

Louisiana Wildlife & Fisheries
team making a rescue
FEMA photo



Search and Rescue

We would put two officers in a boat, one guy to operate the boat and another guy with a flashlight to give him direction. ... Most of our communication at this point is by voice. And they would go out and like I said, it wasn't any problem to find people, there were people everywhere, people were everywhere, every house, people on the porches, people on the roofs, people shouting from windows and you would just go to it and load up the people that you could take and tell them, We'll be back for the rest of you. ...

We encountered every kind of medical condition that you can just about imagine, we had diabetics, we had bedridden patients, we had some security issues. ... And it was constant, I mean it was limitless, you never got a break in the number of people you were bringing out.¹

— Lt. Col. Keith LaCaze
Louisiana Department of Wildlife and Fisheries

Search and Rescue

On the day of Hurricane Katrina's landfall, rescuers from Louisiana's Department of Wildlife and Fisheries (W&F) didn't need their standard grid system for searches. From every direction, thousands of people on rooftops were calling for help in the dark – that evening, lights from the search-and-rescue boats and helicopters were the city's only source of illumination.²

W&F would bring the rescuees back to one of three staging areas on highway overpasses. By 1 a.m. Tuesday, hundreds were massed at these locations, reaching capacity. By Tuesday afternoon, W&F alone had rescued 1,500 people.³

Federal, State, and Local Rescuers Saved Thousands of Lives

Federal, state, and local officials combined to rescue over 60,000 people after landfall.⁴

Federal

FEMA is the federal government's lead agency for Emergency Support Function 9 (ESF-9, Search and Rescue) under the National Response Plan (NRP),⁵ but during Katrina, some perceived the Coast Guard to have been the lead federal agency for search and rescue (SAR).⁶ The Coast Guard rescued over 33,000 people.⁷ The U.S. Department of Defense (DOD), which deployed in support of the Coast Guard, rescued 2,911 people.⁸ FEMA rescued over 6,000 people.⁹

FEMA's Urban Search and Rescue (USAR) teams comprise state and local teams that FEMA contracted to assist the federal government during an emergency. In exchange for funding from FEMA for training and equipment, state and local search-and-rescue teams agree to be deployed by FEMA when needed. There are 28 such teams around the country, many associated with local fire departments. The men and women on these teams are themselves the first responders for disasters in their own communities. When FEMA deploys them, they become federal assets and, therefore, no longer state or local first responders.¹⁰

State

The Louisiana W&F is the state's lead agency for ESF-9.¹¹ W&F and out-of-state agencies rescued about 21,000 people trapped in the greater New Orleans area after landfall.¹² The Louisiana National Guard, which supported W&F under ESF-9, rescued another 9,313 people.¹³

Local

The New Orleans Fire Department (NOFD) and New Orleans Police Department (NOPD) officers – the exact number is unknown – worked with little rest in the first week after landfall, even as their own families remained trapped or were evacuated.¹⁴ NOFD is the City of New Orleans' lead agency for SAR; the NOPD supported NOFD.¹⁵

Hurricane Katrina Confirmed What Hurricane Pam Had Predicted: Decimated Local Responders

Hurricane Katrina confirmed what Hurricane Pam predicted: many local first responders had been incapacitated and thrown into disarray by the severe hurricane. The section on SAR in the plan that grew out of Hurricane Pam stated: "Parish resources in the most severely impacted areas will not be available for several weeks or even months, as they were not removed from the area prior to the storm."¹⁶ But even if Hurricane Pam predicted that Parish resources would not be available, William Lokey, FEMA's Federal Coordinating Officer (FCO), the organization's lead officer in Louisiana, who was stationed in Baton Rouge before landfall, pointed out that Hurricane Pam "did not envision the number of first responders in New Orleans that would become disaster victims and would not be available to take part in that plan."¹⁷

Pam's conclusion that parish resources wouldn't be available for weeks, if not months, may have derived from the city's inadequate preparedness for search and rescue. For example, the NOFD owned no boats;¹⁸ the NOPD owned only five.¹⁹ Although the NOFD was well trained in USAR and incident command, it had no training in water SAR.²⁰ The NOFD had applied in 2005 to DHS for water USAR training, even lining up an instructor, but DHS denied its application.²¹ In the absence of boats and water SAR training, NOFD and NOPD officers had to commandeer and hot-wire boats to improvise rescue missions.²²

Finally, the Hurricane Pam exercise predicted that a similar hurricane in real life would "result in flooding of many roads, limiting access into many areas until flood waters subside."²³ Such a warning required readiness for air and water rescue; specifically, Hurricane Pam called for 20,000 boat-based rescues and about 1,000 helicopter rescues.²⁴ Emergency planners at all levels of government should have realized that large-scale search-and-rescue operations would be likely if a major hurricane struck New Orleans.²⁵

Responders Prepare for the Storm

Although the search-and-rescue teams who deployed after landfall performed heroically, two agencies stand out, the U.S. Coast Guard and the Louisiana W&F.

U.S. Coast Guard

In general, the Coast Guard performed exemplary work in its search-and-rescue missions. Several factors may explain why: (1) pre-positioning of assets close enough to be useful on Monday, August 29, the day of landfall, but still out of harm's way;²⁶ (2) training and equipment for water missions; (3) an organizational culture that encourages personnel to

respond proactively;²⁷ (4) a familiarity with incident response generally and the Incident Command System specifically throughout the entire organization;²⁸ and (5) a long-term presence in the affected areas, promoting familiarity with the region and working relationships with state and local agencies.²⁹

The Coast Guard's Eighth District, which covers 26 states, is headquartered in New Orleans.³⁰ The Coast Guard Air Station in New Orleans, like all the Coast Guard units along the Gulf Coast, exercises its hurricane plans several times each season.³¹ In New Orleans, the Coast Guard exercises regularly with other state and local agencies and in particular has worked closely with the boat forces of the Louisiana W&F.³² Pre-landfall, the Coast Guard placed liaisons at both the state Emergency Operations Center (EOC) in Baton Rouge and at the New Orleans Office of Emergency Preparedness.³³

A key factor in the Coast Guard's rapid reaction is that, unlike FEMA, the Coast Guard sees itself as a first responder.³⁴ Prior to landfall, based on the forecasted intensity of the storm, the Coast Guard decided to move its headquarters to its alternate site in St. Louis, Missouri,³⁵ and to use its alternate incident-command post in Alexandria, Louisiana,³⁶ approximately 200 miles away. The Coast Guard evacuated personnel and their family members³⁷ from the direct path of the storm and pre-positioned personnel and assets north, east, and west of the predicted track, but close enough to maintain its ability to return them to the affected area.³⁸

As a result, the Coast Guard was able to begin search-and-rescue missions by 2:50 p.m. on the day of landfall. The winds were still consistently 45-50 knots (about 52 to 58 m.p.h.) strong³⁹ when a rescue swimmer named Laurence Nettles was lowered by helicopter and navigated his way through tree limbs to rescue a four-month-old infant, her mother and grandmother, and their pet dog in Plaquemines Parish.⁴⁰ Of the more than 33,000 rescues the Coast Guard completed, 12,500 made use of helicopters.⁴¹ This was far more than the Hurricane Pam prediction of 21,000 total rescues, of which 1,000 would be helicopter rescues.⁴² Within the first few days, about 40 percent of the Coast Guard's national helicopter fleet converged on the Gulf Coast to assist in search and rescue and air delivery of food and water.⁴³

Louisiana Department of Wildlife and Fisheries

While the Coast Guard served as the primary source of air SAR, the Louisiana W&F was the primary source of water SAR, and performed equally admirably. Like the Coast Guard, W&F officers, trained for water-rescue missions, were adequately equipped, had pre-positioned search-and-rescue assets close enough to be useful on the day of landfall, and were composed of men and women familiar with the affected area and other federal, state, and local agencies involved.

On Monday, W&F transported 60 boats to New Orleans from their pre-staged areas, and by 4 p.m. that day launched the boats from one of three staging areas strategically located on high ground throughout the city.⁴⁴ W&F also received assistance from the Louisiana National Guard, which had pre-deployed boats and helicopters in and outside of New Orleans.⁴⁵

Shortcomings in the Preparation and Support for the SAR Missions

All levels of government could have provided far better support for these heroes and the people they rescued. Inadequate planning, preparation, and support compromised the SAR missions, and should be drastically improved for future catastrophes.

Prior to Katrina, the NRP considered SAR to focus primarily, if not entirely, on SAR in collapsed structures.⁴⁶ The NRP reflects this belief by titling the mission as Urban Search and Rescue (USAR) and by requiring FEMA, rather than some other agency, to act as the lead agency for ESF-9. However, Katrina required search-and-rescue efforts not only in urban

collapsed structures but also in a water environment. U.S. Coast Guard Vice Admiral Vi-vean Crea acknowledged that the federal response plan should be capable of covering more than one type of search and rescue.⁴⁷

Pre-positioning of Search-and-Rescue Assets: Local and State

Despite the success of the U.S. Coast Guard and the W&F in pre-positioning search-and-rescue assets, similar efforts by other agencies at the state and local levels failed in very basic ways.

Because New Orleans lacked enough boats, complying with the NOFD Emergency Operations Plan required many NOFD officers to pre-position their personal boats.⁴⁸

Although W&F pre-positioned search-and-rescue assets both within and on the outskirts of the affected areas, the Louisiana National Guard pre-positioned its boats and high water vehicles primarily at Jackson Barracks, which flooded when the Industrial Canal levee broke and flooded the Lower Ninth Ward. The floodwaters rendered many of the boats and high water vehicles unusable on the day of landfall.⁴⁹ As many witnesses said, a hurricane's precise landfall and impact are difficult to predict.⁵⁰ Nonetheless, placing a key element of local first response at Jackson Barracks, one of the lowest points in the city, was not an exercise in prudent planning.

Pre-positioning of Search-and-Rescue Assets: Federal

Although the Coast Guard successfully pre-staged search-and-rescue assets, FEMA did not.⁵¹ FEMA pre-staged only three search-and-rescue teams in Shreveport, LA, and only two in Meridian, MS.⁵²

FEMA officials point out that FEMA is not a first responder for disasters,⁵³ but its modest pre-landfall deployment is still hard to understand, considering that the Pam exercise had revealed a critical need for immediate search-and-rescue capability. FEMA did activate 16 additional search-and-rescue teams, but not until Tuesday, August 30, the day after landfall. (It activated 10 more the following day.)⁵⁴ FEMA Federal Coordinating Officer (FCO) William Lokey told the Committee that FEMA did not pre-stage more search-and-rescue teams because the state did not request additional teams before landfall.⁵⁵ But Lokey reasonably should have known, from FEMA's participation in the Hurricane Pam exercise, that the state and locals' search-and-rescue capabilities would need to be supplemented in the event of a catastrophic storm – which Lokey recognized Katrina to be.⁵⁶ The state did not request additional search-and-rescue teams, and FEMA failed to offer them.

