Search Strategies and Tactics Employed by NY-TF1 in Haiti

by Lieutenant Thomas Donnelly

This article focuses on some of the search operations and tactics employed by New York Task Force 1 (NY-TF1) during the Haiti earthquake deployment. Search operations are the foundation of a US&R Task Force mission. In the simplest terms, if victims can't be located, they can't be rescued.

Photo #1--A daily briefing was held for each operational period.

Photo #2--NY-TF1 members sought intelligence about trapped individuals from the residents.

US&R Task Forces must be able to tailor search strategy to fit the conditions they encounter. Such was the case with NY-TF1 deploying to Haiti. Note that FEMA US&R Search Operation Guidelines are based on a disaster occurring within the United States. When deploying to a foreign country, US&R Search Operations fall under the guidelines of the International Search and Rescue Advisory Group (INSARAG). These guidelines differ somewhat from country to country. INSARAG guidelines aim to provide an effective search methodology so the affected country can provide effective search and rescue operations involving numerous foreign countries during a major urban disaster.

Once US&R search operations in a country commence, NY-TF1 members operate under the United Nations On-site Operations Coordination Center (OSOCC). OSOCC incident support members assign United States US&R assets to a specific sector, based on available intelligence coming into the Center. OSOCC divided the city of Port-au-Prince into various sectors and daily briefings were conducted for each operational period. (See Photo #1.) Using the daily operational assignment, NY-TF1 moved into a sector based on several factors:

- Intelligence from other U.S. Task Forces or the United Nations, based on reports of people trapped.
- Once in the geographic sector, intelligence from local residents, merchants and--in some cases--media, on where civilians might be entombed in structures. (See Photo #2.)
- Identify target structures and conduct high coverage searches. (See Photo #3.)
- Ensure structures searched by NY-TF1 personnel are marked with the international search symbol.

Photo #3--Target structures were identified.

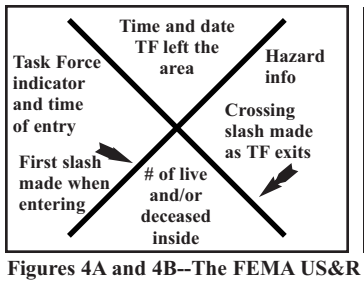
The international search symbol differs from the accepted FEMA US&R marking system that also is used by the FDNY. (See Figures 4A and 4B.) This differing structure-marking symbol was addressed both en route to Haiti, as well as at each daily operational briefing. High and wide area coverage search operations cannot be so rigid that changes cannot be made. They must be flexible, based on local neighborhood sector conditions that US&R search personnel confront. High/wide coverage search operations are driven by several factors. These include, but are not limited to:

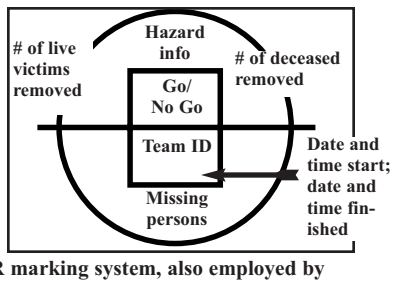
1. Make-up of search team. NY-TF1 operated on a recon team premise set forth by FEMA US&R guidelines. (See sidebar on Reconnaissance Team Make-up on page 9.)
2. Location/detection resources may include physical, canine and technical.
3. When trapped individuals are located, additional resources are requested for removal.
4. Victim locations should be marked using the international search symbol.

Search resources used during the Haiti deployment by NY-TF1 personnel were divided into three main categories: physical, technical (see accompanying technical search article on page 13) and canine. NY-TF1 personnel blended all three into a workable operation that succeeded very well.

A *Hasty Search* features the ability to quickly and methodically conduct physical search operations of an assigned area in an attempt to locate victims who can be successfully rescued from an entombed structure. (See Photo #5.) This search is conducted simultaneously with a recon of the assigned sector from the U.N. OSOCC. The physical hasty search does not require specialized equipment. US&R personnel rely on basic fundamental search techniques, employing around-the-clock call-out and void searches that are accessible. This tactic worked well for NY-TF1 during daylight hours and was very conducive to the widespread areas to which the group members frequently were assigned.

The introduction of state-of-the-art listening and visual search devices has added a very positive benefit to US&R personnel. These devices were employed during every operational period. In all of the





Figures 4A and 4B--The FEMA US&R marking system, also employed by the FDNY, is shown on the left. Members always go right and stay right. The international search symbol is reflected on the right.

