use search stickers, tape, or other means of marking the structure.

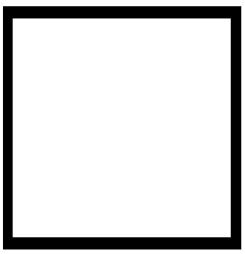
The Structure/Hazards Evaluation and Search Assessment marking procedures are designed to identify specific information pertinent to each affected building. Each component can be completed independent of the other, although normally the Structure/Hazards Evaluation would be completed first. Symbols will be made with spray paint of International Orange color to permanently identify and mark safe entrances to a structure and to note search assessment findings. The two marking systems use differing formats to distinguish between the two as outlined in their respective sections.

Structure/Hazards Evaluation Marking

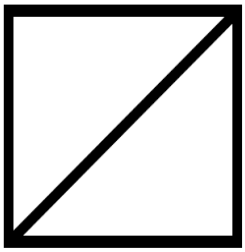
Personnel will outline a 2' X 2' square box at any entrance accessible for entry into a compromised structure. Aerosol cans of spray paint, International Orange color, will be used for this marking. It is important that an effort is made to mark all normal entry points to a building under evaluation to ensure that task force/tea, personnel can identify that it has been evaluated. (see below) Specific markings will be clearly made inside the box to indicate the condition of the structure and any hazards at the time of the assessment. Normally the square box marking would be made immediately adjacent to the entry point identified as safe. An arrow will be placed next to the box indicating the direction of the safe entrance if the Structure/Hazards Evaluation marking must be made somewhat remote from the safe entrance.

The following information; TIME, DATE, and TF/SQUAD/SPECIALIST ID, will also be noted outside the box at the upper right-hand side. This information will be made with pieces of carpenter's chalk or lumber crayon. An optional method may be to apply duct tape to the exterior of the structure and write detailed information on the tape with a grease pencil or black magic marker. All task force/team personnel must also be aware of other Structure/Hazards Evaluation markings made on the interior of the building.

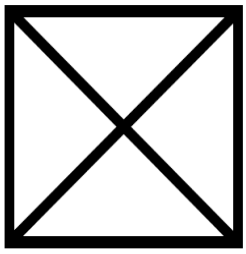
FEMA Structures/Hazards Marking



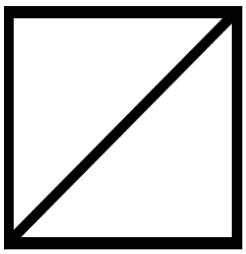
- 2x2ft (60x60cm)
- Structure relatively safe for US&R operations



- Structure significantly damaged
- Shoring/removal of hazards may be required



- Structure not safe for normal US&R operations
- Extensive safety measures must be taken before entry



- To right of box:
  - Date
  - Hazards
  - Time
  - TF ID

Structure/Hazards Evaluation Diagrams

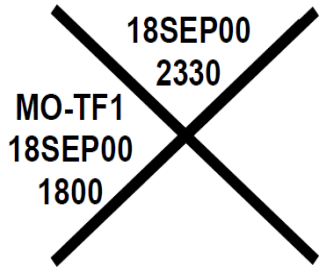
Search Assessment Marking

A separate and distinct marking system is necessary to denote information relating to the victim location determinations in the areas searched. This separate Search Assessment marking system is designed to be used in conjunction with the Structure/Hazards Evaluation marking system. The Canine Search Specialists, Technical Search Specialists, or any other task force/team member performing the search function will draw an "X" that is 2' X 2' in size with International Orange color spray paint. This X will be constructed in two operations - one slash drawn upon entry into the structure (or room, hallway, etc.) and a second crossing slash drawn upon exit. (see below)

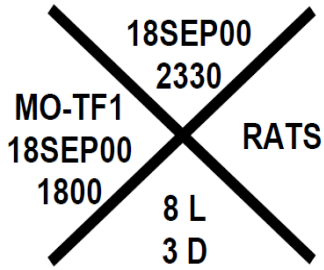
As with the Structure/Hazards Evaluation, it is important that markings are made specific to each area of entry or separate part of the building. If an area is searched and no victims are found, it must be noted with an X. It is also important that situation updates be noted as they are available, to reduce needless duplication of search efforts. Previous search markings would be crossed out and a new marking would be placed next to it with the most recent information.

FEMA Search Assessment Marking

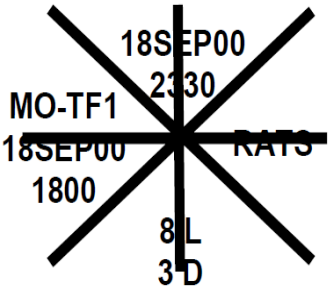
- Single slash upon entry into structure
- TF ID, date & entry time noted
- Indicates ongoing search



- Crossing slash upon exit
- Upon exit, date and time noted in top field
- Additional information placed in open areas of "X"



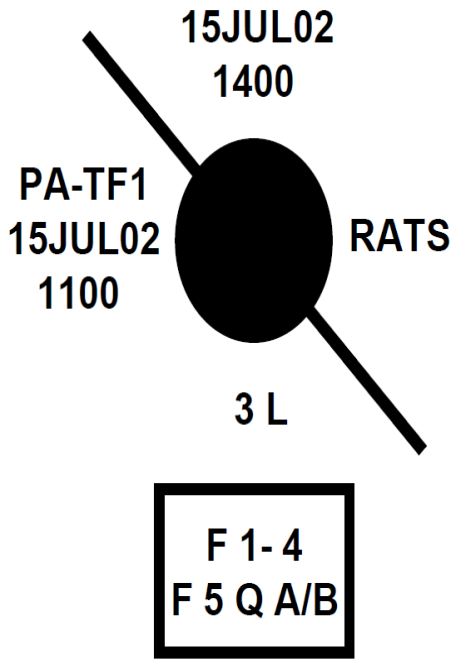
- Right - hazards
- Bottom - # of victims



- When new search completed, cross out previous, and complete new search assessment marking

Search Assessment Marking Diagrams

FEMA Search Assessment Marking
Incomplete Search Marking



- When search terminated prior to completion:
  - Place filled circle at center of slash
  - Add date & time search terminated in top field
  - Note hazards to right
  - Note victims beneath
  - Place box below slash, and note areas searched
  - Use “F” to ID floors searched
  - Use “Q” to ID quadrants searched

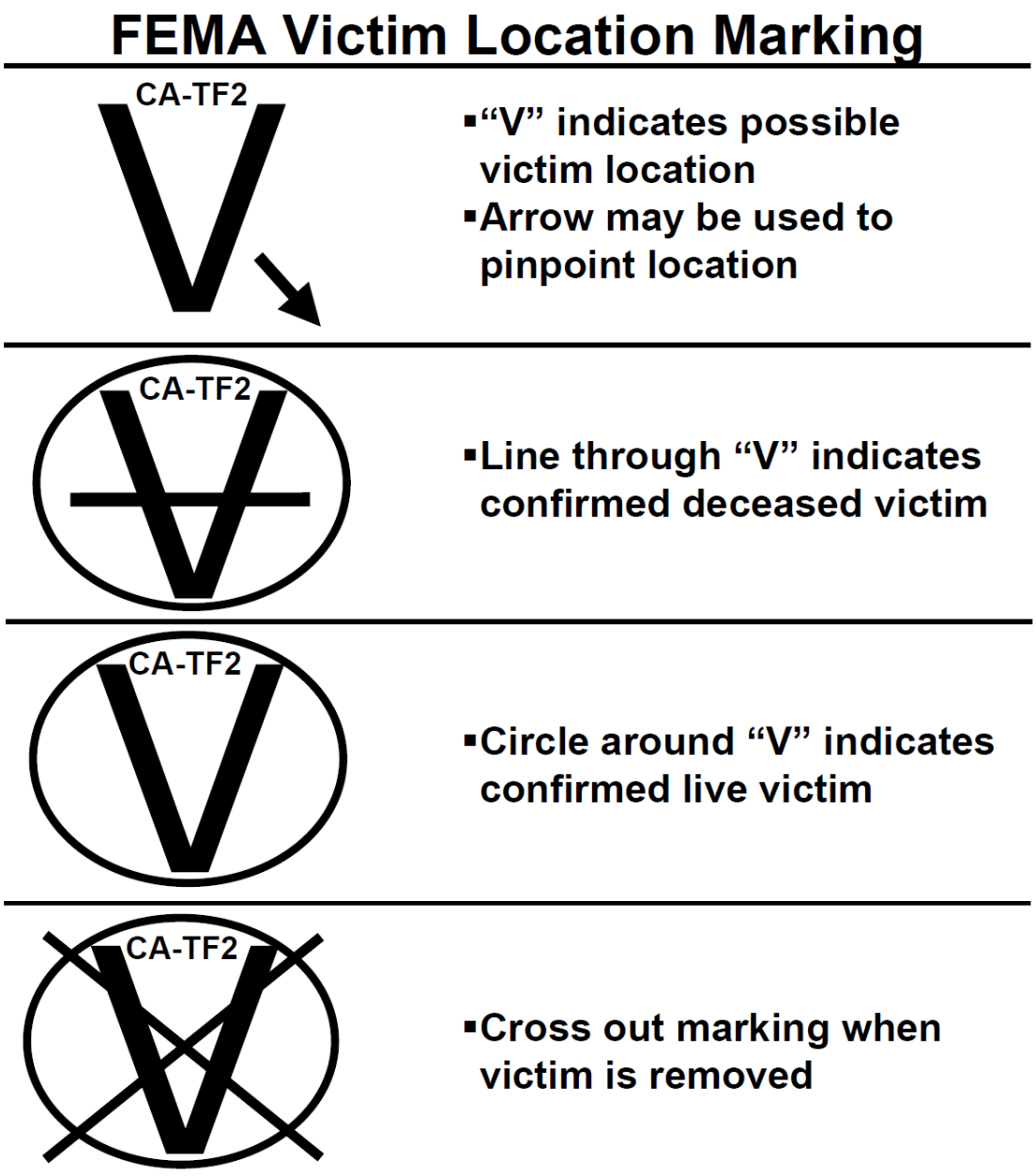
Incomplete Search Marking Diagrams

Victim Location Marking

During the search function it is necessary to identify the specific location of potential and known victims that are not easily removed so that this information can be relayed to rescue squads. Since the amount and type of debris in the area may completely cover or obstruct the location of any victims, victim location markings are made by the search squad. If the victim is lightly trapped and can be removed by the Search Squad, the location should be noted on the collection device and TF214 but not marked at the site. The victim location marking symbols should also be made with orange spray paint. (see below)

A large "V", approximately 2 ft. high, is painted near the location of the known or potential victim. An arrow may need to be added next to the "V" pointing towards the victim's location if not clearly visible or is not immediately nearby. The task force/team identifier is then placed in the top part of the "V". A circle is painted around the "V" when the location of a potential victim has been **confirmed** either visually, vocally, or by hearing sounds that would indicate a high probability of a victim. Paint a horizontal line through the middle of the "V" when the victim is **confirmed to be deceased**. Paint an "X" through the **confirmed** victim symbol after all victims have been removed from the specific location identified by the marking.

