

# Hurricane Katrina After Action Report

---

**Nebraska Urban Search and Rescue Task Force One**  
August 29, 2005 through September 5, 2005

---



Nebraska Task Force One  
1801 Q Street  
Lincoln, NE 68508

Phone: 402-441-8799

# EXECUTIVE SUMMARY

Hurricane Katrina made landfall on August 25, 2005 hitting most of Miami, Fl. Killing 11 people. Strengthening to category #5 (wind speed to 156+ mph and storm surge of 13 to 18 feet above normal) storm on August 28, 2005. Katrina came ashore near the Louisiana, Mississippi border on Monday August 29, 2005. On August 30<sup>th</sup> flooding from the hurricane caused the breach of two levees in New Orleans. Reports estimate that 80% of New Orleans was under 25 to 35 feet of water with thousands of occupants assumed to have drowned.

On August 29, 2005 NETF-1 was activated along with several other Urban Search & Rescue Task Forces at the request of the Federal Emergency Management Agency(FEMA) to assist in the Hurricane Katrina disaster. Our original directive was to depart Lincoln, Nebraska within a 6 hr window (1500 hrs) for an approx. 26 hr driving trip to a military mobilization camp in Shelby, Mississippi.

NETF1 Urban Search & Rescue Task Force team roster was comprised of 34 member - type III team. The team specializes in a variety of occupations including firefighters, medical specialist, structure engineers, canine handlers, hazardous material specialist and other such drivers for ground transportation. Our team was equipped to sustain ourselves independent of outside supplies for a total of 72 hrs. Additional supplies were provided by the team=s logistics division.

During pre travel preparations, each member was briefed of our mission, the possible length of deployment, mode of transportation/route to travel, etc. Due to possible air transport difficulties and the needed mobility of the task force it was determined that it was in the best interest of our mission for the task force to travel by ground. Our convoy consisted of a Good Life Coach bus and US&R vehicles #1, #2, #3, #4, #5, and #6

Due to the distance of travel and the driving time involved, the team made several stops for vehicle fueling, short rest periods and daily meals.

Upon our arrival in Mississippi (August 31, 2005), we proceeded directly to Harrison County- Gulfport, Mississippi- City Hall Court House and made contact with white IST Chief of Operations Fred Endrikat. We were briefed of the situation and advised that we would be operating under a unified command. We were then directed to report to Pascagoula, MS. (Jackson County) to the local jurisdiction (EOC) and advise them of our arrival and provide them with any support needed.

NETF-1 mission was to work in conjunction with VTF-1 and to provide search and rescue operations in the areas of Ocean Springs, MS. There was a consideration to facilitate all task force operations from the Water Park facility in Gulfport, MS., However, the task force was able to appropriate and establish the BoO at the Ocean Springs Middle School.

On September 2, 2005 NETF-1 was re-directed to move all search and rescue operations to the area of Biloxi, MS. along US Hwy 90. After an aggressive search and rescue operation, the task

force completed its mission. A day later (September 3, 2005), NETF-1 was relocated to the DuPont Chemical Factory in Delisle, MS. All efforts of search and rescue were accomplished within these areas until instructed to make preparations for demobilization.

NETF-1 demobilized and departed Ocean Springs, MS. on September 5, 2005 via ground transportation. It was determined that one of the team members (canine handler) would be allowed to return home (Minnesota) via commercial airlines, leaving from Memphis TN. This prevented unnecessary lodging and travel time for canine and handler in this specific case. Throughout the length of deployment there were some concerns regarding team safety. Consideration was given to the drinking water supply, the environment we were exposed to and the numerous hazards encountered while conducting search and rescue operations. Other considerations were team accountability at all times, plenty of rest for team members, possible dehydration due to the high temperatures and maintaining regular hygiene. One task force member was treated for minor laceration to his right arm. His injury occurred during normal search and rescue operations. The task force medical staff treated this member. This member has recuperated and returned to full duty.

NETF-1 has returned home after accomplishing FEMA's assigned team goals and with the task force cache in readiness status to be re-deployed if the need arises

# TASK FORCE SUPPORT

Nebraska Task Force members are committed to assist in mitigating disaster that occurs throughout the United States. This commitment is shared by our families, our community leaders, the Department's rank and file as well as the city overall. Because of this support network, it makes it easier for each member to be away from our family for an extended period of time as well as to work in extremely dangerous and hazardous situations.

Primarily fire department personnel staff the Task Force Logistics. They provided excellent and very effective support throughout the length of the deployment. Their effectiveness was gladly received, as support from IST logistics was limited beyond the 72-hr. period. The Task Force relied thoroughly on being self-sufficient throughout the length of our deployment.