That FEMA pre-staged three teams in Shreveport, approximately 340 miles away from New Orleans, contributed to the delay.⁵⁷ The teams left Shreveport for Baton Rouge on Monday, August 29, moving to the greater New Orleans area only late that night.⁵⁸ As a result, they were not able to begin rescuing people until Tuesday morning,⁵⁹ whereas the other federal, state, and local operations began search and rescue Monday afternoon, as soon as the storm died down.⁶⁰

FEMA Lacked Water-Rescue Capabilities

“Water rescue is not part of the USAR mission,” Lokey testified before the Committee.⁶¹ Indeed, when FEMA search-and-rescue teams arrived in New Orleans, they did not have boats.⁶² Instead, the FEMA teams joined boats operated by volunteers or other agencies.⁶³

Although most of the 28 teams FEMA could tap for search and rescue lacked a water-rescue capability,⁶⁴ FEMA was able to acquire eight teams in California that did possess that training.⁶⁵ FEMA should have pre-staged teams trained in water rescue given that catastrophic post-storm flooding was anticipated. Some have argued that FEMA should have search-

and-rescue teams designed for a water environment, as drowning accounts for 90 percent of deaths in hurricanes.⁶⁶ However, Lokey said that FEMA teams do not arrive on the scene quickly enough for it to make sense to equip and train them for those kinds of searches,⁶⁷ even though long-term planning and training for water rescue would have obviated the need for on-the-scene equipping and training. Some have suggested that it might be worthwhile for FEMA teams to have some basic training and equipment for working in a flooded environment (e.g., life jackets), while more serious water rescue should be left to the states and the Coast Guard.⁶⁸ Some have said FEMA cannot support water rescue under the current budget and would require additional funding.⁶⁹ FEMA was ill-equipped to carry out its ESF-9 obligation in a setting that was anything but a surprise.

Beyond an initial training course in 2000, FEMA's Red, White, and Blue Incident Support Teams (ISTs), which coordinate and manage the search-and-rescue missions, received no training.⁷⁰

Communications Failures

Almost immediately after landfall, communications for the SAR personnel at all levels of government failed to one degree or another. Storm damage rendered many communications systems inoperable while heavy traffic stalled others. Each agency had unique challenges, suffering from communications that were neither operable nor interoperable. Indeed, these widespread communications failures contributed mightily to the failures of coordination among search-and-rescue agencies, which we address below.⁷¹

Communications Failures: Local

The fire and police departments' communications suffered from both inoperability and lack of interoperability.

The NOFD and NOPD were supposed to operate on an 800 megahertz system, but storm damage forced them to switch to their contingency plan: the mutual-aid channel, used by all first responders in the area. The mutual-aid channel required each officer to wait his or her turn, sometimes for 20 minutes, before speaking. NOFD used the mutual-aid channel until Thursday, September 1. NOPD used it until Saturday, September 3.⁷²

Although the mutual-aid channel was operational, NOFD officers could not transmit to certain parts of the city because of its limited range. As a result, NOFD officers essentially had to play the children's game "Operator": An NOFD officer would hear officer A trying to talk to officer B, and would relay A's message to B, if B was within the eavesdropper's range.⁷³

Communications Failures: State

The Department of Wildlife and Fisheries also suffered from unique communications failures. W&F set up three operations centers strategically located around New Orleans. However, its officers could not communicate by radio with the boats carrying out SAR missions, requiring the operations centers to dispatch "runners" to deliver messages.⁷⁴ (The boats, in turn, had trouble communicating with National Guard and Coast Guard helicopters.) Ultimately, the operations centers were able to make contact using walkie-talkies purchased from a local sporting-goods store.⁷⁵

After years of research, a Deputy Superintendent of Louisiana State Police in 2004, and again in January 2005, presented to the state and federal governments a detailed, \$105 million proposal for interoperability infrastructure.⁷⁶ According to W&F witnesses, the plan might well have avoided the communications failures between officials in Baton Rouge and New Orleans, as well as the communications among agencies, by bringing all state and local officials' radio communications onto the same network.⁷⁷

Communications Failures: Federal

Communication capabilities for the Coast Guard varied, both by time and by unit. Although the UHF radio frequency used by Coast Guard helicopters to communicate at a local and unit level continued to work well after Katrina, VHF frequencies typically used to communicate with the Coast Guard and other emergency responders by outside entities (boaters, hospitals, etc.) were cluttered, and frequently overloaded.⁷⁸

Coast Guard pilots also reported difficulty communicating with their bases, including the Coast Guard Air Station in New Orleans, which returned to limited operational status on Monday afternoon, August 29. They estimated that only 40 percent of their communication attempts with bases were successful.⁷⁹ They were attempting to reach the Coast Guard Air Station in New Orleans, Baton Rouge, and other bases by using other aircraft, including a Coast Guard C-130 surveying oil rigs in the Gulf of Mexico and a Customs and Border Protection P-3 AWACS (Airborne Warning and Control System), as mobile communications-relay platforms. These planes would patch calls through to Coast Guard bases, since most ground infrastructure was not operational.

Some Coast Guard personnel were able to use personal cell phones to relay information to other Coast Guard offices, at least initially. But as the infrastructure for cell phone service began failing, this means of communication had to be abandoned.⁸⁰

The Coast Guard should have been better prepared for an anticipated breakdown in communications infrastructure. While not initially deployed for that purpose, aircraft such as the C-130 and P-3 AWACS proved useful in relaying communications. More thought should be given to determining whether this or other temporary means of communication should be used in other large-scale incidents like Katrina.

Unified Command – Coordination of Search-and-Rescue Missions

While many individuals went to heroic lengths to rescue victims, their efforts would have been far more effective if agency efforts were better coordinated. Officials from nearly every search-and-rescue agency told Committee staff that they lacked basic maps of the area.⁸¹ At one point, state and local officials tore maps out of telephone books, so that out-of-state search-and-rescue teams could have some sense of where they were going.⁸² However, high floodwaters in New Orleans hid street signs from view,⁸³ complicating their efforts.

Efforts by DOD and the National Guard to coordinate the airborne search-and-rescue mission by dividing up the city⁸⁴ are discussed below.

The lack of coordination had several significant consequences. Agencies searched areas without knowing whether those areas already had been searched by others.⁸⁵ The agencies in boats were mostly unable to coordinate with the National Guard or the Coast Guard to request helicopters if victims needed to be airlifted.⁸⁶ Finally, the lack of coordination prevented food, water, and other critical needs from reaching the rescuees gathered at the search-and-rescue collection sites.⁸⁷

According to Captain Tim Bayard, the lack of coordination at the local level, resulted from a lack of planning, direction, and leadership from the City of New Orleans' Office of Emergency Preparedness (OEP) and inoperable communications.⁸⁸ For example, the NOPD decided the day before landfall to set up a command post from the trunk of a car and at picnic tables outside of Harrah's Casino, but Captain Bayard did not know where the mobile command center for the city's OEP was.⁸⁹

Although W&F was the lead state agency for the search-and-rescue mission, it failed to establish itself as a leader for other state and local agencies involved in search and rescue.⁹⁰



This is likely due in part to the lack of communications capability and how overwhelmed W&F officials were.

Rescue boats, New Orleans
U.S.Coast Guard photo

At the federal level, FEMA did not establish a local command site for search and rescue either before or on the day of landfall.⁹¹ On Monday, the FEMA teams had no plan for a base of operations in the greater New Orleans area. They ultimately settled on the parking lot at a Sam's Club in Jefferson Parish.⁹² On Tuesday, FEMA moved its command to Zephyr Field, the New Orleans Saints' practice field in Jefferson Parish,⁹³ but by this time both W&F and the Louisiana National Guard had already established their own local command posts elsewhere.⁹⁴ Under the NRP, federal and state governments were supposed to establish a unified command for search and rescue,⁹⁵ but both levels of government failed to achieve that objective.⁹⁶ Poor communications capabilities after landfall exacerbated the challenge of coordination between state and federal agencies. W&F and FEMA did not establish a unified command for search and rescue until Wednesday, two days after landfall, at Zephyr Field.⁹⁷

Although there was no unified command for search and rescue in New Orleans, there is some evidence of a stronger coordination effort made for federal, state, and local search-

and-rescue resources at the EOC in Baton Rouge, according to the U.S. Coast Guard Search and Rescue Controller Valerie Boyd assigned to Baton Rouge. She said that the Coast Guard, FEMA, W&F, the Louisiana National Guard and others formed a joint search-and-rescue task force at the state EOC on Sunday, August 28.⁹⁸ The task force met twice a day over the next two weeks, to try to coordinate the joint search-and-rescue response. Agencies there would update surface and aviation asset spreadsheets on a daily basis, and the Louisiana State Police would provide search-and-rescue case information coming into the EOC via the 911 system to the Coast Guard, who would triage cases to the extent practicable, and convert street addresses to latitude and longitude coordinates.⁹⁹ The Coast Guard would then pass along the triaged cases and coordinate, but not direct, any other search-and-rescue assets.¹⁰⁰

No Plan for Ground Transportation to Evacuate People from USAR Collection Points

As noted earlier, ground transportation arrived in the greater New Orleans area unnecessarily late. The absence of planning for ground transportation by the federal and state governments contributed to the appalling conditions at the Superdome, the Convention Center, the I-10 overpasses, and other search-and-rescue collection sites.

Inadequate Resources

Louisiana National Guard Brigadier General Brod Veillon testified: “We are a force of 11,000 people, and so ... you can’t handle this size of a catastrophe. ... [The Emergency Mutual Assistance Compact (EMAC)] is designed to compensate for that,”¹⁰¹ and “parallel to [her use of EMAC] the Governor made the call to the President for DOD assets.”¹⁰²

As described earlier, the NOFD and NOPD lacked critical watercraft. For nearly a decade, successive New Orleans mayors have imprudently denied NOFD funding requests for watercraft.¹⁰³

After landfall, bureaucracy continued to impede essential relief.¹⁰⁴

W&F pre-staged the roughly 200 boats at its disposal and deployed them in staggered phases throughout the storm. But many of those boats were small; FEMA denied requests for larger rubber rafts¹⁰⁵ because, according to FEMA’s lead official in Louisiana, the rubber rafts would not have been strong enough to maneuver in water filled with debris.¹⁰⁶ Lieutenant Colonel Keith LaCaze with W&F disagreed, claiming that the rafts would have been valuable – particularly in the early days – either for maneuvering in very shallow water near doors and windows or in saving additional trips to collection sites by collecting rescuees in rubber rafts that could be towed behind regular boats.¹⁰⁷ At a minimum, FEMA’s denial of the request is an example of the organization’s failure to follow its own principle of letting those closest to the situation determine how best to meet needs.