Paint new victim marking symbols next to additional victims that are later located near where the original victim(s) were removed (assuming the original symbol has been "X"ed out). The victim location marking symbols and numbers of victims, if known, will also be kept on the developing site map during the search of the structure or area.



Victim Location Marking Diagrams

RESCUE OPERATIONS

Search and rescue operations in the disaster environment require the close interaction of all task force/team elements (search, rescue, medical, and technical personnel) for safe and successful victim extrications. This section outlines tactical considerations and general strategies that should constitute a foundation for productive rescue operations. All task force/team personnel should have a solid understanding of the general rescue procedures. Supervisory personnel must tailor the strategy and tactics to fit the general situation and specific problems encountered.

Standardized rescue strategy and tactics will promote:

- Effective management and coordination of rescue operations.
- Better resource utilization and coordination.
- Proper integration of all disciplines (i.e., medical, hazardous materials, and structures specialists, etc.) in the rescue operations.
- The incorporation of assistance from entities outside the task force/team.
- Simultaneous, multiple-site rescue operations.
- Increased safety for all members involved in rescue operations.
- Provide around-the-clock (24-hour) operations if necessary.
- Organized and rapid victim extrication.

The most effective rescue strategy should blend all viable tactical capabilities into a logical plan of operation. The general strategic considerations are outlined as follows:

Composition

A task force/team may be split into several rescue squads, generally consisting of a Rescue Squad Officer, multiple Rescue Specialists, and a Medical Specialist. If necessary, a Heavy Equipment & Rigging Specialist will be identified. If two or more Rescue Squads are deployed, they should be managed by a Rescue Team Manager.

Task Force/Team Equipment Cache Management

The overall effectiveness of the task force/team depends upon the prompt availability of tools, equipment, and supplies in the task force/team cache so the organization and management of the cache is important. This equipment cache requires immediate and ongoing attention from logistics personnel.

Non-Task Force/Team Resource Requests/Liaison

In certain situations, it may be necessary to request assistance from personnel or organizations outside the task force/team. This could include assistance from military personnel, utility contractors, heavy equipment operators, etc. The Rescue Team Manager should relay these requests to the TFL, who will coordinate requests with the IC/IMT/IST.

Rescue Integration in Search Activities

Rescue personnel may be required to assist canine and technical search personnel with search and reconnaissance activities. This may include safety assessments at collapse sites, gaining access to voids and other difficult areas, deploying equipment, and conducting physical search operations. Individual void inspections, or combined listening operations may require shoring and stabilization prior to entry.

Rescue Site Management and Coordination

The Rescue Squad Officer is responsible for all activities of the assigned rescue site including safety when the squad operates alone. At large or complex rescue operations that require the commitment of two or more rescue squads to a single operation, the Rescue Team Manager may assume command or assign one of the Rescue Squad Officers to be in charge of the site.

Size-up and site control activities should be completed before rescue operations begin.
Once the size-up is completed and the plan of action developed, a short team briefing should be conducted to include safety considerations, structural concerns, hazard identification, and emergency signaling and evacuation procedures.

As rescue opportunities are identified, it is important that rescue personnel adhere to a consistent, formalized site management procedure to ensure the safe, effective operation of the rescue squads. The following considerations should be addressed:

- Hazard assessment and mitigation. This could include removing trip hazards, boards with exposed nails, shutting off utilities, etc.
- A collapse hazard zone (hot zone) should be established and clearly defined, along with the appropriate operational work area.
- All bystanders should be excluded from the operational work area.
- An equipment assembly area and/or cutting workstation should be organized at an advantageous location.

Rescue Site Set-Up

In order to ensure safe and effective rescue operations, the area immediately surrounding the selected work site should be secured. A collapse hazard zone is established for the purpose of controlling all access to the immediate area of the collapse that could be impacted by further building collapse, falling debris, or other dangers. The only individuals allowed within this area are authorized personnel involved in search or extrication of victims. The collapse hazard zone must be clearly identified.

When establishing the perimeter of the operational work area, the needs of the following activities should be provided for and properly identified:

- Medical treatment area
- Personnel staging area
- Rescue equipment staging area
- Cribbing/shoring working area
- Access/entry routes
- Security and environmental protection.

Site/Personnel Safety

Safety of the task force/team personnel is the single most important consideration during rescue operations. As a minimum, the following considerations should be addressed for rescue operations:

- The safety of personnel operating around collapsed/compromised structures, including issues related to exposure and/or contact with victim body fluids, inhalation or ingestion of dusts and contaminated atmospheres, water, etc.
- Emergency signaling and evacuation procedures.
- Personnel rotation as necessary for rest and rehabilitation (R&R).

MEDICAL

The Medical Team is organized and equipped to provide specialized emergency medical care throughout the course of a mission. Along with addressing illness and injuries to task force/team personnel and encountered victims, the Medical Team is also responsible for minimizing health risks, intervening in incident stress issues, and treating task force/team personnel exposed to hazardous materials.

Treatment Priorities

The treatment priorities for the medical team are:

1. Treatment of task force/team personnel, canines, and support staff.
2. Treatment of victims directly encountered by the task force/team.
3. Treatment of other injured/ill persons as practical.

It is not the intent of the Medical Team to be a freestanding medical resource at the disaster site. Local medical systems will be the primary providers of general medical care to disaster victims. It is also considered standard practice in disaster operation that the medical team may "hand off" a potentially unstable patient to a lesser interim level of medical provider (ALS to BLS), for transport to definitive care.

Medical Cache

It is expected that "fixed asset" medical equipment (i.e., defibrillators, monitors, ventilators, etc.) will not leave the rescue site with patients but will be maintained on site for the continued protection of the task force/team personnel or victims being extricated. The organization responsible for follow-up medical care must be prepared to provide such equipment, as necessary for patient transfer from the rescue site to a medical facility. ***However, if any such equipment is not available from the local EMS provider and is deemed essential for a positive patient outcome, the Medical Team may authorize its removal from the rescue site.***

The deployment of medical equipment includes having a combination of portable backpacks, and a resupply system available on site at the Base of Operations (BoO). Each Medical Specialist will have a method for personally carrying the medications, equipment, and supplies that they will need to provide immediate care for task force/team personnel and victims. In addition, other medical supplies are maintained in the medical cache at the BoO for immediate use.

Mission Considerations

The Medical Team, with input from the Safety Officer, is responsible for the health and welfare of all task force/team personnel throughout the course of a mission. The Medical Team must be operational upon activation and remain operational until demobilization is complete. Medical considerations are addressed for the following phases of a mission:

Activation

The Medical Team must quickly address several issues when the task force/team is activated for a mission, including an assessment of the operational readiness of the medical equipment cache and preparing the cache for transport. This would include the appropriation, from an established supply point, of any controlled drugs or medications not routinely maintained in the cache.

Point of Departure

The Medical Team is responsible for initiating or assisting with the medical check-in procedures for all task force/team personnel to include completion of the Medical Data Form (TF 101) and Mobilization Physical (TF 102). If the evaluation of the individual member indicates a current problem that makes the person a risk to himself or other members, this information will be brought to the attention of the Task Force Leader (TFL) for follow-up action.

In Transit

Appropriate medical equipment must be available at all times to ensure immediate medical care for task force/team members during transit. Medical personnel should continuously monitor the mental and physical condition of all members and encourage them to rest and hydrate during the transit phase.

On-Site Operations

The Medical Team Manager should directly participate in selecting the location of the Base of Operations (BoO), with respect to health and sanitation issues. The Medical Team Manager will also provide input to the TFL for the effective on-site operations of the Medical Team.

The Medical Team is responsible for developing and maintaining a Medical Plan (TF 206) which will include the overall medical strategy to be used at the assigned location and the evacuation procedure for injured/ill task force/team members. This procedure will need to be established prior to the task force/team beginning operations at an assigned work site. Current information on the local medical infrastructure and what has happened medically since the disaster occurred should also be included. Communications should be established with the local Emergency Medical Services for patient hand-off

and transportation procedures for victims encountered during rescue operations. Procedures for the processing fatalities should also be identified. The Medical Team will also coordinate re-supply procedures for medical equipment, supplies, and other medical needs, including veterinary capabilities that may be necessary to treat canine injuries.

As the Medical Plan evolves, it is expected that the Medical Team may acquire data that would prove important to local, State, and Federal officials responsible for planning additional medical response to the disaster (i.e., burn teams, mortuary teams, or other medical/health capabilities). This information should be conveyed via the TFL to the IC/IMT/IST as appropriate.

In coordination with the Safety Officer, the Medical Team should provide assessment guidelines for the general sanitation conditions at and around the BoO and work sites. Impacts on the task force/team food and water supply, as well as the placement and use of sanitation facilities, must be assessed and continually monitored. The Medical Team must also ensure medical personnel are available to provide for round-the-clock coverage.

Role in Extrication Activities

While the Team Managers or Squad Officers at an operational work site have the ultimate responsibility for site management, the close coordination between Medical Specialist (s) and other squad personnel is important to ensure a safe and effective operation. It is essential that a Medical Specialist be on site at the inception of any rescue operation. The Medical Team's scope of operations should include monitoring task force/team operations closely as personnel work toward accessing and extricating the patient. Rescue operations must also be monitored for potential impact on the trapped victims (i.e., dust creation, carbon monoxide generation, oxygen consumption, hypothermia, etc.). This may require immediate intervention by the Medical Specialist.

A careful review and pre-positioning of appropriate medical equipment, supplies, and personal communication equipment should be conducted to ensure immediate availability during the course of an operation. Victim assessment must begin as soon as contact with a victim is made verbally, including an evaluation of the level of consciousness, victim injuries, exposures, etc. that have an impact on the victim's medical condition. The Medical Specialist should perform a "hands-on" patient assessment and begin appropriate intervention as soon as the victim is reached, and the surrounding space is stabilized. It is important to closely coordinate efforts with the rescue squad to immobilize the patient and plan for the patient's extrication and evacuation. Once the patient is reached, the Medical Specialist is responsible for the victim's care during the remainder of the extrication.