IST leadership provided adequate coordination of operations for multiple task forces in the field. Lack of documentation such as maps, coordinates, reference points, etc. made operations a little more difficult.

Sharing the Base of Operations with another task force was an essential part of the support system. The support was brought about by means of exchanging useful information that assisted with the coordination and managing search operations in the assigned areas. In addition, the combined efforts of logistics were able to resupply the task forces with additional resources

## **After Action Report Memorandum**

**From:** Bruce Sellon

**To:** Plans

**Subject/Issue:** Hurricane Katrina  
NETF-1 Type III Deployment

**Date:** September 15, 2005

### **Statement of Issue # 1**

NETF-1 was activated and then ordered to hold at our home location until further notice.

### **Background Discussion:**

Successful search and rescue operations are time critical, meaning that the sooner help arrives for search and rescue, the more successful the chance of viable rescues and offering assistance. NETF-1 was activated at approx. 11:00 on August 29, 2005. The team was capable of leaving within 4-6 hours. Our orders to move did not come until approx. 21 hours later. Twenty-one hours was our approximate driving time from Lincoln, NE to the affected Gulf coast.

### **Recommended Action:**

For the most effective operation for this Search and Rescue mission, deployment should have taken place as soon as possible after activation. The team could have completed the twenty-one hour drive and would be ready for immediate search and rescue operations approximately one day sooner. Pre-staging taskforces also allows essential planning time to prepare for their first operational period.

### **Statement of Issue # 2**

Miscommunication and lack of coordination in search efforts occasionally led to duplication of efforts and loss of team effectiveness.

### **Background Discussion:**

The IST was working under extreme disadvantage of being short staffed and trying to work with so many city, county and state jurisdictions over a wide geographic area. Each jurisdiction had their unique requests, regulations and sometimes legal issues. I sensed that many jurisdictions did not have a good working relationship even before this incident. Many of the state (EMAC) teams were operating on their own and without accountability. On several occasions, we tried to coordinate with the East EOC in Pascagoula, MS., specifically, Chief Ehlers (Florida 3 state USAR –Gold Team) and Todd Livingston (Operations Chief) & others. Clear areas of search were designated to both the FL teams and NETF-1 and on several occasions, we found FL 4 & 5 searching areas that were assigned to NETF-1. This occurred mostly in the Ocean Springs and east branch areas.

### **Recommended Action:**

The EMAC and state USAR teams need to adhere to the same search requirements of the FEMA USAR teams. When areas are assigned, other teams should adhere to search grids and not overlap unless specifically requesting assistance. The IST requested that we work with the State teams and take directions from them, but it seems that procedural differences between the state and FEMA teams is not yet in agreement.

### **Statement of Issue # 3**

Communication problems existed for most of the mission.

### **Background Discussion:**

Due mostly to infrastructure damage, cell phone coverage and land lines were virtually non-existent. Radio communication was very short-range and was occasionally compromised during field search operations. Satellite phones were reliable and many times were the only means of communication between units. The lack of communication caused several occasions where we had no means of contacting with Logistics

### **Recommended Action:**

An additional satellite phone would have helped, especially for the BoO. Using a repeater or other radio system enhancements may have assisted during field operational periods. Comms. has discussed mounting an antennae and repeater to the bus or larger trucks at the forward BoO. Technology advances may improve communications in the near future.

### **Statement of Issue #4**

The mission assignments for the day were not usually known until the morning briefing.

### **Background Discussion:**

Mission assignments for the day were often held until the morning briefing. It would have been beneficial for teams to know the night before where search efforts would take place on the following day. Plans would attend a meeting daily at 1600 where team progress reports were submitted for review and followed by assignments for the following day. It seemed that negotiations were then made by individual teams for assignments that were a higher priority than originally assigned. Computer and technology would enhance incident progress and search details.

### **Recommended Action:**

Give mission assignments 8-12 hours before the operational period begins. The use of search grid mapping of the entire event for each taskforce would keep efforts organized, allow all teams to see progress of the entire area with quicker updates. The use of GPS coordinates and marking could also be transferred to each team's database for better incident management and reduce the chances of duplicating search efforts.

### **Statement of Issue # 5**

NETF-1 was continually being approached by civilians with medical problems and issues that were not emergent, but certainly needing continued care.

### **Background Discussion:**

NETF-1 was approached in the field occasionally by storm victims and citizens about the need for supplies, but particularly for medical needs. Occasionally this also included persons needing regular medication support such as for diabetes. Our team had information from daily IST briefings for directing personnel for help at local clinics and shelters, but many times it put our team in a difficult position for managing the situation at the time. The NETF-1 BoO was co-located at the Ocean Springs Middle school with storm victims also using the facility for shelter. NETF-1 and VATF-1 were housed in the school gymnasium secured with a locked door between the classroom side where storm victims were located. Civilian requests from the shelter side for medical assistance had occurred several times once the fact was known that we were a rescue team with some level of medical training. None of the cases were life threatening. Again, we were able to refer these requests to local medical support and the nursing professionals who visited the shelter daily, but our team members were put in a position to deny medical care. This situation was short term since the shelter was decommissioned after 2-3 days.