DHS was slow to deploy equipment pods that contained standardized equipment to sustain or replenish up to 150 first responders. DHS pre-positions these pods at strategic locations nationwide in order that they can arrive at a disaster site within 4 to 12 hours.¹⁰⁸ However, DHS waited until at least two days after landfall to advise either Mississippi or Louisiana of their availability.¹⁰⁹ Thus, nearly a week after landfall, the equipment pods were still en route.¹¹⁰ DHS official Matt Mayer, who was in charge of these pods,¹¹¹ acknowledged that DHS “made a mistake” and should have deployed these pods earlier.¹¹² Captain Fincher of the NOFD bemoaned the fact that he and other first responders did not have these equipment pods earlier since they contained assets that would have been very useful to the NOFD officers: an 18-wheeler full of “turn-out clothes, breathing apparatus, search and rescue cameras, ... hazardous material equipment, ... communications system, [and] ... decontamination set-ups.”¹¹³



On the day before landfall, the U.S. Department of the Interior (DOI) offered two teams of law-enforcement officers to FEMA. These officers would have proved highly valuable, when security concerns later in the week undermined FEMA’s search-and-rescue effort. But FEMA did not make use of those teams,¹¹⁴ and Lokey, FEMA’s FCO in Louisiana, testified that he was unaware of the offer.¹¹⁵

Louisiana couple and dog rescued

Photo © 2005 The Times-Picayune Publishing Co.,
all rights reserved. Used with permission of the
Times-Picayune

In its response to the Committee’s interrogatories, DOI stated that “In the immediate aftermath of the hurricane, DOI delivered to FEMA a comprehensive list of its deployable assets that were immediately available for humanitarian and emergency assistance,” including 300 boats and 400 law-enforcement officers.¹¹⁶ However, DOI’s Emergency Coordinator, Laurence Broun, later told the Committee that DOI, in fact, did not send the list to FEMA and instead sent the list to the White House Homeland Security Council, not “in the immediate aftermath of the hurricane,” but on Saturday, September 3, five days after landfall. Broun does not know if the White House ever sent the list to FEMA,¹¹⁷ and Lokey was unaware of the offer.¹¹⁸

Emergency Mutual Assistance Compact

In addition to designating the W&F as the lead state agency for search and rescue, the Louisiana Emergency Operations Plan specifies that W&F is to seek assistance through EMAC, if W&F’s capabilities are overwhelmed.¹¹⁹ W&F witnesses testified that the agency would have benefited from a request for additional SAR resources from other state governments through the EMAC process before, rather than after, landfall. Lokey specifically advised Colonel Jeff Smith, the Acting Deputy Director for Emergency Preparedness at LOHSEP, to use EMAC to get swift-water rescue teams from California because Lokey knew that California had robust water-rescue capabilities.¹²⁰ Neither Lokey nor Col. Smith realized until

the day of landfall or just the day before that California was not a signatory to EMAC.¹²¹ Ultimately, FEMA and W&F operated outside the EMAC channels to request this assistance. FEMA was able to bring in eight California swift-water teams on August 30, because they happened to be embedded in an organization with which FEMA had contracts for its USAR program.¹²²

In contrast to W&F, the Louisiana National Guard placed EMAC requests pre-landfall. The National Guard asked for helicopters from Arkansas, which approved the request before landfall.¹²³ Moreover, Bennett Landreneau, the Adjutant General of Louisiana, testified before the House Select Bipartisan Katrina Committee that the Louisiana National Guard knew “immediately” that its resources would be overwhelmed and consequently sought other assistance through EMAC.¹²⁴ Forty-eight states and four territories provided requested assistance.

W&F also encountered bureaucratic difficulties in making EMAC requests. Some states could not comply immediately because they were uncertain whether they had proper authorization.¹²⁵ W&F Secretary Dwight Landreneau testified that it would be helpful to have a list of all assets available from each state so that states in need could call on that help more efficiently.¹²⁶ Notably, it was by chance that Lokey was able to advise Louisiana about which states had water rescue teams that it could request through EMAC. Lokey, due to his prior experience with the National Urban Search and Rescue Program,¹²⁷ advised Col. Smith to reach out to California and a few other states that he knew had water-rescue capabilities.¹²⁸ No standardized list of such teams exists for state emergency managers.

Managing and Utilizing Volunteers

Volunteers, who started to arrive as early as Monday evening, proved a great benefit to the search-and-rescue mission in its first days. Many provided boats to transport FEMA and other personnel to conduct search-and-rescue missions¹²⁹ when only other agencies’ boats were available.

At the same time, some volunteers were not well-prepared for water search and rescue. For instance, some of the boats were too big to navigate flooded streets in New Orleans. Moreover, the Louisiana W&F required volunteers to have food, water, fuel, and life jackets; many didn’t and were turned away.¹³⁰ Several volunteers – as well as some out of state officers – were unfamiliar with the city.¹³¹ Finally, the Department could not handle the numbers of volunteers: one day as many as 200 volunteers showed up but could not be effectively used because “about half of them did not have the equipment that was necessary to help.”¹³²

Security Risks

On Monday evening, after W&F officers reported sounds of gunfire, one NOFD team aborted its SAR mission, though it eventually returned to its post.¹³³ Tensions continued to run high in the area, but did not escalate until Thursday, when media – at times incorrectly – reported widespread looting and violence.¹³⁴

On Thursday, FEMA ordered its search-and-rescue missions in New Orleans to stop for the entire day and pull back to Zephyr Field until more security arrived.¹³⁵ Captain Patrick Lampard of the NOFD recalled that as these teams began to pull back, they recommended that the NOFD also withdraw due to the security concerns. Based on this recommendation, Capt. Lampard decided to pull back his NOFD teams that day as well,¹³⁶ although some NOFD officers ignored the command.¹³⁷

Although no other search-and-rescue witnesses have said that conditions on Thursday were such that they would have stopped their mission,¹³⁸ the need for security might very well have been legitimate,¹³⁹ and the rapid deployment of additional law-enforcement officers

would have been helpful, as shown in Chapter 25 on Public Safety and Security. Also, at least one FEMA search-and-rescue team member has recommended that FEMA search-and-rescue teams might have been able to continue their work if they deployed with force protection.¹⁴⁰

Also, in some cases, search-and-rescue teams met resistance from residents who refused to leave their homes, despite the devastation.¹⁴¹ It was only on September 10 that the Department of Justice gave federal agents permission to use force to enter buildings to rescue remaining victims.¹⁴²

Mississippi

Pre-Storm Planning

In Mississippi, the state emergency plan puts SAR operations in the hands of the Mississippi Emergency Management Agency (MEMA), with support from other state agencies.¹⁴³ Hurricane Katrina SAR operations were conducted along the Mississippi Gulf Coast by local first responders, state-sourced SAR personnel, the Coast Guard, rescue teams provided by FEMA, and teams from other states. Jim Brinson of the State Office of Homeland Security directed SAR operations from the State Emergency Operations Center in Jackson and, later, from the Gulf Coast.¹⁴⁴

Mississippi planning provides that local first responders – especially fire-department personnel and sheriffs (who are the presumptive incident commanders for their respective counties under the state plan) – have initial responsibility for SAR operations.¹⁴⁵ For large-scale disasters requiring outside resources, the plan points to four sources: (1) Mississippi personnel and equipment secured by MEMA from other areas of the state; (2) federal assets sourced by FEMA; (3) resources from other states via the EMAC; and (4) Mississippi National Guard support.¹⁴⁶ Brinson did not consult the state emergency plan to review these options, but the SAR response to Katrina involved significant aid from each source, and appeared consistent with the plan.

The identification and staging of SAR assets began on August 27, before landfall. Within two days, MEMA had identified 19 teams consisting of rescue personnel from throughout the state.¹⁴⁷ In addition, FEMA pre-deployed USAR teams on August 27 to the Meridian Naval Air Station in east-central Mississippi, near the Alabama border, approximately 140 miles from the Gulf Coast; first to arrive were task forces from Ohio and Indiana, later augmented by teams from other states and additional FEMA USAR teams.¹⁴⁸ Meanwhile, local first responders had pre-positioned equipment like fire trucks and rescue vehicles in anticipation of the storm.

On August 28 and 29, SAR teams and equipment continued to arrive. These included FEMA teams, which were staged in Meridian, Mississippi, and in Florida before landfall.¹⁴⁹ Fire fighters and first responders from other Mississippi counties awaited the storm at the State Fire Academy in Pearl, near the state capital of Jackson.¹⁵⁰ EMAC teams from Florida formed up and awaited direction from MEMA.¹⁵¹ In addition, Mississippi National Guard elements staged at Camp Shelby, near Hattiesburg, approximately 65 miles north of Gulfport and, to a lesser degree, along the three coastal counties.

Search-and-Rescue Operations Post-Landfall

Hurricane Katrina overwhelmed local SAR responders, who faced flooding, impassable debris fields, obliterated roads, and vast areas requiring searches.¹⁵² Personnel and equip-

ment converged on the Gulf Coast late Monday, August 29, and early Tuesday. Coast Guard teams began air and water SAR missions on August 29.

The level of devastation Katrina inflicted on the Gulf Coast posed a huge challenge for rescuers. Often, roads were impassable and had to be cleared before rescuers were able to start SAR operations. Rescuers sometimes could not wait for the roads to be cleared. For example, the White Cypress subdivision in northern Hancock County, the westernmost county on the Mississippi Gulf Coast, and its 200 residents were completely cut off by fallen trees. Rescuers had to be airlifted into the area while forestry teams were still working to reopen roads.¹⁵³

Rescuers faced debris piles that were often two to three stories high and as many as four blocks wide. The debris extended all along the Mississippi Gulf Coast and stretched inland several hundred yards in some places, to four miles in others. The debris field itself was extraordinarily hazardous. It contained not only the remains of houses, buildings, and automobiles, but also hazards such as chemical spills and gas leaks. In Gulfport, the hurricane had destroyed a number of containers at the port holding chicken carcasses and pork bellies intended for export, and scattered the contents along the coast. This put thousands of decomposing chickens where SAR operations were later to take place. As Pat Sullivan, Gulfport's Fire Chief, aptly summarized, it was "an impossible situation."¹⁵⁴

In part because communication was so difficult along the Gulf Coast, MEMA decided to headquarter state, federal, and EMAC search-and-rescue operations in Harrison County, the geographically central and most populous coastal county, while local responders remained deployed along the coast.¹⁵⁵ For SAR purposes, the Mississippi Gulf Coast was divided into three areas: Jackson/George Counties, with Jackson County easternmost on the coast and George to its north; Harrison/Stone Counties, with Harrison central on the coast and Stone to its north; and Hancock/Pearl River Counties, with Hancock County westernmost on the coast and Pearl River to its north. Maps and grids helped ensure that areas were searched in a coordinated, methodical manner.¹⁵⁶

Various officials in Mississippi reported good coordination among local, state, federal, and EMAC resources.¹⁵⁷

Rescue teams combined Mississippi and out-of-state personnel to mix local knowledge with the specialized equipment and training available to federal and state teams, as Jim Brinson, the SAR coordinator, described:

You know, somebody from New York isn't real sure what water moccasins and alligators do in a severe storm. They get very nasty. My [Mississippi] guys understand this, they live here, they hunt here. And on the flip side USAR teams are trained to do specific things and have specific equipment to do search and rescue in that type of urban environment that many guys don't have: robots, acoustic mics, fiber-optic cameras, things like that.¹⁵⁸

Officials estimate that the teams assisting local first responders consisted of approximately 550 SAR personnel¹⁵⁹ including Mississippi first responders sent by MEMA, 17 FEMA rescue and incident-management teams,¹⁶⁰ and rescuers from Florida and other states sent through the EMAC. These figures do not include personnel from the Coast Guard and Mississippi National Guard, who figured importantly in search-and-rescue operations. For example, the Coast Guard rescued and airlifted 1,700 stranded residents.¹⁶¹ The Mississippi National Guard provided manpower and engineering support along the Gulf Coast,¹⁶² and conducted SAR in devastated Hancock County on Mississippi's western Gulf Coast.¹⁶³

Search-and-rescue operations continued for about a week before moving into recovery phase.¹⁶⁴

Despite the many challenges SAR teams faced, Mississippi officials were generally pleased with search-and-rescue efforts. They praised the hard work and professionalism of the FEMA and EMAC teams, and of Mississippi first responders.¹⁶⁵

Gulfport Fire Chief Pat Sullivan was effusive in his praise:

If everything went like the FEMA USAR teams, FEMA would get the academy award. ... [The] FEMA USAR [urban search and rescue] teams, you can't say enough about what they did and how they did it and [the] equipment they brought in and the way that they were here to help you.¹⁶⁶

Department of Defense and National Guard Air Search and Rescue

Accumulation of Aircraft

Despite the increased number of military helicopters in the Gulf Coast by the end of the first week, the number of helicopters capable of performing search and rescue – the most critical of all missions – was still inadequate for the number of victims in need of rescue, leading to delays in saving lives and reducing suffering.