The patient should be re-evaluated after every significant maneuver (lifting a crushing object, changing the patient's position, etc.) and as medically indicated. After removal from the collapsed structure, the patient should be taken to a pre-designated safe area, outside the identified collapse hazard zone, where the patient should again be evaluated prior to transfer for transport. Further evaluation, treatment, and stabilization of the patient prior to transfer should be based on the patient's injury, medical destination, level of care during transport, and transport time.

Coupled with the ongoing medical overview of rescue operations, Medical Specialists must also monitor task force/team members involved in the operation for signs of excessive stress and fatigue, inadequate fluid and caloric intake, and environmental impact (i.e., cold, dust, heat, etc.) before, during, and after rescue operations. If indicated, the Medical Specialist should recommend appropriate actions, including rotation and rest for assigned personnel.

Patient Transfer Considerations

It is essential to maintain the ability to provide care for task force/team members and victims at the disaster site. Essential non-replaceable equipment, such as cardiac monitors should not be transported from the work site for continued patient care unless necessary for a positive patient outcome. This may occur at the Medical Team Manager's discretion, in consultation with the TFL.

Medical Support of Other Task Force/Team Operations

The Medical Team should evaluate all operations that may require immediate medical support. This includes activities such as site evaluation, structural assessment, and hazardous material evaluations. A Medical Specialist may be assigned to the Structure Triage Teams to assess general damage and victim entrapment potential.

Victim Tracking

It is important to document any encounter that the Medical Team has with any victim or task force/team member during a deployment. The TF 206V can be used to track victims while the TF 206T can be used to maintain a record of any task force/team member that is given medical care.

Patient Documentation

A Task Force Patient Care Form (PCF) is used to create written documentation of any patient's assessment and any medical intervention performed by the Medical Team. The Medical Team on each task force/team will use the patient care forms they use on a daily basis to ensure familiarity. The PCF should also provide documentation of the transfer of a patient from the task force/team control to other medical resources.

Prior to transport, the PCF should be completed, documenting the complete patient care performed by the Medical Team and should be attached to the victim. The Medical Team will also maintain a copy of each completed PCF.

Property Accountability

As with the task force/team cache in general, accountability of the medical equipment and supplies is especially important, particularly with regard to medications and controlled drugs. The Medical Team, in conjunction with the Logistics Specialists, must ensure that medical supplies and equipment are always secured and accounted for appropriately.

Care for Injured Task Force/Team Members

The Medical Team shall provide initial care for all task force/team members who have been injured, exposed to toxic/biologic materials, or become ill. The Medical Team will also assist with all other documentation to support follow-up investigation (workmen's compensation, etc.). For medical treatment beyond the Medical Team's capabilities, the Medical Team Manager, in conjunction with the Incident Medical Unit Leader, will determine the best available course of action. The Medical Team Manager shall make a recommendation to the TFL concerning the duty-status of any affected task force/team member (i.e., remain on incident, assigned light duty status, relieved of duty and returned home, etc.).

Evacuation Process for Task Force/Team Members

The Medical Team will make efforts to stabilize any injured task force/team member prior to evacuation from the work site/incident. The Medical Team Manager shall recommend to the TFL the optimal medical destination and method of transport and task force/team personnel may be assigned to escort the injured member to assure that optimal care is provided. The TFL will communicate all pertinent information and details through appropriate communications channels back to the injured member's agency head and to the local IC/IMT/IST. The TFL should also brief all task force/team personnel on the occurrence, the member's condition, destination and the care provided. Periodic updates of members' injuries and current condition should be provided, as warranted. Upon return to home base, the Medical Team will assure that all task force/team members cared for by the Medical Team receive referrals and follow up on their medical issues as indicated.

The TFL and Medical Team must identify, in advance, the medical evacuation system for any seriously injured or ill task force/team member (including canines). This activity may require close communications and coordination with the appropriate local staff. This arrangement may be quite different from the one used for disaster victims.

Death of a Task Force/Team Member

In the event of death of a task force/team member, the Medical Team Manager shall verify the identity and confirm the death of the individual. The probable cause of death should be specified, if possible. This information must be provided to the TFL as soon as possible. Security should be ensured for the deceased member's personal items, such as wedding rings and watches, etc. The TFL should assign a task force/team member to accompany the remains at all times. Transfer of the remains must be coordinated with the local IC/IMT/IST and the member's home agency.

The Medical Team must initiate all appropriate documentation to record the details regarding the cause of death and support the follow-up investigation. The TFL, in conjunction with the Medical Team must assess the stress impact of the accident/incident on the task force/team personnel and determine their further operational capability.

Reassignment and Demobilization

The Medical Team Manager will assist the TFL in evaluating the current capabilities of the medical team, equipment, and supplies to accept a new mission or assignment, if necessary. This evaluation of the task force/team personnel's general physical and mental capabilities, as well as the operations and stressors already sustained, will influence this determination.

The Medical Team must coordinate the necessary follow-up care for any task force/team member treated by the medical personnel for even minor injuries. The Medical Team should be briefed on the mission status and reassignment or demobilization determinations when identified. Any operational losses and potential maintenance requirements of supplies, medicines, and equipment must be documented. The Medical Team Manager should make recommendations to the TFL regarding any expendable supplies and medications that may be left for use by the local jurisdiction.

Post-Mission Activities

The Medical Team Manager should submit personal notes and documentation to the Planning Team Manager for After-Action Reports. This should include a review of pertinent position descriptions, operational checklists, and recommended changes. The Medical Team will also provide other appropriate information for the After-Action Report, including lessons learned and recommendations for the improvement of future activities.

HAZARDOUS MATERIALS

Disaster search and rescue may include operations within a contaminated environment which may result from a release of hazardous materials in man-made or natural disasters or may be present within a site's normal environment. The health and safety of task force/team members is of paramount concern and is the primary focus of the Hazardous Materials section. This objective is accomplished through the application of limited monitoring, detection, and contamination-reduction capabilities.

Composition

The hazardous materials section is supervised by the Hazardous Materials Team Manager (HMTM) and includes a number of Hazardous Materials Specialists (HMS). However, the preparation for, response to, recovery from, and the mitigation of a contaminated SAR environment will likely require a coordinated response among federal, state, local, and tribal governments. Non-governmental organizations and private sector resources may also be requested for support. All task force/team members receive basic training regarding response to hazardous materials incidents, hazardous materials recognition, use of equipment, and decontamination procedures. The Medical Specialists and Hazardous Materials Specialists also receive advanced training in their disciplines, relative to specific hazmat situations.

Assumptions

Conducting SAR operations within contaminated environments is dangerous and challenging. Task force/team personnel must assume the following while operating in those environments:

- **The health and safety of task force/team members is the top priority**. Hazard and risk assessments conducted by Hazardous Materials Specialists, in conjunction with the Medical Team Manager and Safety Officer, are critical and will dictate whether a defensive or offensive posture is taken.
- The task force/team may have an extended response time to the incident.
- Local first responders may not have conducted an initial site characterization prior to task force/team arrival. Therefore, conducting an independent site characterization prior to commencing operations will be required.
- The US&R task force/team carries a limited supply of atmospheric monitors and personal protective equipment (PPE). Logistical support required to continue extended operations in contaminated environments may include water for decon operations; definitive site characterization from other agencies; analytical support services; and hazardous waste/wastewater removal services.
- Standards and procedures for hazmat operations will meet existing regulatory guidelines and follow safe operating practices for contaminated environments.
- Task force/team personnel will be operating within a unified command structure and will be working with responders from all levels of government including local and state hazmat teams, the EPA, the National Guard, CDC, etc.

Operational Capabilities

Using a combination of protective clothing and detection equipment, task force/team personnel are appropriately equipped, trained, and organized to accomplish the following assignments within a contaminated environment:

- Presumptively characterize a contaminated rescue site
- Decontaminate task force/team personnel and a limited number of survivors
- Perform limited breaching, shoring, search, and survivor rescue/extraction. Limiting factors are determined by the capability and availability of PPE for the environmental conditions
- Perform limited medical treatment for task force/team personnel and rescued survivors
- Shut off working valves
- Perform other US&R functions in which engineered controls can be used to manage the environment or limit the risk of protective equipment failure

Operations Outside Task Force/Team Capabilities

US&R task force/teams are not equipped nor intended to operate as a Hazardous Materials team. The following operations are **not** conducted by US&R task force/team personnel due to staffing and equipment limitations:

- Bonding and grounding operations
- Plugging and patching operations
- Off-loading; capping; or flaring
- Definitive chemical agent identification
- Absorbing or removing materials (except the use of dirt or other onsite materials to absorb small amounts of liquid)
- Containment of large spills, including contaminated decon wastewater
- Site mitigation
- Mass decontamination

Pre-Activation

- Maintain equipment and supply readiness

Activation

- Ensure that personnel have immediate access to issued respiratory protection
- Gather and analyze hazmat intelligence from the incident site
- Provide haz mat portion of task force/team briefing

In Transit

- Maintain a heightened level of situational awareness
- Attempt to gather additional site intelligence, available onsite/area resources, etc.

Base of Operations

- Perform site safety inspections in conjunction with the Safety Officer and Medical Team Manager
- Provide and assist with contamination reduction measures for all personnel and equipment entering the BoO
- Continuously monitor for hazardous materials and air quality within the BoO

Operational Guidelines

The Task Force Leader, in consultation with appropriate team specialists, will determine whether offensive or defensive operations are appropriate based on a site assessment, the level of training of personnel, and equipment capability.

Defensive Operations are defined as the precautionary and emergency measures taken to prevent, avoid, or minimize possible exposure to the release of a chemical, biological material, incendiary device/compound, radiological material, and/or detonation of an explosive device. When conducting defensive operations, task force/team personnel shall implement the following procedures:

- Perform reconnaissance for site characterization and the identification of control zones
- Establish an emergency decon capability
- Establish escape routes and safe refuge areas

Defensive actions may be required when circumstances outside the scope of existing training, equipment, and/or support capability exist, making the adequate protection of personnel impossible.

Offensive Operations are defined as any operation in which personnel are committed to a known or probable contaminated environment. When conducting offensive operations, task force/team personnel may take the following actions:

- Perform reconnaissance, search, and/or rescue of survivors.
- Attempt to manage existing hazards in order to maintain an acceptable level of risk.