FEMA US&R Reconnaissance/Search Team Make-up and Responsibilities

1. Search Team Manager (Recon Team Leader) sets the priorities for search, determines type of search, passes information obtained to Task Force Leader (TFL) and Rescue Team personnel.
2. Technical Search Specialists conduct searches using visual and acoustic search devices, operate as overseer for K-9, assist Communications Specialists with navigation and GPS marking of site.
3. Canine Search Specialist assist Technical Specialists with K-9 search.
4. Structure Specialists assess assigned work area (size-up, recon), triage structures and mark as necessary for safe entry.
5. Haz-Mat Specialists identify and assess hazards--chemical, atmospheric and electrical--for search team, advise and ensure a decon is established.
6. Rescue Specialists assist in all areas as needed, assess technical rescue priorities.
7. Medical Specialists look after medical needs of Search/Recon Team, assess condition of victims located and provide treatment as necessary.

The number of personnel assigned to the Reconnaissance/Search Team can be adjusted by the TFL, based on mission assignment, type of structure, rescue considerations, etc.

Photo #5--A Hasty Search is one that is fast-paced and methodical. Members work in an assigned area where it is believed that trapped civilians can be successfully rescued from an entombed structure.

successful rescues that involved NY-TF1, both listening devices and visual search equipment were used to locate the entombed civilians. (See Photo #6.)

Canine search operations

Canine search operations also were used extensively by NY-TF1 on the Haiti deployment. (See Photo #7.) A FEMA US&R Type I deployment roster requires that four canines be deployed; in the Haiti search and rescue operation, all four canines were used extensively. A certified canine search time can cover a lot of ground in a short time; a K-9 search team consists of the K-9 and its associated handler under the supervision of the search team manager. The canine will detect live human scent of a buried victim and focuses its barking (bark alert) at the source.

The primary function of the K-9 is to detect those victims who are alive. The dog will give subtle indications of human remains. The best working conditions for a K-9 are usually during dawn to dusk, while a scent is rising, and with very limited personnel. Generally, live human scent channels around solid slabs, broken concrete and debris. Canines will indicate where the scent is emerging from, not necessarily where the victim is. Continued search operations are necessary to pinpoint exact victim location.

NY-TF1 canines were used during searches of numerous structures. K-9 operations can be complex. The dog's well-being must be evaluated constantly; a tired and/or injured K-9 is not effective to the overall search operations. It's important for the K-9 handler to keep supervisory personnel up to date on the dog's ability to conduct searches as was done with the Haiti deployment. All four canines deployed to Haiti served their function and contributed positively to the overall search operation.

Information management

Obtaining available and reliable information on areas of the city and its various structures where possible trapped civilians might be located is critical to developing a usable search plan.

Photo #7--Canine search operations were used extensively.

Photo #6--Listening devices and visual search equipment were used to locate trapped civilians.

Sorting out this information using mapping and GPS devices was critical to NY-TF1's successful search operation. NY-TF1's communication specialists were able to download available data from several sources and relay that information to a forward communications link where NY-TF1 reconnaissance search teams were operating. Downloading this critical data of structural features, GPS coordinates and grid map locations made the search plan more logical as sectors were covered.

The communication specialists also were able to navigate routes to various structures, as well as directions to and from the base camp for each operational period. Their work was critical to the overall search mission, given the size of the city and the complexity and magnitude of the damage to the infrastructure of Port-au-Prince.

Quick, individual sketch maps of structures where rescues were ongoing were made, pointing out structure features, points of entry, hazards, possible victim location, etc. This information was communicated and shared with other U.S. and Task Forces working together.

The systematic search planning process used during the Haiti deployment involved an overall strategy of coordinating with other Task Forces, trying to reduce confusion and facilitate smoother work site engagement and disengagement, thus reducing overlapping searches. Detailed building marking and a smooth execution of search mission assignments resulted in a coordinated, successful search operation by NY-TF1 that resulted in saving civilian lives, as well as searching large areas of a city that was devastated by an earthquake, thus fulfilling the very mission for which US&R Task Forces were created.

About the Author...

Lieutenant Thomas Donnelly is a 19-year veteran of the FDNY. He is assigned to Rescue 1. Previous assignments include Ladder 176 and Rescue 2 as a Firefighter. He has been an instructor at the FDNY Technical Rescue School since its inception in 1996. He is a member of FEMA NY-TF1. He holds a BS degree from Saint Joseph's College. He writes frequently for WNYF.