On Saturday, August 27, two days before Hurricane Katrina made landfall, the Louisiana National Guard began to supplement its state inventory of helicopters, requesting four CH-47 and two UH-60 helicopters from the National Guard Bureau. The helicopters were sent from neighboring states through the EMAC system, beginning with two UH-60s from Oklahoma, which arrived on Monday.¹⁶⁷ By Monday, Army National Guard helicopters totaled 15 in Louisiana and 13 in Mississippi.¹⁶⁸ As soon as gale-force winds subsided below flight-restriction levels, on Monday afternoon, the helicopters commenced SAR missions, continuing through the evening.¹⁶⁹ Louisiana and Mississippi had 60 helicopters available for this initial response. The aircraft and crew flew around-the-clock due to the overwhelming number of emergency missions facing them. Additional National Guard aircraft did not begin to arrive in numbers until five days after landfall.¹⁷⁰ By September 8, however, 150 Army National Guard aircraft were operating in the Joint Operating Area.¹⁷¹

The active-duty (Title 10) military involvement in Air SAR began Tuesday evening, with the arrival of the amphibious-warfare helicopter carrier USS *Bataan* (see Chapter 26, Military Operations) carrying three MH-60s and two MH-53s, and continuing with a steady buildup of assets through September 8, when the total number of active-duty helicopters peaked at 143.¹⁷² The *Bataan* had been positioned in the Gulf of Mexico at the conclusion of an exercise and, on the orders of the Second Fleet commander, had steamed northward toward New Orleans following the storm's passage. The first helicopters launched at 5 p.m. CT, once the *Bataan* was in range of the coast.¹⁷³ Upon landing in New Orleans Tuesday evening, the pilots reported to the Coast Guard Air Station commander, who as the designated On-Scene Commander, coordinated all air assets then engaged in search-and-rescue missions.¹⁷⁴

Aircraft began arriving in greater numbers on Wednesday, August 31, when six Army helicopters – three UH-60s and three CH-47s – reported to the Louisiana National Guard at the Superdome. Six additional Army helicopters arrived in Baton Rouge from Fort Benning, GA, on Thursday, September 1, and performed medical evacuation missions in New Orleans.¹⁷⁵ Five Air Force helicopters from Patrick and Moody Air Force Bases deployed on their own authority to Mississippi on Wednesday, performing SAR missions in Hawkins,

and Gulfport-Biloxi.¹⁷⁶ By Friday, 21 Air Force HH-60 helicopters were operating from Jackson, MS.¹⁷⁷

By the latter half of the week, helicopters from all services had joined the efforts, including Marine utility and heavy lift aircraft from New River, NC; Air Force UH-60s from various locations; and Navy SH-60 helicopters from Jacksonville, FL. Many of the Jacksonville-based aircraft were delayed for several days, however, as the Navy planned to transport them aboard ships which would pick them up in Florida on Friday and arrive in the region on Sunday. Friday, however, they were ordered to fly over land to the region, and operate from one of the military bases ashore,¹⁷⁸ and were joined by 13 additional Navy aircraft flown in from Naval Air Station North Island in San Diego, CA.¹⁷⁹

Though FEMA requested at least 45 helicopters from DOD between the day before landfall and the day after landfall¹⁸⁰ – two on Sunday,¹⁸¹ five just past midnight Monday,¹⁸² and 38 on Tuesday¹⁸³ – DOD deployed far more, exceeding 45 by Wednesday. Still, according to Army personnel, there were no superfluous aircraft in the field.¹⁸⁴ Vice Admiral Vivien Crea, Commander of the Coast Guard Atlantic Area, described her visit on “Saturday talking to the rescue swimmers, who were talking to me with tears in their eyes and the frustration and the fear that they weren’t going to get to everybody on time.” As late as Saturday, she said, there were “absolutely not enough assets.”¹⁸⁵

And although the total number of military helicopters – active-duty and National Guard – reached 293 on September 8, the number does not accurately reflect the number of assets devoted to SAR. Many of the helicopters in the region were not equipped with the hoist necessary for SAR, and many were light utility helicopters, without the necessary lift capacity. Others, such as the MH-53s from USS *Bataan*, are so large that the down-wash from their rotors would push a victim underwater, and thus cannot be used for SAR. While these aircraft served essential roles in medical evacuation, personnel transport, and logistical missions, hoist-equipped aircraft were a highly valuable asset, and far less numerous. Furthermore, the available SAR-capable aircraft were, at times, tasked with support missions more appropriate to the utility aircraft, detracting from the more urgent life-saving mission.¹⁸⁶

Lack of Search-and-Rescue Coordination

Although the National Search and Rescue Plan (1999) covers conduct and interagency coordination in small-scale SAR operations, no plan exists for large-scale SAR operations during a declared disaster.

Agencies and individuals performed heroically under exhausting, hazardous, and unprecedented circumstances. Yet the lack of an interagency plan to address search strategy, planning, and organization, communications, a centralized command structure, air-traffic control, and reception of victims led to hazardous flight conditions, inefficient employment of resources, and protracted waits by victims in need of rescue.

The hundreds of aircraft that arrived on the Gulf Coast faced an overwhelming task. From throughout the miles upon miles of destruction, the number of distress calls mounted by the day, and as SAR crews would fly to respond to calls, they would often pass over many more victims in need of rescue.¹⁸⁷ The aircraft and crews flew long and difficult hours to the point of exhaustion, and at the same time, flew in extraordinarily dangerous and confusing conditions in congested skies, rescuing thousands of victims from rooftops, attics, apartments, and overpasses. The participants included not just the DOD, National Guard, and Coast Guard, but numerous civilian elements such as the DOI, state and local law-enforcement agencies, and commercial entities. Yet in the chaos of Katrina’s aftermath, no network

of coordination linked these resources; even the DOD assets remained under separate and changing commands for many days. No common strategy to a thorough and expeditious search existed, and no unified air-traffic control system ensured safety of flight. At the root of these problems is the fact that the United States lacks an appropriate national plan for SAR in large-scale disasters.

The National Search and Rescue Plan is a multi-agency plan, agreed to by the DOD, DOI, and the Department of Transportation, among other federal agencies, providing guidance “for coordinating civil search-and-rescue (SAR) services to meet domestic needs and international commitments.”¹⁸⁸ It outlines the roles and responsibilities of various agencies in establishing an integrated structure for SAR missions. Although the plan reflects a consensus rather than doctrine, its intent is to achieve “the effective use of all available facilities in all types of SAR missions.”¹⁸⁹ Perplexingly, however, it expressly does not apply during declared emergencies and disasters:

Civil SAR does *not* include operations such as ... overall response to natural or man-made disasters or terrorist incidents; and typical disaster response operations, such as: locating and rescuing victims trapped in collapsed structures or other assistance provided under the scope of the Federal Response Plan.¹⁹⁰

In a catastrophic disaster, then, there is currently *no* mechanism for planning SAR operations over extensive areas in both maritime and overland environments, or establishing a sufficiently broad command and control structure to encompass all agencies and assets involved.

Although ESF-9 under the NRP covers USAR – “locating, extricating, and providing onsite medical treatment to victims trapped in collapsed structures”¹⁹¹ – it does not address such massive efforts as Katrina, involving the combination of air, surface, and ground efforts. According to Admiral Crea:

I was surprised by the nebulous nature of the National SAR Plan once I started looking at it from the post-Katrina perspective, because as a Coast Guard aviator and operator, I had always ... assumed that I could do any search and rescue, and certainly in the maritime environment, and I would do it in any inland environment if somebody asked me to do it. ... I was surprised when I read that it’s more of a not-to-interfere type of a basis. ... I think the maritime piece is pretty clear, but I think the inland piece needs a little more structure, perhaps.¹⁹²

The lack of an adequate plan for large-scale SAR led to two major shortcomings in DOD’s air search-and-rescue missions: inadequate air-traffic control and poor coordination of deployed aircraft.

Rear Admiral Joseph Kilkenny, who reported to Joint Task Force Katrina as the commander of maritime forces, agreed. Considering that an easily imaginable attack with a weapon of mass destruction would require a similarly complex SAR response, standardization of SAR procedures must become a priority, he said.¹⁹³ As Second Fleet’s “Lessons Learned” Report observed, “An ad hoc grid reference system was established due to lack of awareness of the common grid reference system already designed by the U.S. National Search and Rescue Supplement.”¹⁹⁴ Some regions were missed while others remained unsearched for long periods of time,¹⁹⁵ and stranded citizens were still being rescued on September 8, 11 days after landfall.¹⁹⁶



Safe on an Interstate island

Photo © 2005 The Times-Picayune Publishing Co., all rights reserved. Used with permission of the Times-Picayune

Because the storm had incapacitated military and civilian air-traffic control radar systems throughout the Gulf Coast, much of the airspace was uncontrolled,¹⁹⁷ creating a hazardous and inefficient situation, with pilots relying simply on a “see-and-avoid” system, without the essential tracking or separation normally provided by an Air Traffic Controller.¹⁹⁸ “I am amazed at the volume of traffic that was in that [Area of Responsibility] and there was not a mid-air collision,” Rear Admiral Dan Lloyd, a Coast Guard representative at U.S. Northern Command (NORTHCOM) said.¹⁹⁹

Coordination was poor because no overarching command existed to assign search sectors, communicate with all assets, or direct aircraft to respond to distress calls. Second Fleet recommended, “Centralized Command and Control, with subordinate sector command and control of air, land, and water-borne assets, in place as soon as possible, will maximize safety and capabilities.”²⁰⁰ The different services each directed their own aircraft, with the structure changing continuously due to the rapid buildup of assets in the operating area throughout the first week.

From Tuesday, August 30, to Wednesday, August 31, DOD air assets operated with Coast Guard aircraft under the coordination of Coast Guard District Eight.²⁰¹ Beginning Wednesday, August 31, all DOD air assets were controlled by Admiral Kilkenny, based on USS *Bataan*.²⁰² Beginning Wednesday, August 31, Army SAR assets reported to the Louisiana National Guard, stationed at Eagle Base at the Superdome.²⁰³ Beginning late in the week, Air Force and other shore-based SAR assets reported to the Joint Force Air Component Commander, who arrived at Camp Shelby, Mississippi, on Thursday, September 1.²⁰⁴ On Satur-

day, September 3, Air Force Brigadier General Harold Moulton arrived from NORTHCOM to consolidate command and control of all Title 10 SAR units from a mobile headquarters unit at Naval Air Station Joint Reserve Base in Belle Chasse.²⁰⁵ Meanwhile, the National Guard established their SAR coordination headquarters at Zephyr Field, the New Orleans Saints' practice field in Jefferson Parish.²⁰⁶

According to the Lessons Learned Report from USS *Bataan*, the lack of a unified communications system among these numerous authorities further complicated the SAR mission. While aircraft communicated with their respective commanders while on the ground, "once airborne ... aircraft from all services and the local authorities took tasking via radio calls from one another," rather than from their operating bases.²⁰⁷ This ad-hoc tasking system led to a lack of an overall strategy, in which victims were often deposited at intermediary locations, requiring further transport. Admiral Crea elaborated:

We would take somebody for a Medevac to the airport where they were supposed to be triaged and further evacuated, and that place got saturated. So my helicopter would come in ... with a medical patient and be told to hold for a half-hour until they could fit them in. Or in some cases, they were told to fly to Baton Rouge, which is like a 2-hour flight. So there we were wasting one helicopter taking one patient all the way to Baton Rouge to drop them off before he'd get back. So I think, clearly, with better organization and planning, that things could have been divided up into missions and sectors and so forth. That was just understandably due to the terrible communications and the chaos and trying to figure out who's in charge initially, and so forth.²⁰⁸

General Moulton, tasked with instituting a centralized SAR plan, described the "crisis mode" of operations he found upon his arrival:

If you had a helicopter, you flew it in, you found somebody on the top of the roof, you grabbed them, and you took them to safety. And it appeared from our perspective that the procedures for doing that were not developed, were not organized. ... And I think sort of by – by routine they started ending up dropping people off at certain places.²⁰⁹

With his headquarters at NORTHCOM, and with leaders and representatives of the forces already engaged in SAR, he developed a plan to integrate the numerous agencies and their hundreds of assets, operating across the air, ground, littoral, and urban environments. The team assembled on September 5, and the overall intent was to achieve a thorough search of the disaster area with all agencies operating on a common strategy and using a common communications network. As described in Chapter 26, large numbers of active-duty military ground troops had then arrived, and together with the thousands of National Guard troops, were able to conduct the thorough door-to-door searches to ensure that all areas had been covered.