Offensive actions may be possible in situations where protective equipment is adequate and available. Again, specific task assignments may or may not be possible depending on the equipment needs and personnel performance limitations imposed by protective equipment.

On-Site Operations

Safe operations in a contaminated environment will require task force/team personnel to effectively interface with the IC/IMT/IST, other federal, state, and local officials/responders, and authorities responsible for intelligence, site security, and the development of evidence preservation guidelines. The following objectives are critical in a contaminated environment:

- In conjunction with the Logistics section, determine available on-site hazmat resources
- Ensure the establishment of an initial capability to provide emergency decontamination, rapid intervention, and medical treatment
- Assist with structural triage, reconnaissance operations, and SAR operations by assigning a HMS as needed to provide direct monitoring and hazard evaluation
- Ensure that an initial site characterization is conducted prior to deployment of any squad (if available intelligence indicates known contamination)
- Use detection/monitoring equipment appropriate for potential hazards
- Determine PPE requirements
- Establish control zones and access control points
- Pre-plan appropriate equipment and PPE for emergency decon operations

Decontamination Operations

- Implement decontamination capabilities as needed for task force/team personnel and a limited number of rescued survivors
- Pre-plan contamination reduction procedures for all phases of offensive and defensive operations
- Staff the decontamination corridor under the supervision of Hazardous Materials Specialists. (Any task force/team member may be required to assist with decontamination)
- Assign appropriate monitoring equipment to the decontamination corridor
- Secure support from local jurisdictions and/or outside agencies for water supply, contaminated water removal, and self-contained breathing apparatus (SCBA) refill.
- Record all suspected exposure and related decontamination procedures
- Ensure medical monitoring of affected task force/team personnel and rescued survivors

* Gross Decon Wash: This is a two-stage process that is set up along a decon corridor. All run-off solutions may be retained for proper disposal if necessary. It is recommended that qualified Hazardous Materials personnel be used to implement this procedure and persons implementing the corridor should be protected by splash gear.

- Rescuer in safety gear is scrubbed with brushes using a clean water and soap solution. Any contaminated tools are left behind here for cleaning.
- Rescuer is rinsed with clean water.

** Bleach Solution: Bleach solution should be made using 1 ounce of Sodium Hypochlorite 5% (household bleach) for each one (1) gallon of clean water. This will yield a 20,000-ppm solution of bleach. Decon equipment should include buckets, sponges, long handled brushes, bleach, Dawn dishwashing soap, and portable hand pump sprayers.

Demobilization

- Decon all equipment used in the contaminated environment
- Based on the type of exposure it may be necessary to leave some equipment, PPE, uninforms, etc. for disposal by the local jurisdiction
- Vehicle safety inspection and decon should be completed prior to departure

Post-Mission Activities

- Ensure proper exposure forms are submitted
- Assist with post-mission medical screening as necessary
- Replace and restock equipment and supplies
- Participate in the development of the After-Action Report and ensure all concerns are incorporated. It is imperative that hazmat related findings and lessons learned are highlighted and incorporated into future training sessions, field exercises, and operational procedures.

PLANNING

Another critical function of task force/team management is to ensure that sound strategic and tactical planning is performed, and details of the response are documented appropriately. Proper planning is a continuous process that begins well before receipt of the Alert Notice and continues through the completion of an After-Action Report. The lack of proper planning will generally contribute to a less than productive mission.

Composition

The planning section is supervised by the Planning Team Manager. Depending on the size of the task force/team, a Technical Information Specialist may be added. However, for planning to function in a complimentary manner throughout the mission, it is imperative that the specific functions and requirements of planning and technical information are completely understood by all task force/team members. The Planning Team Manager and other supervisory personnel must work closely together to ensure that the documentation and reporting needs of the task force/team are met. The planning function is responsible for the collection, evaluation, dissemination, and use of information regarding the development of the incident and status of resources. Information is required in order to understand the current situation, predict the probable course of incident events, evaluate the need for additional resources, and prepare contingencies to accomplish the mission. The technical information function is responsible for documenting, tracking, and retrieving all pertinent information regarding task force/team activities for on-site and post incident analysis, historic documentation, and post event review. The planning function of the task force/team will be closely tied to the planning function of the incident, as the IC/IMT/IST is responsible for determining the overall mission objectives which dictate the actions of the task force/team.

Planning Meetings

Planning meetings are conducted so that task force/team management can review the status of objectives and operations from the previous operational period, determine the accomplishments and deviations, and begin planning for the next operational period. At the task force/team planning meetings, the Planning Team Manager is the meeting facilitator. As such, he/she must be prepared to collect the information needed for the next operational period and disseminate information contained in a Tactical Action Plan (TAP). These planning sessions should have limited attendance, as too many people in attendance can slow the process. To further enhance planning meeting effectiveness, all participants must come prepared to address their particular agenda issues.

Although the TFL decides who should attend the planning meetings, the following personnel are generally involved:

- Task Force Leader; Planning Team Manager; Technical Information Specialist; Safety Officer; Task Force/Team Managers; and any specialist or local representative deemed necessary.

Briefings and Debriefings

During the various phases of a deployment, there are two types of operational briefings that a TFL is responsible for holding. First, there is the need for a general briefing that all task force/team personnel should attend, and second, technical briefings related to functional issues, where only selected individuals are designated to participate. Early in the mission, the TFL will establish the briefing process that will be used throughout. This should include who will be responsible for conducting the briefings, the briefing schedule and location, who should attend the briefings, and topics or issues to be covered.

Even though briefings may be conducted on a scheduled basis, it may also be necessary to conduct impromptu briefings for special situations such as dealing with life threatening information, a change of tactical assignment or work priorities, special risk or hazard identification, injury of a task force/team member, etc.

On-incident debriefings of task force/team members are also critical in order to maintain current resource and situation status. Information gathered from these debriefings will aid managers in tracking assigned personnel and equipment, assessing progress, and planning tactical activities. Debriefings normally require the involvement of the TFL, Team Managers, Squad Officers, Planning Team Manager, and Technical Information Specialist for documentation.

Pre-Activation

Prior to any activation, each task force/team must ensure that all forms, equipment, and supplies are available on computer hard drive, back up thumb drives, and hard copy for immediate use. The amount of this immediate need equipment and supplies should be such that it can be deployed with the task force/team. Each task force/team must also ensure that all personnel who may be required to complete documentation are familiar with the forms and the submission requirements. In addition, all computers and other automated office equipment will need to be checked and updated regularly.

Activation

When the Activation Order is received, the Sponsoring Agency (s) should have a process in place for beginning mobilization efforts. An Alert Notice may also utilize the same initial planning process described below. In either case, initial documentation should begin using the TF 214 – Activity Log. Specific forms have also been developed to assist in completing and documenting the activities required at the Point of Departure (POD).

The initial actions required by the TFL or Planning Team Manager include obtaining any additional information regarding the incident or mission. This could include determining the environmental conditions, obtaining topographical and street maps of the incident area, preplanning the routes of travel, etc. In addition, the Planning Team Manager should begin the immediate development of a Tactical Action Plan (TAP) for the initial operational period, which is the period from deployment to arrival. The TAP can generally be documented on a Tactical Worksheet. (Refer to Task Force forms)

On-Site

When the task force/team arrives on-site, the TFL and Planning Team Manager should meet with the IC/IMT/IST as soon as possible to receive an overall assessment of the incident and any immediate assignment. The TFL and Planning Team Manager will generally attend and provide input at any incident planning meetings and obtain copies of the Incident Action Plan (IAP). The IAP should contain the overall incident objectives for the operational period along with weather information, safety concerns, evacuation plan, maps of the area, site information, building plans, utility information, and other relevant information. Based on the task force/team assignments, as outlined in the IAP, the TFL should in turn, have the Planning Team Manager develop a Tactical Action Plan (TAP) for subsequent operational periods. The TAP does not have to be complicated or lengthy, but rather should summarize the tactical assignments necessary to accomplish the strategic objectives.

While on-site, the task force/team will engage in two types of planning functions simultaneously, while considering capabilities and subsequent priorities for work assignments. The first is short range, daily strategic planning. The condition of the task force/team personnel (i.e., physical and mental fatigue, morale and effectiveness, etc.) must be monitored daily and factored into subsequent planned activities. The Planning Team Manager must constantly monitor and plan for environmental changes such as dramatic weather fluctuations. These can have a significant impact on the performance and effectiveness of the task force/team and victim viability.

The second type of planning function involves long range planning. This entails monitoring issues and resources necessary for the next 3 to 7 days. Input should be reviewed from each team manager's operational period reports and activity logs. These reports should contain the status of what resources are necessary for the next several days to allow completion of task force/team objectives. The Planning Team Manager must take into consideration the lag time for obtaining resources as identified by the IC/IMT/IST and ensure that supply requests are promptly submitted for sufficient food, water, and equipment to keep the task force/team operating at its full capability. Task force/team managers should also include status reports on the physical and mental condition of their assigned personnel so the Planning Team Manager can have a good idea as to how long the task force/team can continue to operate at its current pace. This information will be factored into the long-range planning for task force/team use and the demobilization process.

Throughout the incident, the TFL and Planning Team Manager (or other designees) have the responsibility to attend briefings convened by the IC/IMT/IST and ensure that the task force/team is kept informed of appropriate issues in a timely manner. The Planning Team Manager should have a clear understanding of what reporting information is required by the IC/IMT/IST and the times and to whom this information is required to be submitted.

Planning Schedule

While the task force/team planning schedule is generally determined by the incident planning schedule, the following chart provides an **example** of a planning schedule that can be used for 12 or 24-hour operations.