### **Recommended Action:**

More information should be available for local medical information and resources at the taskforce level. The availability of DMAT teams could also assist by providing local medical resources. Additional support at shelter sites may ease the need for medical request from the taskforce. Moving the BoO to a more isolated location is an option, but at a loss of power, water and security.

## **Best Practices/Lessons Learned**

Our arrival in the Gulf Coast area of Mississippi for search and rescue was on the early morning of August 30, 2005. We had received information from the IST that State USAR teams primarily from Florida were in the area of Pascagoula, MS conducting search and rescue operations. We were requested to work with VATF-1 and the FL State USAR teams (FL 4 & 5) to coordinate S&R efforts. Search areas were coordinated with VATF-1 and operations for the first operational period went well. During the second operational period, we had also coordinated the search areas with both VATF-1 and the FL State USAR teams, but throughout the day, we continually found the FL State teams operating in areas that were assigned to NETF-1. This resulted in a substantial duplication of efforts.

Communications was always a problem with cell phone service either unreliable or non-existent. Many times when operating in such a geographically large area, communication for the entire team was by two satellite phones. The new P25 radios do not function well without a repeater which occasionally made search team accountability difficult. The P25 radios seem to have less range than the old radio system (BK's). In the future, use of repeaters with the P25 radios will be a high priority.

The Type III configuration seemed to work very well for the type of operational conditions encountered on this response. Our Search and Rescue operations could have been enhanced by operating with a Type III cache and a Type I personnel compliment (70 person).

# Cache Management/Equipment Performance Report

## Overview

NE-TF1 deployed as a Type III Task Force with a compliment of 28 task force members and 6 support personnel for a total of 34. The compliment of equipment included a complete Type III equipment cache with Water Rescue PPE equipment, and the new 2<sup>nd</sup> cache of 55 portable radios. The vehicle fleet consisted of (2) 24' Temperature Controlled Van Body Trucks, (2) Suburbans, (2) Crew Cab 4 x 4 Pickups, (1) Kawasaki utility vehicle, and a 47 passenger motor coach. The Type III task force departed on September 29 and arrived at the IST contact location at the Harrison County Courthouse in Gulfport, MS.

NE-TF1 deployed with its complete Type III first cache (old cache), and cache of 55 portable radios and support equipment from the new 2<sup>nd</sup> cache that meet DHS-FEMA guidelines for P-25 compliance. All components of the new 2<sup>nd</sup> cache had not been provided to the task forces by DHS-FEMA prior to activation for this deployment so the decision was made to take the first cache as it is complete.

## Cache Management

A Base of Operations was coordinated and established by NE-TF1 logistics at the Ocean Springs Middle School upon arrival in Ocean Springs, MS. Cache management was coordinated by logistics. The task force was tasked with search/recon and rescue of survivors and/or determining possible locations of victims who did not survive. A compliment of search/recon equipment was staged on each of the 4 x 4 pick-ups and the remaining compliment of Type III rescue equipment was in place on one of the 24' temperature controlled van trucks. The base of operations equipment and supplies on the second 24' temperature controlled van truck were off-loaded into the middle school gymnasium and the truck reconfigured to provide task force support for basic needs items such as ice, food, water, and electrolyte-type drinks. The task force was able to maintain temperatures of at or below 32 degrees Fahrenheit in this truck so was able to maintain ice and all food and fluid items at storage temperatures. All cache items were managed from these trucks when operating in the field. The gymnasium required 24 hour surveillance by task force members to provide security for cache and task force support items. Due to lack of available support from an established FEMA-DHS IST, the task force was tasked with locating shelter, support supplies, and replacement items locally through state and local government agencies, or purchasing as needed from local vendors.

## Equipment Performance

The task force compliment of equipment performed as follows:

### Vehicle Fleet

All vehicles are new and performed well during transport and for on-site use. The temperature controlled 24' van trucks are invaluable for continued support of task force for ice, food, water, and weather sensitive items and should be a standard option for one or more transport vehicles for all TF's. Temperature controlled trucks can also be used for personnel rehab if needed. Light utility 4 x 4 vehicles used for command and task force support. Small Kawasaki utility vehicles (Mules) are invaluable for transport of personnel and equipment during on-site operations. NETF1 was able to transport a Kawasaki Mule in the 24' van truck and load on and off as needed with ramps. For the type of situations that NETF1 faced in having to provide almost all of their own support on this deployment, an additional light utility 4 x 4 vehicles such as a suburban or pick up would have been beneficial for use as a support vehicle for logistics. Fuel for vehicles was obtained at the last known location prior to entering the areas affected by infrastructure damage. Arrangements were made by task force logistics to obtain fuel from local sheriff and public works facilities.