Katrina exposed a significant gap in our nation's plans for SAR in a catastrophe. Thousands of lives were saved by the heroic efforts of the pilots, aircrew, and swimmers, together with the thousands of personnel operating in boats and on land. From the moment Katrina cleared the Gulf Coast, SAR was the primary mission, as decreed by leaders of the response, and as reflected by the actions of the Coast Guard and the National Guard as soon as the winds would permit safe flight. But it is necessary to harness these efforts and this heroism in a single cohesive plan that would provide all agencies a centralized coordination structure, a unified communications network, restorable air-traffic control system, and a common search-and-evacuation strategy in order to ensure that in the next large disaster, which may occur in an entirely different environment, this primary mission is a collaborative and efficient success.

- 1 Committee staff interview of Lt. Col. Keith LaCaze, Assistant Administrator, Law Enforcement Division, Louisiana Department of Wildlife and Fisheries, conducted on Nov. 30, 2005, transcript pp. 51-53.
- 2 Committee staff interview of Sec. Dwight Landreneau, Louisiana Department of Wildlife and Fisheries, conducted on Nov. 30, 2005, transcript pp. 44-45.
- 3 Testimony of Lt. Col. Keith LaCaze, Assistant Administrator, Law Enforcement Division, Louisiana Department of Wildlife and Fisheries, before the U.S. Senate, Committee on Homeland Security and Governmental Affairs, hearing on *Hurricane Katrina: Urban Search and Rescue in a Catastrophe*, Jan. 30, 2006 (“The number of people evacuated during that 36 hour period, in my estimate, would be approximately 1,500 people at the three sites we performed evacuations.”).
- 4 Testimony of Jeff Smith, Acting Deputy Director, Louisiana Office of Homeland Security and Emergency Preparedness (LOHSEP), before the U.S. House, Select Bipartisan Committee to Investigate the Preparation for and Response to Hurricane Katrina, hearing on *Hurricane Katrina: Preparedness and Response by the State of Louisiana*, Dec. 14, 2005 (estimating 60,000 people were rescued); Lt. Col. LaCaze, Senate Committee hearing, Jan. 30, 2006 (estimating 60,000 people were rescued); Testimony of Madhu Beriwal, President and Chief Executive Officer, IEM, Inc., before the U.S. Senate, Committee on Homeland Security and Governmental Affairs, hearing on *Preparing for a Catastrophe: The Hurricane Pam Exercise*, Jan. 24, 2006 (estimating between 60,000 and 100,000 people were rescued).
- 5 U.S. Department of Homeland Security, *National Response Plan*. Washington: Government Printing Office, Dec. 2004, Emergency Support Function Annex, p. ESF #9-1 [hereinafter *NRP*].
- 6 See e.g.: Committee staff interview of James Strickland, Team Member, Urban Search and Rescue, Federal Emergency Management Agency (FEMA), conducted on Jan. 25, 2006, transcript p. 42 (stating that the Southeast Louisiana Hurricane Plan listed the U.S. Coast Guard as the lead federal agency for search and rescue and then relied on that information).
- 7 Written Statement of Madhu Beriwal, President and Chief Executive Officer, IEM, Inc., for the U.S. Senate, Committee on Homeland Security and Governmental Affairs, hearing on *Preparing for a Catastrophe: The Hurricane Pam Exercise*, Jan. 24, 2006, p. 6. In all, the Coast Guard completed over 12,500 air rescues, 11,500 surface (boat) rescues and 9,400 hospital evacuations during Katrina. While its air missions garnered much media coverage, it conducted almost half its rescues and evacuations by boats. U.S. Coast Guard, Factcard, “Coast Guard Response to Hurricane Katrina.” <http://www.uscg.mil/hq/g-cp/comrel/factfile/index.htm>. Accessed on Apr. 6, 2006.
- 8 Written Statement of Beriwal, Senate Committee hearing, Jan. 24, 2006, p. 6.
- 9 Testimony of William Lokey, Federal Coordinating Officer for Hurricane Katrina in Louisiana, FEMA, before the U.S. Senate, Committee on Homeland Security and Governmental Affairs, hearing on *Hurricane Katrina: Urban Search and Rescue in a Catastrophe*, Jan. 30, 2006 (stating that FEMA rescued 6,582 people); Strickland, interview, Jan. 25, 2006, pp. 86-87 (stating that FEMA rescued around 6,000 people). See also: U.S. Department of Homeland Security, Emergencies & Disasters, “Hurricane Katrina: What Is Government Doing.” <http://www.dhs.gov/interweb/assetlibrary/Katrina.htm>. Accessed on Apr. 11, 2006.
- 10 Written Statement of William Lokey, Federal Coordinating Officer for Hurricane Katrina in Louisiana, FEMA, for the U.S. Senate, Committee on Homeland Security and Governmental Affairs, hearing on *Hurricane Katrina: Urban Search and Rescue in a Catastrophe*, Jan. 30, 2006, pp. 2-3.
- 11 LOHSEP, *Emergency Operations Plan*, Apr. 2005, p. ESF-9-2 [hereinafter *Louisiana Emergency Operations Plan*, Apr. 2005]; Committee staff interview of Maj. Jeff Mayne, Supervisor, Special Investigator Section, and Legislative Liaison, Louisiana Department of Wildlife and Fisheries, conducted on Nov. 30, 2005, transcript p. 10.
- 12 Lt. Col. LaCaze interview, Nov. 30, 2005, pp. 134-136; Lt. Col. LaCaze, Senate Committee hearing, Jan. 30, 2006.
- 13 Written Statement of Beriwal, Senate Committee hearing, Jan. 24, 2006, p. 6.
- 14 Committee staff interview of Capt. Paul Hellmers, Engine 18, Second Platoon, Fifth District, New Orleans Fire Department, LA, conducted on Nov. 7, 2005, transcript p. 137 (“from our perspective, we were going to stay there for weeks or as long as it took, you know? We had no intention of leaving until we were told it’s time to go.”); Capt. Hellmers interview, Nov. 7, 2005, p. 220 (“And by Saturday evening it was painfully clear that this was not going to be like one [these] small storms. So, me, I wasn’t the only one. There were other people who were pretty much sure it was going to flood. I moved as much of my belongings to my second floor as I could, tried to save what I could before I went to work. Obviously, had I not gone to work, well, I could have saved a lot more of my belongings, but me and most other firemen went to work.”); Testimony of Capt. Timothy Bayard, Commander, Vice Crimes and Narcotics Section, New Orleans Police Department, LA, before the U.S. Senate, Committee on Homeland Security and Governmental Affairs, hearing on *Hurricane Katrina: Urban Search and Rescue in a Catastrophe*, Jan. 30, 2006.
- 15 New Orleans Office of Emergency Preparedness, *Comprehensive Emergency Management Plan*, May 2005, Appendix – Emergency Support Functions, p. 7 (assigning the primary responsibility for Emergency Support Function 9 – search and rescue – to the New Orleans Fire Department, and assigning the New Orleans Police Department as a supporting agency for search and rescue).
- 16 *Southeast Louisiana Catastrophic Hurricane Plan*, prepared by IEM, Inc. for LOHSEP and FEMA, Jan. 2005, p. 65 [hereinafter, *Southeast Louisiana Catastrophic Hurricane Plan*, Jan. 2005].
- 17 Committee staff interview of William Lokey, Federal Coordinating Officer for Hurricane Katrina in Louisiana, FEMA, conducted on Nov. 4, 2005, transcript p. 113.

18 Committee staff interview of Charles Parent, Superintendent, New Orleans Fire Department, LA, conducted on Nov. 10, 2005, transcript pp. 9-10, 33-38; Capt. Hellmers interview, Nov. 7, 2005, p. 18-19 (stating that the NOFD “does not own any boats other than a . . . deep-water boat”); Capt. Hellmers interview, Nov. 7, 2005, pp. 192-193 (preferring “one boat for every two rescuers”).

19 Capt. Bayard, Senate Committee hearing, Jan. 30, 2006.

20 Parent interview, Nov. 10, 2005, pp. 39-40; Capt. Bayard, Senate Committee hearing, Jan. 30, 2006 (stating that NOPD and NOFD are working on “cross-training police officers and firemen in water and urban rescue procedures”).

21 Mike Joseph, the New Orleans Fire Department Liaison to the New Orleans Office of Homeland Security and Public Safety who was responsible for that office’s applications to the U.S. Department of Homeland Security’s Office for Domestic Preparedness (ODP) grants, said that ODP denied his request for water rescue training that would have been held just days before Katrina hit. *Source:* Committee staff interview of Michael Joseph, Liaison to New Orleans Office of Homeland Security, New Orleans Fire Department, LA, conducted on Nov. 8, 2005, transcript pp. 18-20.

I mean just Friday before the hurricane I was denied – I had written a proposal about two months before or a month and a half before. We wanted to have awareness and operational level training to water rescue. The Friday before the storm, request denied, does not meet the parameters of ODP. . . . Just the irony is just unbelievable, because this training was scheduled for that Saturday and Sunday before landfall of Katrina. . . . And that’s just total coincidence because we had been trying to get this water training for over a year as part of our new USAR Team, Urban Search and Rescue, which we formed over a year ago. The committee was formed probably in April or May of ’04, which I serve on that committee, and that’s always something that we wanted to have as part of our USAR was some type of water capability. And we probably found the appropriate and affordable instructor, and you know, as I said, I wrote a little proposal and sent it out through the process to ODP, and it was denied.

The record does not indicate why DHS denied the application.

22 Committee staff interview of Capt. Joseph Fincher, Engine 18, Third Platoon, Fifth District, New Orleans Fire Department, LA, conducted on Nov. 11, 2005, transcript p. 97.

23 *Southeast Louisiana Catastrophic Hurricane Plan*, Jan. 2005, p. 65.

24 Written Statement of Beriwal, Senate Committee hearing, Jan. 24, 2006, p. 6. Additionally, the January 2005 plan that came out of the Hurricane Pam exercise predicted that hundreds of thousands would need to be evacuated after landfall of a catastrophic storm in New Orleans. *Southeast Louisiana Catastrophic Hurricane Plan*, Jan. 2005, p. 30.