TIME	DESCRIPTION OF EVENT
0500 1700	OPERATIONAL BRIEFING/DEBRIEFING – 0.5 hours TFL & Managers from current and next operational period participate in the briefing/debriefing process. TAP is distributed.
0530 1730	TASK FORCE OPERATIONAL BRIEFING – 0.5 hours TFL briefs on-coming task force members. Tactical Action Plan is distributed, and tactical assignments are made.
0600 1800	OPERATIONAL PERIOD BEGINS – OPERATIONS SHIFT CHANGE – 1.0 hours Task force begins operations. Planning Team Manager and Technical Information Specialist collect, compile, and finalize report related to the last operational period.
0700 1900	PLANS SECTION SHIFT CHANGE – 1.0 hours Plans personnel conduct shift change briefing and debriefing.
0800 2000	PREPARE FOR PLANNING MEETING – 3.0 hours TFL and Planning Team Manager review accomplishments and begin planning for the next operational period, which includes gathering information and preparing displays and documents for the planning meeting. This may include a meeting with the incident's Operations Section Chief to identify resources and tactics for the next operational period.
1100 2300	PLANNING MEETING – 0.5 hours TFL and Planning Team Manager meet with IC/IMT/IST staff to discuss objectives for the next operational period. Review the Incident Action Plan (IAP). Specific actions are identified in order to meet the objectives.
1130 2330	PREPARE TACTICAL ACTION PLAN – 3.5 hours Planning Team Manager begins formulation of the Tactical Action Plan (TAP) for the next operational period.
1500 0300	REVIEW AND APPROVE TAP – 0.5 hours Planning Team Manager forwards the TAP to the TFL and other task force managers for review.
1530 0330	MAKE ANY CHANGES AND FINALIZE TAP – 0.5 hours Based on input from the TFL and managers, Planning Team Manager makes any final changes to the TAP and prepares the TAP for duplication.
1600 0400	PREPARE FOR OPERATIONS BRIEFING – 1.0 hours Displays and other required documents are prepared for use at the operational briefing; TAP is duplicated and collated for distribution.
1700 0500	OPERATIONAL BRIEFING/DEBRIEFING – 0.5 hours TFLs & Managers from current and next operational period participate in the briefing/debriefing process. TAP is distributed.
1730 0530	TASK FORCE OPERATIONAL BRIEFING - 0.5 hours TFL briefs on-coming task force members. Task force Tactical Action Plan is distributed, and tactical assignments are made.
1800 0600	OPERATIONAL PERIOD BEGINS – OPERATIONS SHIFT CHANGE – 1.0 hours Task force begins operations. Planning Team Manager and Technical Information Specialist collect, compile, and finalize report related to the last operational period.

Demobilization

Beginning with the task force/team activation, the TFL and Planning Team Manager should begin planning for the demobilization process. Demobilization is no more than a reversal of the mobilization process. The Planning Team Manager should be considering demobilization issues several days before the assignment has been completed. This process needs to be discussed with the TFL and team managers during planning meetings and reviewed with the task force/team members during the briefing sessions.

Issues that should be considered are:

- General condition of task force/team personnel.
- Notifications to home agencies.
- Transportation requirements.
- Inventory and packaging of tools and equipment.
- Break down of support facilities.
- General clean up.
- Resupply requirements.
- After-action activities.

As the mission begins to conclude on-site operations, the IC/IMT/IST should notify the TFL of an estimated demobilization date and time, along with any reporting requirements for demobilization. The Planning Team Manger should then develop a demobilization timeline. This demobilization timeline should identify what activities the task force/team needs to complete to be ready to disengage and conclude the mission, be released to return home, or be reassigned. It should detail the time schedule for the conclusion of any mission objectives, the dismantling of the BoO, loading of all equipment, food schedule for the last meal on-site, and the time personnel should be ready for transport.

Note: It is important to remember that advanced notice is not always possible. The decision by the IC/IMT/IST to demobilize the task force/team may come quickly and without much notice. Each task force/team must be prepared to adapt as necessary by anticipating this possibility.

After-Action Reporting

The Planning Team Manager should constantly reinforce the need for task force/team personnel to document all activities and issues that will be included or reviewed in the after-action reporting process. This can be easily accomplished with the TF214. All information, conclusions, and recommendations from both on-site and formal debriefings, as well as all planning and reporting documents, should be compiled and reviewed for the formal After-Action Report.

DOCUMENTATION AND REPORTING

Purpose

A standardized process for the documentation and reporting of task force/team activities through all phases of a mission or planned event is critical. While some forms for documenting activities have been specifically developed for task force/team operations, most of the forms are standard ICS forms that have been modified slightly to show task force/team positions. The purpose of these modified forms remains the same as that of the corresponding ICS forms found in the NIMS ICS Forms Booklet. **All modified forms are identified with the prefix "TF" to easily distinguish them from the incident ICS forms.** ICS and TF forms, and instructions can be found on the OSFM's website.

While a standardized process is essential to maintaining consistency, the process or reporting requirements may be modified by task force/team management personnel as necessary to meet the needs of the incident.

Availability of Forms

Where applicable, all forms have been developed as fillable PDF documents and should be maintained electronically by each task force/team, along with the equipment and office supplies needed to generate forms and reports in the field. Each task force/team should also maintain an adequate hard copy supply of each form in order to conduct operations until additional forms can be generated on scene.

Naming Convention

To maintain consistency and make electronic documents easy to locate, a common naming convention should be identified by the Planning Team Manager when saving forms for each incident.

Task Force Forms

Tactical Worksheet

The tactical worksheet can be used as a task force/team planning document. It is a one-page document that can be used as a tactical action plan. The tactical worksheet can often summarize numerous other forms identified below.

TF 101 – Task Force Medical Data Form

A medical data form must be completed by each deploying member during the mobilization process and reviewed/maintained by the Medical Team for the duration of the deployment or event.

TF 102 – Task Force Mobilization Physical
This form must be completed by the Medical Team for each deploying member during the mobilization process and maintained by the Medical Team for the duration of the deployment or event.

TF 201 – Task Force Briefing
This form may be used to prepare information for a task force/team briefing.

TF 202 – Task Force Objectives
This form may be used to identify task force/team objectives and other important information for each operational period.

TF 203 – Task Force Assignment List
This form may be used to list position and squad assignments for task force/team members.

TF 204 – Task Force Field Assignment List
Based on the objectives identified, a TF 204 may be used to document specific assignments for each Squad, Division, Group, etc.

TF 205 – Task Force Radio Communications Plan
This form may be used to provide specific communications information for the task force/team, such as frequencies, talk-group assignments, etc.

TF 205A – Task Force Communications List
This form is used to record a contact mobile phone number for each deploying member. A copy of the TF 205A is provided to the IC/IMT/IST upon arrival at the incident.

TF 206 – Task Force Medical Plan
This form may be used to provide specific medical information for task force/team operations such as hospital location, transport services, or other medical procedures.

TF 206V – Victim Injury & Illness Log
This form is used to track information about the victims encountered during task force/team operations.

TF 206T – Task Force Injury & Illness Log
This form is used to track information about injuries or illnesses to task force/team members.

Patient Care Form
The Patient Care Form (PCF) is used to create written documentation of any patient's assessment and any medical intervention performed by the medical team. This form is generally used by the medical team during everyday patient care at their home jurisdiction.

TF 208 – Task Force Safety Message/Plan
This form may be used to expand on basic safety information or provide information about specific hazards that may be encountered during task force/team operations.

TF 209 – Task Force Situation Report
This form is used to provide a "snapshot" of the progress in a specific time period toward meeting assigned objectives. While the TF 209 may be submitted at the end of each operational period or more frequently in a fast-moving operation, the IC/IMT/IST will likely determine the required frequency for receiving situation reports from the task force/team.

TF 211 – Task Force Check-In
This form is used to check in personnel mobilizing at the Point of Departure (POD). A copy of the TF 211 is provided to the IC/IMT/IST upon arrival at the incident.

TF 213 – Task Force General Message
This form may be used whenever a message and/or reply needs to be documented, either internally or externally.

ICS 213 RR – Resource Request Message
This form should be used to document requests for resources and/or support from the IC/IMT/IST.

TF 214 – Task Force Activity Log
This form is used to document the details of notable activities by task force/team personnel at all levels during each operational period.

TF 218 – Task Force Support Vehicle Inventory
This form is used to check in vehicles mobilizing at the Point of Departure (POD). A copy of the TF 218 is provided to the IC/IMT/IST upon arrival at the incident.

LOGISTICS

Without the appropriate logistical support, no task force/team can be considered operational for any length of time. The Logistics team is critical to ensuring adequate supplies such as food, water, insect repellant, etc. are on hand and deployable; to securing living arrangements, fuel, and other on-scene supplies; to repairing and maintaining tools and equipment; and to ensuring adequate internal and external communications are maintained.

Task Force/Team Vehicles/Trailers

The vehicles and trailers used for equipment and personnel transport for each task force/team are located with the Participating Agencies on the task force/team. Those agencies are responsible for the periodic inspection and maintenance as necessary to keep those vehicles and trailers operational and deployable. The Sponsoring Agency is responsible for maintaining a detailed list of vehicles and trailers assigned to a task force/team response on a TF 218.

Task Force/Team Equipment

The equipment assigned to a task force/team response is located with the Participating Agencies on the task force/team. Those agencies are responsible for the periodic inspection and maintenance as necessary to keep the assigned equipment operational and deployable. The Participating Agencies are responsible for providing a detailed list of deployable equipment to the Sponsoring Agency, who will ensure that the appropriate and adequate equipment is assigned to a task force/team response.

Ground Movement

Ground transportation during any phase of the incident may require manual handling and loose loading of cache containers and/or equipment. Attention to the container weight and size limitations will ensure overall manageability of the cache and is of paramount importance. The Logistics team is responsible for the assembly, management, and movement of the cache from its Point of Departure to the assigned location during mobilization. This requirement should be fully defined, preplanned, and exercised prior to any actual mobilization. The following issues, should be addressed:

- Process for identifying, procuring, and packaging perishable or short shelf-life items (i.e. batteries, food supplies, water, fuels, etc.)
- Process for generating and maintaining an inventory of all cache items
- System for tracking on-scene equipment issue and use, including on-scene repair and maintenance

Considerations for Cache Placement

Consideration should be given to the prioritization and placement of cache tools, equipment, and supplies that will be needed at the beginning of a mission. An effort should be made to segregate specific tools, equipment, and supplies that would constitute the first priority, along with appropriate personnel, into the disaster site should the total cache/task force arrive in waves instead of all together. The following considerations should be given to segregating and loading tools, equipment, and supplies that will be needed early in the mission:

- Priority should be given to a combination equipment for both the search and rescue functions. These two categories interrelate, as technical equipment enables the location of potential live victims during the critical first hours when the task force/team arrives at the disaster site.
- Some elements of the communications equipment should also comprise part of the first priority into the disaster site to allow initial personnel to begin operations. This equipment plays a key role in initial reconnaissance, search, and rescue activities.

Personal gear and supplies will generally be transported with the user but regardless, all personnel should maintain a small personal kit or daypack to keep essential personal and safety gear with them at all times.

BASE OF OPERATIONS

One of the crucial elements of a successful operation by a task force/team is the location and operation of the Base of Operations (BoO). The BoO serves as the equipment cache set-up area, command and control area, sleeping/resting/eating areas, refuge from the elements, communications link with the outside world, and many other functions.