### Base of Operations

The Base of Operations was established in the gymnasium of the Ocean Springs Middle School. NE-TF1 shared this location with VA-TF1 for the duration of this deployment. The task forces worked together to support their respective task forces from this location. No task force shelter or generators were utilized to support the base of operations. NE-TF1 set up a plans area with computers/printer/copiers as needed. The gymnasium was supported with auxiliary power from a generator provided by the Cingular company.

A larger supply of MRE's, water, toilet kits, fuel, and disposable batteries should be considered in the Type III cache configuration instead of the 72 hour requirement. NETF1 utilized MRE's almost exclusively for this deployment once in the affected area. There was limited support available from local, state, or federal sources and if not for the use of the middle school, NE-TF1 would have needed additional fuel, water, toilet kits, and batteries to support operations. Most businesses were closed due to hurricane damage, no electricity, or lack of employees to open. Only after about 4-5 days were some businesses open that could provide access to some supplies.

### Communications

No capability for local phone or internet service was available at the middle school due to infrastructure damage from the hurricane. Phone service lines were not available to connect TF phone equipment. The status of the current equipment cache does not provide the capability for stand alone internet access.

The task force cache does not currently contain any repeater or base station equipment compatible with the P-25 portable radios that the task force was directed to bring and to use. Base station and portable radio repeater systems may have been useful in some areas, but the distance between Ocean Springs and the later established IST location at the Water Park north of Gulfport, MS precluded any capability of being able to communicate via radio systems. In many instances, the portable radios did not provide adequate communications within even short distances between the operating teams. A portable repeater may have been beneficial for onsite operations and could have been established in the motor coach that the task force had with them. Cell phones were not usable in the Ocean Springs area and only provided sporadic capability in certain areas. Only satellite phones provided almost 100% reliability.

### Field Operations Equipment

Operations included mainly the forcible entry and physical search of residences and structures in the assigned areas for survivors and/or victims. The need for halligan-type bars and sledge hammers was identified during the first operational period. The Type III equipment cache did not contain any halligan-type bars so other types of pry bars were utilized but provided less than desired capability.

Atmospheric monitoring equipment sensors failed early on due to mixture of various contaminants in debris field. Replacement sensors were not readily available in the equipment cache. We brought 5 monitors with us and by the time we left we only had 2 that were operational. Due to shelf life and cost of sensors, probably not appropriate to store/maintain them in cache, but some means should be established to service monitor equipment during deployments.

Some areas were inundated with large amounts of water and mud. Task force members had to avoid these areas during search operations. They needed fire service-type hip length boots with toe and sole protection in order to access and operate in these areas. These types of boots may need to be considered as standard issue.

The task forces have little or no decontamination capability available in the current Type III equipment cache.

NE-TF1 had to arrange any decontamination capability with resources that were available. Decontamination after search operations at the DuPont Chemical plant were coordinated by NE-TF1 logistics with plant supervisors and supported by the employees and contractors available on site.

The task force used large quantities of spray paint for marking structures. The current equipment cache does not include enough spray paint for one operational period of these types of operations. NE-TF1 logistics had to forage for additional spray paint from public works facilities and purchase from local auto parts stores to support task force operations. Regular upright spray paint is more appropriate for marking structures.

### Recommendations

1. Provide additional capability for communications. P25 capable base stations and repeaters, stand alone satellite internet access equipment, and hand held satellite phones instead of cell phones.
2. Issue fire service-type hip length boots with proper foot protection to all TF members as part of standard issue equipment. Add to personal gear list of items on equipment cache list.
3. Improve decon capability within task force equipment cache. Consider gasoline powered-type pressure sprayers for cleaning PPE and equipment.
4. Task forces may need to consider procuring additional sensors for monitoring equipment prior to departure for deployment. Also have personnel technician trained to be able to field service monitoring equipment.
5. Add halligan-type tools and more sledge hammers to equipment cache list. Need at least 4 of each of these for Type III operations.

6. Add more spray paint to equipment cache. Identify upright paint for marking vertical surfaces on structures.
7. Current policy is to not allow small utility vehicles as part of task force deployment cache. Allow transport and use of small utility vehicles (Kawasaki Mule, John Deere Gator, etc) by task forces. Allow purchase of small flatbed trailers for these vehicles to be pulled by 4 x 4 pick-ups.