25 Two days before landfall, many FEMA officials, including the FCO, received via e-mail, the plan that came out of the Hurricane Pam exercise, including the section on search and rescue. *Source:* Sharon Blades, e-mail to Michel Pawlowski, Linda Hammett Morgan, Pete Jensen, Robert Jevac, Cassandra Ward, Debra Clark, William Lokey, Michael Lowder, Rick Tinker, Pleasant Mann, Richard Brown, Jr., Richard Gray, Vanessa Quinn, Ronald Goins, Bill Zellars, Ted Lifty, Shauna M. Blanchard-Mbangah, Gerilee Bennett, Pat Bowman, Tony Robinson, Gary Jones, Joe Bearden, Wayne Fairley, Chris Riley, and Kara Satra, “Sela Plan,” Aug. 27, 2005, 10:35 a.m. Provided to Committee; filed as Bates no. DHS-FEMA-0028-0000455. However, FEMA search and rescue Incident Support Team member James Strickland said he did not receive the plan, and that it would have been very helpful to have been briefed on the Southeast Louisiana Catastrophic Hurricane Plan and the Hurricane Pam exercise before Katrina made landfall. *Source:* Strickland interview, Jan. 25, 2006, pp. 70-71.

26 Written Statement of Rear Adm. Robert F. Duncan, U.S. Coast Guard, Commander, Eighth Coast Guard District, for the U.S. Senate, Committee on Homeland Security and Governmental Affairs, hearing on *Always Ready: The Coast Guard’s Response to Hurricane Katrina*, Nov. 9, 2005, p. 1.

27 Testimony of Capt. Frank M. Paskewich, U.S. Coast Guard, Commander, U.S. Coast Guard Sector New Orleans, before the U.S. Senate, Committee on Homeland Security and Governmental Affairs, hearing on *Always Ready: The Coast Guard’s Response to Hurricane Katrina*, Nov. 9, 2005 (“We simply would not dream of not responding. If there is a possibility to use a Coast Guard asset or Coast Guard people to help out when people need assistance, we are going to find a way to do it. We are not going to wonder whether we have the authority to do it, we are just going to take action.”).

28 Testimony of Rear Adm. Robert F. Duncan, U.S. Coast Guard, Commander, Eighth Coast Guard District, before the U.S. Senate, Committee on Homeland Security and Governmental Affairs, hearing on *Always Ready: The Coast Guard’s Response to Hurricane Katrina*, Nov. 9, 2005; Capt. Paskewich, Senate Committee hearing, Nov. 9, 2005 (“I am not sure I can recall in the last two years actually making it through a night without getting a phone call about responding to a particular incident. We are trained to do that, and I think that is our strength. We respond, and it is ingrained in our culture.”).

29 Written Statement of Rear Adm. Duncan, Senate Committee hearing, Nov. 9, 2005, p. 2.

30 Committee staff interview of Rear Adm. Robert F. Duncan, U.S. Coast Guard, Commander, Eighth Coast Guard District, conducted on Oct. 18, 2005, transcript pp. 7-8.

31 Testimony of Capt. Bruce C. Jones, U.S. Coast Guard, Commanding Officer, Air Station New Orleans, LA, before the U.S. Senate, Committee on Homeland Security and Governmental Affairs, hearing on *Always Ready: The Coast Guard’s Response to Hurricane Katrina*, Nov. 9, 2005.

32 Rear Adm. Duncan, Senate Committee hearing, Nov. 9, 2005.

33 Capt. Paskewich, Senate Committee hearing, Nov. 9, 2005.

- 34 “The Coast Guard success in completing all of our assigned missions after one of the most devastating storms in the Nation’s history was a result of well-honed first responder skills, our ability to pre-plan and our multi-mission nature.” Capt. Paskewich, Senate Committee hearing, Nov. 9, 2005. The Coast Guard also executed its other missions – containing or remediating hundreds of oil spills; clearing the waterways for navigation; delivering critical supplies by air – in addition to search and rescue in the aftermath of Katrina.
- 35 Rear Adm. Duncan interview, Oct. 18, 2005, pp. 9-10.
- 36 Capt. Paskewich, Senate Committee hearing, Nov. 9, 2005.
- 37 To minimize the direct impact on Coast Guard personnel, which would have adversely affected response efforts, the Coast Guard evacuated (non-essential) personnel and their family members from the Gulf Coast region. “We exercise before every hurricane season. . . . It is a good opportunity for us to bring people into the culture, to understand what the threats are in the Gulf Coast, how we would deal with that, make sure they have their own plans for their families, to talk about those things. . . . We did that this time. We actually left the area.” Rear Adm. Duncan, Senate Committee hearing, Nov. 9, 2005.
- 38 Capt. Paskewich, Senate Committee hearing, Nov. 9, 2005.
- 39 Committee staff interview of Lt. Cmdr. Tom Cooper, U.S. Coast Guard, Helicopter Pilot and Engineering Officer, Air Station New Orleans, LA, conducted on Oct. 18, 2005, transcript pp. 11-12.
- 40 Capt. Jones, Senate Committee hearing, Nov. 9, 2005 (“Laurence Nettles was lowered from an H65 and threaded his way between tree limbs to reach a four-month old infant, her mother and grandmother stranded in deep flood waters in lower Plaquemines Parish at 2:50 that day.”).
- 41 U.S. Coast Guard, Factcard, “Coast Guard Response to Hurricane Katrina.” <http://www.uscg.mil/hq/g-cp/comrel/factfile/index.htm>. Accessed on Apr. 11, 2006.
- 42 Written Statement of Beriwal, Senate Committee hearing, Jan. 24, 2006, p. 6. However, a FEMA PowerPoint presentation dated Aug. 27, 2005, two days before Katrina made landfall in the Gulf, noted that there were likely to be “incredible search and rescue needs (60,000+).” FEMA, “Tropical Storm Katrina: 0900 August 27, 2005,” PowerPoint presentation. Provided to Committee; filed as Bates no. DHS-FEMA-0055-0002142.
- 43 Rear Adm. Duncan, Senate Committee hearing, Nov. 9, 2005.
- 44 Lt. Col. LaCaze interview, Nov. 30, 2005, p. 46.
- 45 Testimony of Brig. Gen. Brod Veillon, Assistant Adjutant General, Louisiana Air National Guard, before the U.S. Senate Committee on Homeland Security and Governmental Affairs, hearing on *Hurricane Katrina: Urban Search and Rescue in a Catastrophe*, Jan. 30, 2006; Committee staff interview of Col. Thomas Beron, Commander, 61st Troop Command, Louisiana Army National Guard, conducted on Dec. 9, 2005, transcript pp. 104-105; Committee staff interview of Lt. Col. Jacques Thibodeaux, Joint Director of Military Support to Civilian Authorities, Louisiana National Guard, conducted on December 9, 2005, transcript pp. 151-153, 157-161.
- 46 “See, Urban Search and Rescue Teams, this was the first time they’d ever actively done water rescues. They carry water equipment to work around in a water environment, but FEMA policy had been that we don’t do water rescue. We do structural collapse rescue assets. . . . Well, in hindsight, what I would have done, since Urban Search and Rescue Teams aren’t water rescue teams, I would have worked more with the State through EMAC and whatnot.” Lokey interview, Nov. 4, 2005, pp. 66-67.
- 47 Committee staff interview of Vice Adm. Vivean Crea, U.S. Coast Guard, Commander, Coast Guard Atlantic Area and Commander, Maritime Defense Zone Atlantic, conducted on Jan. 3, 2006, transcript p. 76 (“Q: Do you think that’s a change that needs to be made to the National SAR Plan, or does there need to be something in the National Response Plan which addresses – A: It would be nice to think that that was an all-hazards, all-encompassing plan, at least a reference to a relevant document that would go into more depth.”).
- 48 New Orleans Fire Department, *2005 Hurricane Guidelines*, 2005, p. 2-4; Committee staff interview of Capt. Fincher, Engine 18, Third Platoon, Fifth District, New Orleans Fire Department, LA, and Capt. Hellmers, Engine 18, Second Platoon, Fifth District, New Orleans Fire Department, LA, interview, conducted on Nov. 7, 2005, transcript pp. 171-173.
- 49 The National Guard’s decision to keep its assets at Jackson Barracks is particularly puzzling given that it could have stationed at least some of the assets at New Orleans police stations throughout the city instead. According to New Orleans Police Department (NOPD) Superintendent Warren Riley (then Deputy Chief) the NOPD had asked the Louisiana National Guard to station some of its high-water vehicles (that can drive through flooded areas) and boats at eight police stations pre-landfall. However, the Guard told him that they would supply vehicles to only three or four NOPD stations, but would not be able to supply them with boats at that time. *Source*: Committee staff interview of Warren Riley, Superintendent of Police, New Orleans Police Department, LA, conducted on Jan. 12, 2006, transcript pp. 121-122. But LANG Brig. Gen. Veillon was not aware of the NOPD request. *Source*: Brig. Gen. Veillon, Senate Committee hearing, Jan. 30, 2006.
- 50 The officer in command of the Louisiana National Guard forces in New Orleans before and after landfall, General Gary Jones said that deciding whether to pre-position equipment at Jackson Barracks in the future would be a “tough call.” Committee staff interview of Brig. Gen. Gary Jones, Assistant Joint Forces Commander, Louisiana Army National Guard, conducted on Dec. 7, 2005, transcript pp. 79-80 (“We pre-position as much of the stuff as we can. For example, the aviation support; we typically move out, get it right on the edge. The engineer teams, we do that, so forth. But if you’re going to be missioned at Jackson Barracks – which, obviously, that’s some of the most vulnerable part of the area – you have to take some risk. And, you know – I guess the question is, it kind of becomes a damned if you do, damned if you don’t. If

we had not positioned some of the trucks and stuff there that ultimately got lost, and the water had not gotten up as high as it was, then we would have faced criticism for the slowness of response for doing that. Historically we've always pre-positioned things there. This storm was of a magnitude that far surpassed anything that we previously had to deal with.”); Col. Beron interview, Dec. 1, 2005, pp. 29-30 (“[I]f the industrial canal had broken on the west side instead of the east side, Jackson Barracks would have been high and dry and those vehicles would have been fine. As to places to move to higher ground, overpasses, bridges, they have inherent problems with vulnerability to wind and other things. So you maybe take them out of the water risk and put them in another risk. I’ll tell you that nowhere really comes to mind. You think of an elevated parking garage maybe would be good. You can’t exactly drive an 18-wheeler into something like that. I’ll tell you that I’ve thought and nothing comes immediately to mind that would lead me to believe that’s a better place because it offers this. Everything that I’ve thought of so far has pros and cons, frankly.”); Committee staff interview of Col. Glenn Curtis, Chief of Staff, Louisiana Army National Guard and Col. Jacques Thibodeaux, Joint Director of Military Support to Civilian Authorities, Louisiana National Guard, conducted on Dec. 6, 2005, transcript pp. 46-57.

51 Lokey, Senate Committee hearing, Jan. 30, 2006 (stating that in retrospect, he would have activated more search and rescue teams before landfall).

52 Lokey, Senate Committee hearing, Jan. 30, 2006; Strickland interview, Jan. 25, 2006, pp. 31-32.

53 Committee staff interview of William Lokey, Federal Coordinating Officer for Hurricane Katrina in Louisiana, FEMA, conducted on Jan. 20, 2006, transcript p. 184. Moreover, Lokey stated that he made a conscious decision to station the USAR teams in Shreveport rather than Baton Rouge. At the time, he explained, Baton Rouge was expected to be in the path of the storm and he wanted the USAR teams out of harm’s way. *Source:* Lokey interview, Jan. 20, 2006, pp. 88-90. According to Lokey, FEMA is now considering a five-year plan that would revise its practices and budget to ensure that its search-and-rescue teams arrive within 12 hours after landfall. *Source:* Lokey interview, Nov. 4, 2005, p. 153.