Site Selection Criteria

One of the primary functions of supervisory personnel is to survey potential sites for the Base of Operations. If there is no established location for the BoO while the task force/team is enroute, it may be prudent for the TFL to send an advance team to go ahead of the main body of the task force/team to find an appropriate site. **In all cases, the main body of the task force/team should stage outside the general incident area until it can be determined where they should operate or set up the BoO.**

There are a number of general considerations when choosing a site. The most strategic factor for the placement of the BoO is its proximity to the anticipated work sites. There are two key factors: travel distance and available transportation. If transportation is limited, the need to establish a forward base close to the work area should be considered. Transportation access or avenues should be considered as part of the location choice of the BoO.

As important as the proximity of the BoO to the work site is, it is also prudent to consider having the BoO some distance away from the work site. The BoO must provide a tranquil place where task force/team members can get restful sleep if operations will occur around the clock. It should be away from major highways, railroad tracks, and airports if possible. It is important for all members to get as much rest as possible during down time as this makes for more productive work and reduces the chance of injuries. It is also important that the members get physically away from the work area and are not forced to constantly view the site. This reduces the amount of stress that workers must deal with during the incident and gives them temporary refuge from the disaster environment.

The site should be environmentally safe with no chance of contaminated run-off. It should not be located near landfills, manufacturing plants, tank farms, or other such sites and should be located upwind/upstream if near any facilities with a potential for release. It must also be safe from the effects of rain run-off, snow build-up, exposure to high winds, etc. The BoO site should be set up to provide as much natural security as possible since it can be an attractive target for looters who recognize it as a source for food, water, and equipment. As much as possible, task force/team members must provide guard over the site. If necessary, the TFL should request professional security personnel or military guards to exclude unauthorized persons.

Establishing the BoO on higher ground will usually enhance radio communications. In addition, there must be adequate space for equipment cache set up and maintenance, shelter of personnel and canines, the Task Force Command Center (TFCC), medical treatment area, food preparation and feeding area, and toilet and sanitation areas.

Existing structures may be available for the BoO site and would be preferable, so long as they can be determined safe. The BoO should not be set up next to a high-rise building or other structures with the potential for failure. If the task force/team elects to use existing buildings, permission must first be obtained from the local jurisdiction because there may have to be waivers on the zoning and occupancy of the buildings used. Other health and safety issues may be involved in using non-residential buildings. If tents are used, the space must be level or have proper drainage so that rainwater does not flow into the tents or create a muddy area where there is heavy foot traffic.

Base of Operations Set-Up

The set-up of the BoO should be based upon the needs of the task force/team as it begins the mission. The task force/team is not fully effective without the use of the tools, equipment, and supplies. Therefore, the cache area of the base should be a priority. In most cases, it will be necessary to assign additional personnel to assist in the set-up of the equipment area due to the size and weight of equipment.

The location of the Task Force Command Center (TFCC) is also an important consideration while setting up the BoO. During the length of the mission, the TFCC will be the focal point for the task force/team and must be strategically located so as to function effectively. After the cache is set up and the TFCC is operational, the lodging requirements of the task force/team should be addressed.

Determine if existing structures are available and can be used safely. In general, smaller, wood framed structures may prove safer for cache and personnel shelter.
A food preparation area, task force feeding area, and a separate canine area must be established. If not already established, toilet/sanitation areas must be set up. A medical treatment area must also be established within the BoO, with input from the Medical Team.

The main entrance should be near the main route of travel. Generators and lighting should be placed on the perimeter of the BoO as close as possible to the section being powered. The quietest generators should be used around the sleeping areas and the TFCC.

Throughout the course of the mission, supervisory personnel should assess the BoO functionality. Requests to the IC/IMT/IST may be necessary for communications equipment, medical equipment, canine needs, or issues related to food, shelter, and sanitation.

Set-Up Procedures

Each task force/team should have a template of the site set-up for their Base of Operations, considering the type and size of equipment, vehicles, tents, etc. This should enable a smooth & quick set up of the BoO.

Base of Operations Management

The Task Force Command Center (TFCC) is the main control point for the task force/team operations. This control point can be as simple as a single tent, trailer or command vehicle, or an existing structure. The TFCC should become the command and coordination point for the TFL and accommodate the operations of the Communications Specialist and Planning Team. Other supervisory personnel should also be situated in this area so that important decisions can be made quickly. The TFCC should be staffed whenever operations are ongoing in order to maintain a contact point with the task force/team for communications with personnel in the field, with the IC/IMT/IST, and with the home jurisdiction as necessary.

Accountability of all task force/team members should be maintained in the TFCC so that the TFL or other designated personnel are able to quickly identify the personnel in the BoO and those off-site for any reason. This is critical in the event of an evacuation order or significant weather event.

Demobilization

Upon demobilization, the BoO site should be restored to its original condition in as much as possible. This includes properly policing for trash and other remnants left behind. Task force/team members should ensure that the site looks as good or better than when they arrived, so as not to burden the local jurisdiction with clean-up.

COMMUNICATIONS

Effective communication is vital to the safe and successful operations of the task force/team. Upon arrival, the Communications Specialist should meet with on-scene communications assets to establish procedures, frequencies, etc. as necessary to complete the Radio Communications Plan (TF 205).

Telephones

Cellular phones will provide the primary telephone communications within the task force/team during a deployment so a Communications List (TF 205A) should be developed and distributed when the task force/team is activated. The 205A is shared with each task force/team officer and vehicle, as well as the IC/IMT/IST on arrival at the incident site. Hard line phones can be used if available at the assigned Base of Operations.

Radios

Radios can be used to allow personnel operating at remote sites to communicate with each other, with other work sites as authorized, and to communicate back to the TFCC. As many of the Participating Agencies may have a different type of radio, it is the Communications Specialist's responsibly to patch them together as necessary for effective communications throughout the mission. **Emergency radio traffic will always have priority over general radio usage.** In the event that a person signifies that they have an emergency, all other users will maintain radio silence until such time as the emergency traffic has concluded. Sensitive communications should not be transmitted over the radio but instead, should be handled by telephone or face-to-face. Examples of sensitive communications include victim information, health issues, task force/team injuries, etc.

Radio Procedures

All personnel should use the following radio procedures:

- Identify the person (position) to be called first, and then identify the caller.
- Repeat information for confirmation.
- Use task force/team/squad identifier as necessary.

Clear Text Radio Vocabulary

Words/Phrase	Application
Unreadable:	Used when signal received is not clear. In most cases, try to add the specific trouble. Example: "Unreadable, background noise."
Loud and Clear:	(self-explanatory)
Copy, Copies:	Used to acknowledge message received. Unit radio identifier must also be used. Example: "KS-TF2 copy."
Affirmative:	Yes.
Negative:	No.
Out-Of-Service:	Indicates a unit is not available.
In-Service:	This means that the unit is available.
Repeat:	(self-explanatory).
Return to:	Normally used to direct units that are available back to a specific location.
What is your location?:	(self-explanatory).
Call _____ by Phone:	(self-explanatory).
Disregard Last Message:	(self-explanatory).
Stand By:	(self-explanatory).
Is _____ Available for a Phone Call?:	(self-explanatory).
At Assignment:	Used when units arrive at their assigned work site. Example: "Squad 1 at Side Charlie."
Can Handle:	Used when the amount of personnel and equipment is sufficient to handle the assignment.
Report on Conditions:	(self-explanatory).

Emergency Traffic Only:	Radio users will confine all radio transmissions to an emergency in progress or a new incident. Radio traffic, which includes status information such as reports on conditions at scene and availability, will not be authorized during this period.
Emergency Traffic:	Term used to gain control of radio frequency to report an emergency. All other radio users will refrain from using that frequency until cleared for use.
Resume Normal Traffic:	(self-explanatory).