54 Lokey, Senate Committee hearing, Jan. 30, 2006.

55 Lokey interview, Nov. 4, 2005, pp. 81-82.

56 Lokey interview, Nov. 4, 2005, p. 82.

57 Strickland interview, Jan. 25, 2006, pp. 33-34 (“I would have preferred being slightly closer.”).

58 Strickland interview, Jan. 25, 2006, pp. 35-37, 42-48.

59 Strickland interview, Jan. 25, 2006, pp. 82-83.

60 Although it is generally not advisable for even first responders to begin search-and-rescue missions when the winds are above 40 mph, some of the NOFD officers literally threw caution to the wind. Fincher interview, Nov. 7, 2005, p. 93 (“Personally, I guess I didn’t have good communications with me because I wasn’t aware and I really didn’t give a damn about what anybody else wanted. I knew there were people dying. I was pretty sure I could get out safely and get the boat back so we could get our rescue operations underway.”).

61 Lokey, Senate Committee hearing, Jan. 30, 2006; Strickland interview, Jan. 25, 2006, p. 15 (“I don’t deem we were in the water rescue business.”).

62 Committee staff interview of Eric Tolbert, former Director, Response Division, FEMA, conducted on Dec. 1, 2005, transcript, p. 40 (stating that FEMA lacks any water rescue capability); Strickland interview, Jan. 25, 2006, p. 21 (“We don’t own boats.”).

63 Strickland interview, Jan. 25, 2006, pp. 15, 83, 21-22 (stating that the FEMA search-and-rescue teams “were at the mercy of the people who showed up with the boats.”).

64 The teams are trained and equipped to rescue people from collapsed structures, as after an earthquake. The team members are not trained or equipped for a flooded environment. Lokey interview, Nov. 4, 2005, pp. 66, 70.

65 Strickland interview, Jan. 25, 2006, pp. 29-30; Lokey, Senate Committee hearing, Jan. 30, 2006.

66 Beriwal, Senate Committee hearing, Jan. 24, 2006 (“As you might know, nine of ten deaths that occur in a hurricane are due to storm surge and due to drowning from rain and storm surge. So we wanted to create ten to 20 feet of water in the City of New Orleans, which would constitute a catastrophic scenario for Southeast Louisiana.”).

67 Lokey interview, Nov. 4, 2005, p. 79.

68 Strickland interview, Jan. 25, 2006, p. 17 (“FEMA Urban Search and Rescue does not need to get into the water rescue business....But in any event, yeah, there is probably a little bit higher level of training that the USAR system needs to have in order to safely operate in a water environment.”); Strickland interview, Jan. 25, 2006, p. 18 (stating that the mission to do water rescue is that of the “Coast Guard and the federal, local and state.”); Lokey, Senate Committee hearing, Jan. 30, 2006.

69 Strickland interview, Jan. 25, 2006, p. 19 (explaining that FEMA lacks boats and does not have the funding to support water rescue); Strickland interview, Jan. 25, 2006, p. 27 (“But that’s not to say that if they plan this out, and they fund it correctly, and they hit every step, and they connected all their dots, maybe we could get into the water rescue business.”); Lokey, Senate Committee hearing, Jan. 30, 2006.

70 Strickland interview, Jan. 25, 2006, pp. 12-13 (“It’s kind of irritating to me, but they don’t [provide additional training for IST teams]. They haven’t in five years.”); Strickland interview, Jan. 25, 2006, p. 14 (stating that with additional training, the IST teams “would have had a little bit smoother response ... when you only see people [when] ... we go out on a disaster ... it’s kind of hard; that’s not the optimum time to do training, when you’re up to your elbows in some kind of

an incident.”); Strickland interview, Jan. 25, 2006, p. 20 (explaining that “when you show up for something like Katrina ... there’s no time to be trying to get our act together then.”); Strickland interview, Jan. 25, 2006, p. 22 (“When you’re in and around polluted, contaminated water like that, there’s a health and safety issue that we would have to prepare for. There’s that higher level of training that they need to have.”).

71 Capt. Bayard, Senate Committee hearing, Jan. 30, 2006; Lt. Col. LaCaze, Senate Committee hearing, Jan. 30, 2006.

72 Capt. Fincher and Capt. Hellmers interview, Nov. 7, 2005, pp. 105-110, 113, 115-116 (stating that the “Fire Alarm,” the NOFD main communications center, flooded and went down around 6:20p or 7:20p on Monday, August 29, 2005, forcing prompting NOFD to follow its contingency plan and use the National Mutual Aid Channel); New Orleans Fire Department, *2005 Hurricane Guidelines*, 2005, pp. 3-2 through 3-7.

73 Capt. Hellmers interview, Nov. 7, 2005, pp. 111-112 (stating “that happened many times with not just me, but other people doing the same thing, relaying messages between people when it was clear they couldn’t hear each other.”).

74 Lt. Col. LaCaze interview, Nov. 30, 2005, pp. 62-63.

75 Sec. Landreneau interview, Nov. 30, 2005, p. 16.

76 Committee staff interview of Lt. Col. Joseph Booth, Deputy Superintendent, Crisis Response and Special Operations, Louisiana State Police, conducted on Dec. 9, 2005, transcript pp. 47-49. The record does not reveal why the proposal was not accepted.

77 Sec. Landreneau, Louisiana Department of Wildlife and Fisheries, explained that he would have difficulty communicating from Baton Rouge at the state’s Emergency Operations Center to his officers operating in New Orleans, such as Lt. Col. Keith LaCaze. Sec. Landreneau interview, Nov. 30, 2005, p. 1. *See also:* Lt. Col. LaCaze interview, Nov. 30, 2005, pp. 15-17 (“If we were in Baton Rouge and Keith was on Clearview Avenue in Metairie, [Department of Wildlife & Fisheries Major] Jeff [Mayne] would get a call and sometimes when we were lucky we could communicate from Baton Rouge to New Orleans, but then the next link is to be able to communicate from our operations center to the boats, that was virtually impossible and some of it because [we were] overwhelmed by traffic, you’re in between big buildings. So we tried regular cell phones, we tried satellite phones, we ended up going to the local Academy Sports stores and we bought the little hand-held walkie-talkies. At least people in the boats could talk but it still didn’t assist us in getting communications from New Orleans to Baton Rouge and back. ... Is your communications with other agencies good or bad, and we would say we can’t communicate with them. Well, it wasn’t that we had a misunderstanding between the agencies, we just couldn’t talk to them.”); Brig. Gen. Veillon, Senate Committee hearing, Jan. 30, 2006; Strickland interview, Jan. 25, 2006, pp. 123-124.

78 Capt. Jones, Senate Committee hearing, Nov. 9, 2005; Lt. Cmdr. Cooper interview, Oct. 18, 2005, pp. 19-20; Committee staff interview of Lt. Cmdr. Mark Vislay, U.S. Coast Guard, HH-60J Instructor Pilot, Training Division, Aviation Training Center Mobile, AL, conducted on Oct. 26, 2005, transcript pp. 18-19.

79 Lt. Cmdr. Vislay interview, Oct. 26, 2005, p. 17.

80 Lt. Cmdr. Cooper interview, Oct. 18, 2005, pp. 50-52.

81 Strickland interview, Jan. 25, 2006, p. 124; Lt. Col. LaCaze interview, Nov. 30, 2005, p. 189.

82 Sec. Landreneau interview, Nov. 30, 2005, pp. 189-190.

83 Lt. Col. LaCaze interview, Nov. 30, 2005, p. 49 (“As the water began to rise too it would have been extremely difficult for us to identify streets and addresses, so once the address on the side of the house or that little mark is under water, it’s kind of hard to go to a certain physical address. The same thing with street signs. Already some of the guys were not familiar with the city of New Orleans and then I guess even an added difficulty with the street signs being covered by water, so it was difficult.”).

84 Committee staff interview of Brig. Gen. Brod Veillon, Assistant Adjutant General, Louisiana Air National Guard, conducted on Nov. 29, 2005, transcript pp. 101-103.

85 Committee staff interview of Capt. Timothy Bayard, Commander, Vice Crimes and Narcotics Section, New Orleans Police Department, LA, conducted on Nov. 21, 2005, transcript p. 165.

86 Strickland interview, Jan. 25, 2006, p. 95 (“We couldn’t buy a ride on a DoD helicopter.”).

87 According to Sheriff Harris Lee for Jefferson Parish, it is only by chance that he learned that thousands of people were sitting on I-10 in need of food and water. As a result, the people lacked food and water for as long as a full day. Committee staff interview of Harry Lee, Sheriff, Jefferson Parish, LA, conducted on Jan. 9, 2006, transcript pp. 34-37.

88 Capt. Bayard, Senate Committee hearing, Jan. 30, 2006. *See also:* New Orleans Police Department, Initial (30-day) After Action Report, Report of Captain Timothy Bayard, Oct. 16, 2005, p. 1. Provided to Committee (“The Office of Emergency Preparedness needs to be revamped. If their role is to have us prepared to handle a disaster such as this they FAILED. [emphasis in original] They lacked a plan, did not provide the necessary equipment, provided no direction or leadership, did not coordinate or attempt to have commanders of field operations coordinate with any state, or federal agency etc.”).