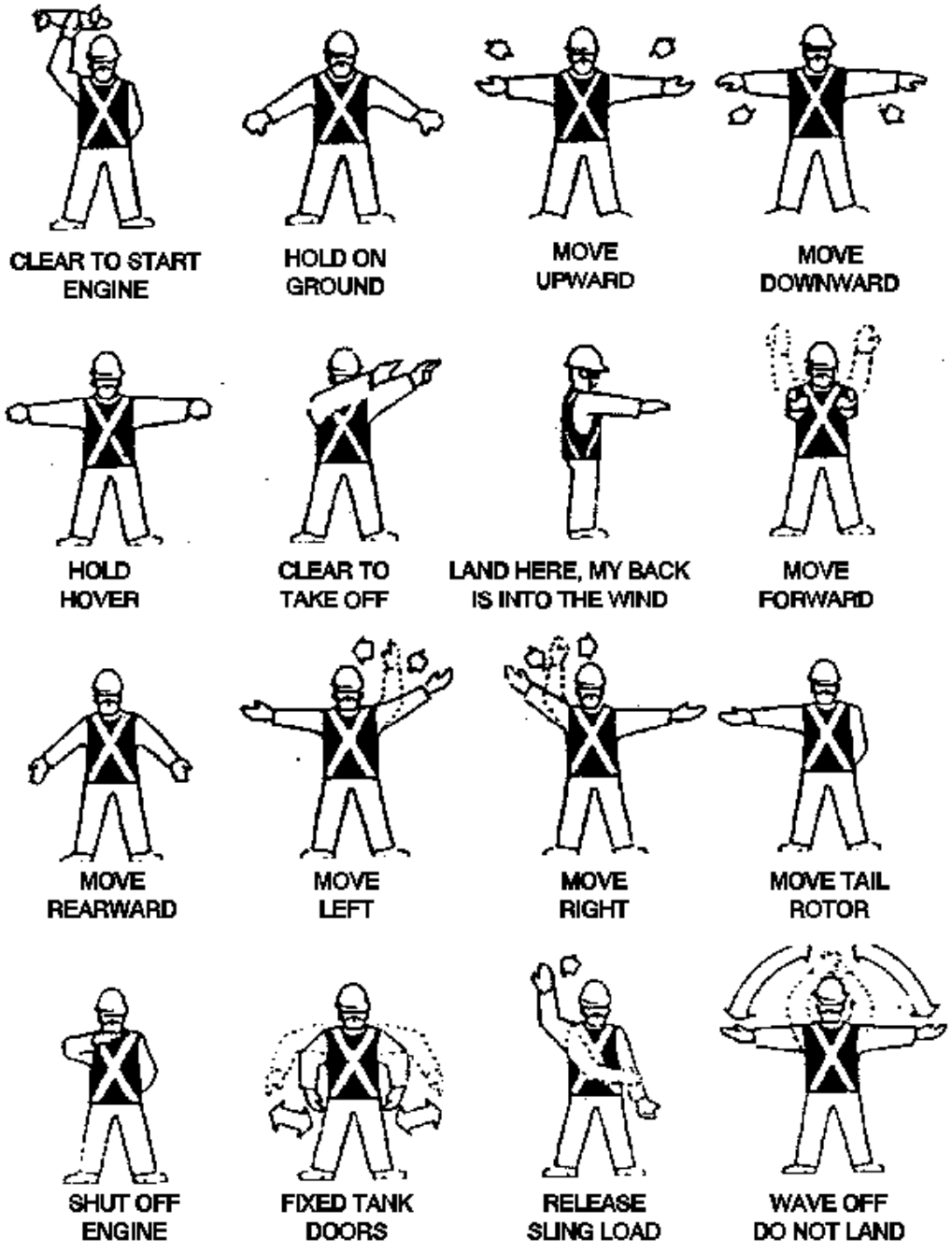
Phonetic Alphabet

A - alpha (AL fah)	J - juliet (JEW lee ett)	S - sierra (SEE air rah)
B - bravo (BRAH voh)	K - kilo (KEY low)	T - tango (TANG go)
C - charlie (CHAR lee)	L - lima (LEE mah)	U - uniform (YOU nee form)
D - delta (DELL tah)	M - mike (MIKE)	V - victor (VIK tah)
E - echo (ECK oh)	N – november (no VEM ber)	W - whiskey (WISS key)
F - foxtrot (FOKS trot)	O - oscar (OSS car)	X - x-ray (ECKS ray)
G - golf (GOLF)	P - papa (pah PAH)	Y - yankee (YANG key)
H - hotel (HOH tell)	Q – quebec (keh BECK)	Z - zulu (ZOO loo)
I - india (IN dee ah)	R - romeo (ROW me oh)	

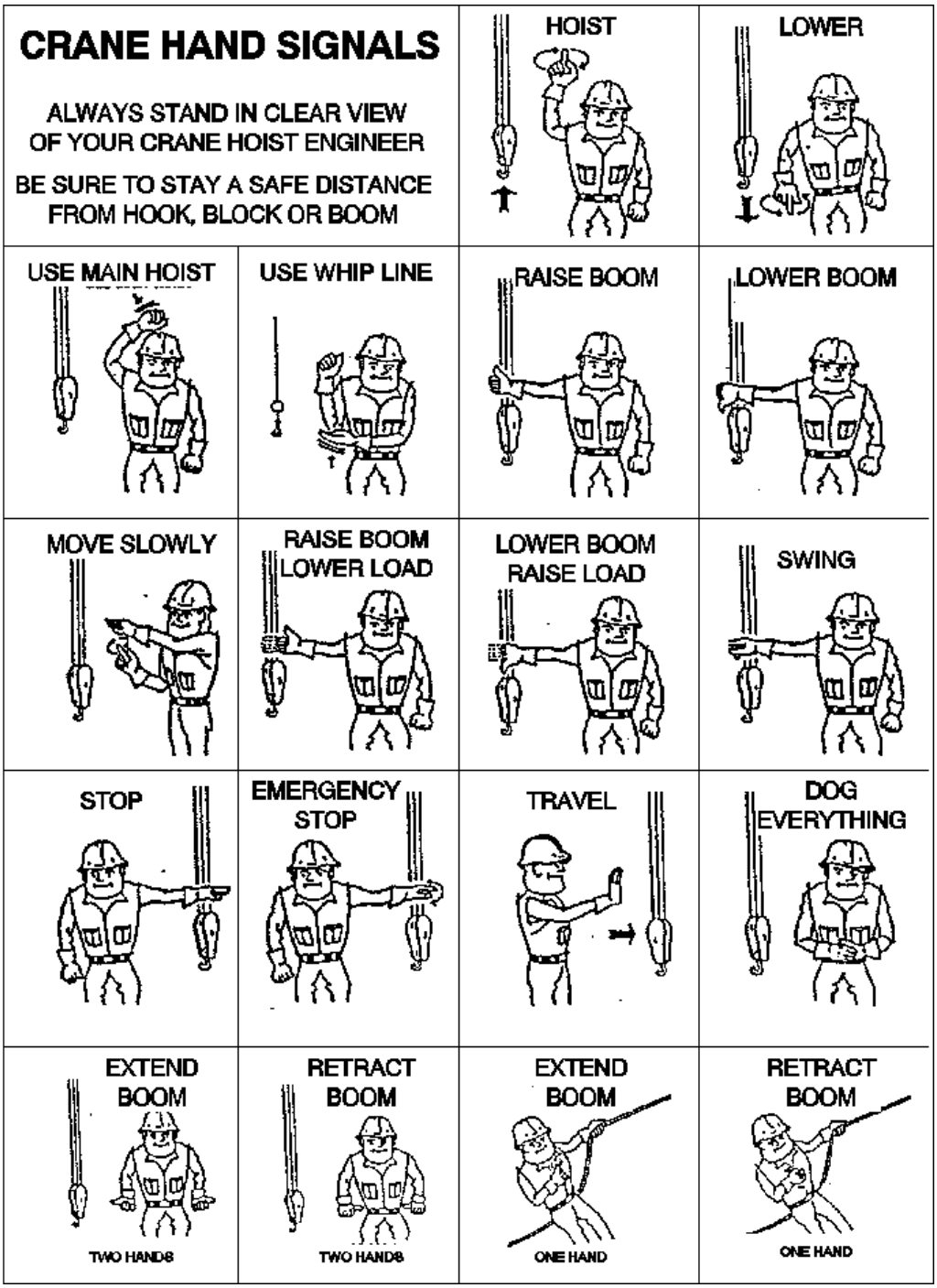
On-Site Signaling and Alerting Procedures

Effective emergency signaling procedures are essential for the safe operation of task force/team personnel operating at a disaster site. These signals must be clear and understood by all personnel. Air horns or other appropriate hailing devices should be used to sound the appropriate signals as follows:

- Cease Operations/All Quiet:
    - ◊ 1 long blast (3 seconds).
- Evacuate the Area:
    - ◊ 3 short blasts (1 second each).
    - ◊ Conduct a radio roll call to account for all personnel as necessary. When all are accounted for, the radio signal "all clear" will be broadcast.
- Resume Operations:
    - ◊ 1 long and 1 short blast.



Helicopter Hand Signals



Crane Hand Signals

WATER RESCUE

Search and rescue operations conducted in the water environment include searching disaster areas that have become flooded; conducting rescue operations in collapsed structures inundated by floods, dam failure, or other water-related disasters; accessing and rescuing persons and companion animals trapped by flood waters during disasters; and extracting task force/team personnel and other responders who have become stranded or trapped by flood waters.

Water Rescue Modes

Defensive Water Operations – includes the ability to:

- Transport personnel & equipment to and from operational areas
- Develop a site survey for an existing water hazard
- Conduct witness interviews
- Select water rescue personal protective equipment
- Define search parameters for a water rescue incident
- Develop an action plan for the shore-based rescue of single or multiple victim (s)
- Deploy a water rescue reach device to a water-bound victim
- Deploy a water rescue rope to a water-bound victim
- Escape from a simulated life-threatening situation

Offensive Water Operations – includes the ability to:

- Use watercraft for rescue operations (as designated by AHJ)
- Use techniques appropriate for the water environment to extricate an incapacitated water-bound survivor from the water
- Identify procedures for operation of rope systems particular to the water rescue needs of the AHJ
- Perform a swimming surface water rescue
- Use defensive tactics during a swimming surface rescue with a combative patient
- Supervise, coordinate, and lead rescue teams during operations

Deployment

The water rescue equipment cache is deployed utilizing existing task force/team vehicles to transport equipment and to tow boat and/or equipment trailers. Each task force/team shall develop and maintain vehicle and transportation plans for an imbedded water rescue team as well as a stand-alone team. The task force/team must also ensure that appropriate equipment such as ratchet straps, chains, binders, etc. are provided to tie down boats and equipment. **The removal of boat covers is recommended for over-the-road travel.**

Personal Protective Equipment

The minimum personal protective equipment (PPE) worn/carried by task force/team personnel engaging in water operations shall include:

- Personal flotation device (PFD)
- Helmet appropriate for water operations
- Cutting device (knife, scissors, etc.) attached to the PFD
- Whistle
- Locating light (i.e.: strobe, light stick, etc.)
- Throw bags (minimum two per watercraft)
- Footwear appropriate to conditions and operations
- Respiratory protection when conditions warrant
- Eye protection when conditions warrant
- Appropriate gloves
- Thermal protection
- Contamination protection (dry suit) as conditions dictate.
- Headlamp and other lighting appropriate for inclement weather and/or low light conditions

General Safety Concerns for Water Operations

Review strategic and tactical objectives, launch point and potential exit points, communications plan (including hand signals), emergency protocols, medical plan, etc.:

- All passengers/survivors shall properly don a PFD.
- A minimum of four spare PFDs should be carried anytime survivors may be encountered.
- Anyone entering the water shall wear PPE that provides contamination protection.
- The depth of the water should be assessed prior to entry.
- The area underwater must be assessed for holes and other hazards by probing with a pike pole or other object prior to entry and movement by any person or vehicle through the water.
- Ensure that boat team capabilities are adequate for conditions encountered.
- All boats shall have radio communications with land-based task force/team members.
- On navigable waterways boat operators shall have communication capability with commercial vessels in the area using marine band radios.
- Boat teams need to be prepared for extenuating developments such as companion animals or a combative survivor.
- Team members should be aware of conditions that produce heat stress, dehydration, hyperthermia, and hypothermia.

Safe Boating Operations

- Operation of a boat should be in accordance with the boat manufacturer's recommended specifications and boat operations training.
- When appropriate, rescuers should provide for downstream safety.
- It is recommended that boat teams operate in tandem when possible.
- Special consideration should be used with flat bottom boats as they can become unstable in moving water.
- Boats used in night operations shall have appropriate navigational lights.
- Boat operators and officers should monitor weather conditions to assist in decision making during the use of boats.

Size Up

After receiving a specific assignment (s) from the IC/IMT/IST, task force/team members shall assess water conditions, hazards, and needs, including:

- Water condition risk benefit analysis (inundation with still water, inundation with moving water, natural or manmade waterway, strainers and other navigation hazards, potential for additional inundation such as levee failure, dam failure, storm surge, flash flooding, mud & debris flows, etc.), potential water contamination **(all water should be assumed contaminated until determined otherwise)**, and other conditions and hazards.
- Evaluate your team's capabilities relating to the above water conditions. Water and water features can be deceiving in fast moving water. Determine if the conditions at scene will exceed your team's capabilities.
- Weather conditions that may affect the safety and effectiveness of water operations. Be cognizant of weather events in the total runoff area for the waterway in which you are operating.
- Determine the most appropriate watercraft to conduct/support operations in the specific water environments identified.
- The need for additional resources to conduct or support water operations (including additional watercraft, high water vehicles, rotary airlift for deployment to remote locations, etc.).
- Considerations for useable daylight hours. (Time of day). Can you deploy your team, conduct operations and retrieve all members before loss of light? Current equipment capacity (cache) may not support night operations. **Night operations should only be conducted in extreme circumstances.**
- Conduct a risk benefit factor field analysis to identify the risks and determine the benefit of conducting water operations.
- Determine the strategy and tactics for the water operations.

Search Operations in Water Environment

The most effective search strategy should blend all tactical capabilities into a logical plan of operation. One of the initial determinations that supervisory personnel may have to make at the inception of a mission would be what area should be searched first. There may be many structures damaged or surrounded by water that require attention. An area may be segmented by city block or other easily definable criteria. Search operations should be conducted in accordance with search strategy and tactics contained in this document. In the event of high flood waters, consideration should be given to single story occupancies as opposed to multistory, focusing attention on roofs and attic spaces. Occupancies that present the highest likelihood of survivability in terms of type of construction and the number of potential survivors would also receive priority. All locations searched will be identified, recorded, and mapped according to the defined Rules of Engagement.

Search and Rescue in Collapsed Structures in the Water Environment

The tactics for searching structures compromised by water will depend on the depth of the water remaining in the structure. If the water has been evacuated from the structure, the search and rescue operations will likely be consistent with general search practices. If water remains in the structure, a thorough risk/benefit assessment should be completed. Significant structural damage may not be visible because of flood waters. Other hazards such as energized electrical equipment and hazardous materials may also be present.

If water remains in the structure, it is probable that survivors will move to the highest level of the structure, specifically the upper floors or even attic spaces. Boat crews must be prepared to perform inspection holes and breach roofs to gain access to the attic spaces. **In no case, shall search and rescue operations be conducted that require rescuers to be exposed to a subsurface environment.**

Recommended tool cache for search operations from a boat:

- 2 – Forcible entry tools: axe with cover, halligan tool, etc.
- 2 – Rope throw bags
- 4 – Survivor PFDs
- 1 – Chain Saw with protective cover
- 2 – GPS / Data Collection devices
- 4 – Marking Paint and markers
- 1 – Search Camera
- 1 – Thermal Imaging Camera
- 1 – Atmospheric monitor
- 1 – Hot Stick
- 1 – Companion animal essentials
- 4 – Flashlights
- 214 in waterproof covering

Launch Operations

During urban flooding situations, alternative boat launch locations may be needed. Teams may need to utilize flooded roadways, ramps, or bridge approaches as launch points. Partnering with local or military assets may prove valuable as they have high clearance vehicles to transport over areas that are too shallow for the launch of a boat, especially rigid hull boats. When the water is too deep for high clearance vehicles, then the boat may be launched from the cargo area of the vehicle. Any launch area should be evaluated for the possibility of being unusable due to high or low water conditions/hazards. Team members should make sure the ramp is clear by physically inspecting the end of the ramp that is under water. The inspection should determine if the ramp can support vehicles and trailers. Launching techniques should be in accordance with agency training. With the parked trailer in place, use the winch to ease the boat into the water. If the ramp is slippery, you might need wheel chocks to keep the tow vehicle and trailer in place. Once the boat is afloat and secured, detach the winch cable from the boat. Rewind the cable and park the trailer nearby. Boats may need to be carried until the water is deep enough to float. Plan for alternate launch/recovery sites due to changes in water levels.

Securing Boat

Task force/team personnel should refer to their boat operator training for general methods of securing and anchoring procedures and considerations. Boat crews should utilize the straight edges of the boat to press on structural members of a building. The boat operator can generally apply light forward pressure to the building from the boat to hold the boat in place. Boat crews can utilize rope lines from the boat to secure it to a structure. When securing the boat to a structure, the boat should be tied off via two (2) locations, as dictated by the boat's alignment to structure. After the boat is secured to a structure, shut down power to motor. The boat operator should routinely check anchor points to ensure holding ability, as fluctuations in water conditions may affect anchor points. When loading survivors or evacuees onto the boat or when using the boat as a working platform at least one boat operator shall be on the boat.

Recovering a Survivor

Recovering a survivor from a structure –task force/team personnel may be assigned to rescue a survivor from a partially collapsed structure that is completely surrounded by water. Entry into a structure should be commensurate with the Rules of Engagement from the AHJ and hazards should be mitigated prior to entry if possible. If entry into the water is necessary, personnel entering the water shall wear a dry suit for contamination protection. When loading or off loading, secure boat to structure if possible. When rescuers or survivors are unloading, the boat should be monitored for weight distribution. The use of a Stokes litter with a floatation kit should be used when transporting a survivor with spinal injuries.

Recovering a survivor from the water

- Survivor pick off from a fixed object or location
  - Talk to survivor instructing them not to jump to the boat.
  - Approach and leave shore or object slowly in a ferry perpendicular to shore to prevent damage to boat.
  - Utilize power to stabilize boat during transfer of survivor to boat
  - Maintain positive control of the boat at all times.
  - Approach into a fixed object with control and survey hazards.
  - Nudge fixed object and press bow against it with sufficient power to stabilize boat against it.
  - Crew members assist the survivor into boat.
  - Ferry away from the object under control without striking the object or bottom of the boat.

- Floating Survivor Pick Up
  - The crew maintains eye contact on floating survivor and points.
  - The boat operator focuses on piloting the boat and maintains situational awareness.
  - The bow quarter is presented to the survivor to assist the person grasping the survivor and assists the survivor into boat.

Note: Task force/team personnel should always refer to their boat operator training for general information regarding rescuing a survivor from the water.

Companion Animal Rescue

The *Pets Evacuation and Transportation Standards Act* (PETS) was made an amendment to the Robert T. Stafford Disaster Relief and Emergency Assistance Act in October 2006. Responders are required to consider pet owners, household pets, and service animals when engaging in emergency operations and evacuation. This act does not apply to horses, cattle, or any other livestock.

Use caution when transporting animals on boats. If possible, secure the safety of humans first and then return for animals, in accordance with the PETS amendment of the Stafford Act. Precautions should be taken to protect the survivors and rescuers from adverse actions by any animal taken on board a boat during rescue operations. Consider the use of muzzles and restraints. The boat team (s) must also communicate with the collection point regarding the number, size, and condition of animals being rescued.

Hazardous Materials & Decontamination for Water Environments

US&R water operations generally include working in bodies of water contaminated with hazardous substances or microorganisms harmful to humans and canines. The water operations team must have the ability to decontaminate all personnel, canines, PPE, boats, trailers, and other equipment following operations in contaminated water environments. Gross decon* should be performed after each entry and the completion of exposure reports is recommended for all entries into contaminated floodwaters.

Personnel Decon

After exiting the water, even for short periods, members should go through a gross decon wash with soap and clean water. Remove gloves and wash hands and face with clean water and anti-microbial soap. At the end of the duty period, members should go through a gross decon scrub wash with soap and clean water before any safety gear is removed. Wash hands and face with clean water and anti-microbial soap after removing all safety gear. Members should shower, using antimicrobial soap, before leaving the scene if possible or as soon as possible thereafter, and change into clean clothes. **Any personnel assigned to boating operations who could be required to enter a water environment within the next 24 hours during a deployment should refrain from shaving to limit the possibility of exposure to water born contaminants.**

Decon procedures should be used any time hazardous materials (hazmat) are identified or likely to be present. These include areas of sewage contamination as well as agricultural and chemical contamination. These areas should not be entered, if possible. Limiting the number of personnel exposed to the water should be the top priority of the squad officer. Support for decon should be arranged before units are committed to the contaminated area. **Water samples should also be taken for testing from areas entered by the team.**

Equipment Decon

Dry suits shall be cleaned in accordance with the manufacturer's recommendations. When contaminated, equipment should be sprayed with bleach solution** or other agents as recommended by Hazardous Materials Specialists on scene and allowed to stand a minimum of fifteen minutes. Thoroughly rinse all treated equipment with clean water and allow it to dry before storing with other equipment. Bag any equipment that cannot be dried for the return trip to the BoO. Wipe with bleach solution** any surfaces inside vehicles that might have come in contact with wet safety equipment during the duty period. Units requiring decon should be taken out of service until all equipment has been cleaned and dried.

* Gross Decon Wash: This is a two-stage process that is set up along a decon corridor. All run-off solutions may be retained for proper disposal if necessary. It is recommended that qualified Hazardous Materials personnel be requested to implement this procedure and persons implementing the corridor should be protected by splash gear.

- Rescuer in safety gear is scrubbed with brushes using a clean water and soap solution. Any contaminated tools are left behind here for cleaning.
- Rescuer is rinsed with clean water.

** Bleach Solution: Bleach solution should be made using 1 ounce of Sodium Hypochlorite 5% (household bleach) for each one (1) gallon of clean water. This will yield a 20,000-ppm solution of bleach. Decon equipment should include buckets, sponges, long handled brushes, bleach, Dawn dishwashing soap, and portable hand pump sprayers.

Decontamination Operations

- Pre-plan contamination reduction and decon procedures for all phases of offensive and defensive water operations.
- Staff the decon corridor under the supervision of Hazardous Materials Specialists, although any task force/team member may be required to assist with decon.
- Assign appropriate monitoring equipment to the decon corridor.
- Remember that task force/team decon capabilities are intended for task force/team personnel and a limited number of survivors rescued by the team (s).
- Secure support from local jurisdictions or other agencies for water supply.
- Decon operations when implemented for water operations will consist of emergency decon. This will allow for minimal equipment in a boat.
- The decon equipment should consist of equipment and supplies found in the task force/team cache and water supply by the local jurisdiction.

Demobilization

Demobilization shall be consistent with the existing task force/team demobilization process, with the following considerations:

- Boat trailers that have been submerged in water during operations shall be fully inspected prior to departing the training or incident site. The trailer frame, tires, wiring, lighting, wheel lugs, and hubs and bearings shall be inspected to identify damage or deficiencies that may cause breakdowns or problems during the trip home.