89 Capt. Bayard interview, Nov. 21, 2005, p. 33; Capt. Bayard, Senate Committee hearing, Jan. 30, 2006.

90 Capt. Bayard interview, Nov. 21, 2005, pp. 83-84.

91 Strickland interview, Jan. 25, 2006, p. 56.

- 92 Strickland interview, Jan. 25, 2006, pp. 42-48.
- 93 Strickland interview, Jan. 25, 2006, p. 60.
- 94 Maj. Sandy Dares, Enforcement Division, Louisiana Department of Wildlife and Fisheries, Hurricane Katrina Activity Report (discussing Wildlife and Fisheries command post at Causeway and I-10 on Aug. 30, 2005); Brig. Gen. Veillon interview, Nov. 29, 2005, pp. 30-31.
- 95 Strickland interview, Jan. 25, 2006, pp. 54-55; *NRP*, p. 39.
- 96 For example, one FEMA search and rescue team member testified that W&F failed to keep a representative at Zephyr Field, where FEMA and the Coast Guard had set up “on the fly” a local unified command for search and rescue on Wednesday, August 31, 2005. Strickland interview, Jan. 25, 2006, p. 58; Capt. Fincher interview, Nov. 7, 2005, p. 226 (“We kind of stumbled into FEMA. It wasn’t planned.”).
- 97 Strickland interview, Jan. 25, 2006, p. 56 (“the first time we got all of the unified commanders ... was 48 hours after the hurricane made landfall, and that’s not good.”).
- 98 Committee staff interview of Lt. Valerie Boyd, U.S. Coast Guard, Command Center Watch Officer, Eighth District Office Headquarters, New Orleans, LA, conducted on Nov. 7, 2005, transcript p. 20.
- 99 Lt. Boyd interview, Nov. 7, 2005, pp. 15-16.
- 100 Lt. Boyd interview, Nov. 7, 2005, p. 23.
- 101 Brig. Gen. Veillon interview, Nov. 29, 2005, p. 188.
- 102 Brig. Gen. Veillon interview, Nov. 29, 2005, p. 153.
- 103 Parent interview, Nov. 10, 2005, p. 9. With such a significant need for water search and rescue, it is inexcusable that no level of government provided New Orleans’ first responders with more boats. Fincher interview, Nov. 7, 2005, pp. 120-121 (requesting assistance for search and rescue at 3 p.m., on Monday, August 29, 2005); Capt. Hellmers interview, Nov. 7, 2005, p. 121 (“I assume when I tell people that the water is up to the roofs of houses that the people above me are going to do everything within their power to send help. I mean, it’s pretty clear there’s [sic] people drowning.”).
- 104 Capt. Hellmers interview, Nov. 7, 2005, pp. 205-207 (“If you call and say your house is on fire, you don’t have to do any more. The fire department is coming. You don’t have to sign a piece of paper to let them in you door, you know, they come.”).
- 105 Louisiana Department of Wildlife and Fisheries, E-Resource Request, Res-113736-911082805, Aug. 29, 2005, 11:39 p.m. CT. Provided to Committee (including a handwritten remark above the request for rubber rafts that reads “Request Denied.”).
- 106 Lokey, Senate Committee hearing, Jan. 30, 2006.
- 107 Lt. Col. LaCaze, Senate Committee hearing, Jan. 30, 2006.
- 108 Jeffrey Hall, e-mail to Marc Short, Sept. 2, 2005, 10:04 p.m. Provided to Committee; filed as Bates no. DHS-FRNT-0010-0000294. *See also*: Committee staff interview of Matt Mayer, former Chief of Staff and Senior Policy Advisor, Office of Domestic Preparedness Security, U.S. Department of Homeland Security, conducted on Jan. 26, 2006, transcript pp. 24-25. It appears that FEMA officials were unaware of, or forgot about, the pods that DHS held. Currently, DHS is reevaluating whether this program should come under FEMA control. Mayer interview, Jan. 26, 2006, pp. 26-27.
- 109 Mayer interview, Jan. 26, 2006, pp. 26-27; Jeffrey Hall, e-mail to Marc Short, Sept. 2, 2005, 10:04 p.m. Provided to Committee; filed as Bates no. DHS-FRNT-0010-0000294.
- 110 Capt. Fincher interview, Nov. 7, 2005, pp. 193-196.
- 111 Mayer interview, Jan. 26, 2006, p. 37.
- 112 Mayer interview, Jan. 26, 2006, pp. 37, 143 (“[B]ottom line is, hindsight, we would have deployed the PODS much sooner than when we did. We didn’t. We made a mistake.”).
- 113 Fincher interview, Nov. 7, 2005, pp. 193-196.
- 114 Committee staff interview of Laurence Broun, Emergency Coordinator, U.S. Department of the Interior, conducted on Mar. 21, 2006, transcript pp. 9-12. Broun stated that although a DOI representative had conversations with some FEMA personnel about the law enforcement personnel, but ultimately, FEMA did not follow through on the DOI offer.
- 115 Lokey, Senate Committee hearing, Jan. 30, 2006; Lokey interview, Jan. 20, 2006, pp. 50-51.
- 116 U.S. Department of the Interior, Office of the Assistant Secretary, Police, Management and Budget, Response to the U.S. Senate, Committee on Homeland Security and Governmental Affairs, Document and Information Request Dated Oct. 7, 2005, Nov. 7, 2005, p. 20.
- 117 Broun interview, Mar. 21, 2006, pp. 15-19.
- 118 Lokey, Senate Committee hearing, Jan. 30, 2006; Lokey interview, Jan. 20, 2006, pp. 50-51.
- 119 *Louisiana Emergency Operations Plan*, Apr. 1, 2005, pp. 14-15 (“The State of Louisiana is a signatory to the Emergency Management Assistance Compact (EMAC), as stated in the Louisiana Homeland Security and Emergency Assistance and Disaster Act of 1993 as amended. If an emergency becomes too widespread or serious for parish and state resources, the Director LOHSEP will process a request for assistance through EMAC.”).

- 120 Lokey interview, Nov. 4, 2005, p. 73. *See also*: Lokey interview, Jan. 20, 2006, pp. 152-153.
- 121 Lokey interview, Nov. 4, 2005, p. 74.
- 122 Lokey interview, Jan. 20, 2006, pp. 152-153. On Saturday, Aug. 27, 2005, Gov. Blanco also facilitated the request by calling Gov. Schwarzenegger. California officially became a signatory to EMAC on September 13, 2005. California, Office of the Governor, "Governor Schwarzenegger Signs Emergency Management Assistance Compact Legislation," press release, Sept. 13, 2005.
- 123 Brig. Gen. Veillon interview, Nov. 29, 2005, p. 152; Brig. Gen. Veillon, Senate Committee hearing, Jan. 30, 2006.
- 124 Testimony of Maj. Gen. Bennett C. Landreneau, Adjutant General, Louisiana, before the U.S. House, Select Bipartisan Committee to Investigate the Preparation for and Response to Hurricane Katrina, hearing on *Hurricane Katrina: Preparedness and Response by the Department of Defense, the Coast Guard, and the National Guard of Louisiana, Mississippi, and Alabama*, Oct. 7, 2005.
- 125 Lt. Col. LaCaze, Senate Committee hearing, Jan. 30, 2006 ("requests were bogged down in the process, in the pipe, so to speak"); Lokey, Senate Committee hearing, Jan. 30, 2006 (recalling "delays of people not wanting to respon[d] because they didn't have the right signature to assure they were covered under the EMAC compact").
- 126 Sec. Landreneau interview, Nov. 30, 2005, pp. 116-117 ("South Carolina couldn't leave the state until they could call a FEMA number. And we talked about this as a way to improve this, if FEMA or whoever is in charge of this would give us a list of approved department agencies. ... It would have been great because South Carolina took us basically a day from the time they got word that they ... were packed up and ready to come, they were stationed up in a convoy ready to go but they couldn't move. And I don't blame them, they couldn't leave because the proper paperwork wasn't done.").
- 127 Lokey interview, Nov. 4, 2005, p. 8.
- 128 Lokey interview, Jan. 20, 2006, p. 152.
- 129 Strickland interview, Jan. 25, 2006, pp. 117-118.
- 130 Sec. Landreneau interview, Nov. 30, 2005, pp. 169-174.
- 131 Capt. Fincher interview, Nov. 7, 2005, pp. 153-154; Sec. Landreneau interview, Nov. 30, 2005, pp. 189-190.
- 132 Sec. Landreneau interview, Nov. 30, 2005, p. 70; Strickland interview, Jan. 25, 2006, pp. 169-170.
- 133 Lt. Col. LaCaze interview, Nov. 30, 2005, pp. 48-49, 66-69.
- 134 Strickland interview, Jan. 25, 2006, p. 66 (recalling that "Thursday ... is when it seemed like the whole thing, New Orleans, was imploding"); Strickland interview, Jan. 25, 2006, pp. 91-93 (stating that "on the 1st, ... there were all these reports ... that there was shooting, ... that they were rioting in the streets and all this.").
- 135 FEMA-NRCC, e-mail to Clair Blong and others, "HSOC SPOT REP #53," Sept. 1, 2005, 8:31 p.m. Provided to Committee; filed as Bates no. DHS-FEMA-0051-0000193 ("Status of US&R Task Force in LA. ... All assets have ceased operations until National Guard can assist TF's with security."); Strickland interview, Jan. 25, 2005, pp. 66, 91; Lokey interview, Jan. 20, 2005, pp. 148-149.
- 136 Committee staff interview of Capt. Patrick Lampard, Fifth District, New Orleans Fire Department, LA, conducted on Jan. 11, 2006, transcript pp. 76-78.
- 137 Capt. Hellmers interview, Nov. 7, 2005, p. 170 (stating that some NOFD officers "said no, we're not stopping" and turned their radios off).
- 138 Capt. Hellmers interview, Nov. 7, 2005, pp. 162-163 ("And our area wasn't really that dangerous....for one thing, we were armed, but there was the potential of criminals getting into our area, but I didn't see it as a big problem. We go into burning buildings for a living, and I'm not really that worried about running into a criminal. Not that I don't value my own life, I do, ... I'm not particularly afraid of some possible danger.").
- 139 Strickland interview, Jan. 25, 2006, pp. 91-92.
- 140 Strickland interview, Jan. 25, 2006, pp. 94-95.
- 141 Lokey interview, Jan. 20, 2006, pp. 209-211.
- 142 On September 10, 2005, the Department of Justice ruled: "Federal agents may pursue house-to-house forced entry rescue attempts where deemed appropriate." The ruling was interpreted as allowing federal agents to force entry into a house to rescue someone trapped or injured in a building, but not to take part in a forced evacuation. Linda Bizzarro, e-mail to James A. McAtamney and others, "Legal Opinion on entry into homes," Sept. 13, 2005, 3:26 p.m. Provided to Committee; filed as Bates no. DAG 000000107.
- 143 Mississippi Emergency Management Agency (MEMA), *Mississippi Emergency Operations Plan, Volume II: Mississippi Comprehensive Emergency Management Plan (CEMP)*, May 14, 1999, section ESF-9, p. 9-1 [hereinafter *Mississippi CEMP*, May 14, 1999].
- 144 Committee staff interview of Jim Brinson, Response Coordinator, Office of Homeland Security, Mississippi Department of Public Safety, conducted on Dec. 14, 2005, transcript p. 12.
- 145 *Mississippi CEMP* May, 14, 1999, section ESF-9, pp. 2-3.
- 146 *Mississippi CEMP*, May, 14, 1999, section ESF-9, pp. 9-5, 9-8 through 9-9.

147 MEMA, Hurricane Situation Report #11, Hurricane Katrina. Aug. 29, 2005, 9 a.m., p. 8. Provided to Committee; filed at Bates no. MEMA-0010905.

148 FEMA, Urban Search and Rescue National Response System, Incident Support Team (White) Transition Team, Executive Summary, Sept. 11, 2005. Provided to Committee [hereinafter USAR, Executive Summary].

149 Brinson interview, Dec. 14, 2005, p. 18. After the storm, additional FEMA teams were staged in Texas and sent to Mississippi. USAR, Executive Summary.

150 Brinson interview, Dec. 14, 2005, pp. 24-26.

151 Brinson interview, Dec. 14, 2005, pp. 23-24.

152 For example, Paul Bennett of the Gulfport Police Department recounted what search-and-rescue responders encountered in Harrison County immediately after the storm:

And in some of the areas that we could not get to – and I very distinctly remember one of the first units that had gone out, he had gotten as close as he could to a particular neighborhood and he couldn't get in because you couldn't find the road. And residents were actually swimming out to the vehicle trying to get – because they saw the vehicle. They saw the flashing blue lights. But they were swimming out to the vehicle trying to get to it. And that's when it really started – we started getting our feedback from the field, Hey, this is very, very bad.

Committee staff interview of Paul Bennett, Deputy Chief of Police, Gulfport Police Department, MS, conducted on Dec. 7, 2005, pp. 33-34.

153 Brinson interview, Dec. 14, 2005, pp. 63-64.

154 Committee staff interview of Pat Sullivan, Fire Chief, Gulfport Fire Department, MS, conducted on Dec. 7, 2005, pp. 127-144.

155 Brinson interview, Dec. 14, 2005, pp. 16-17.

156 Brinson interview, Dec. 14, 2005, pp. 39-69.

157 See e.g., Committee staff interview of Michael Beeman, Director, National Preparedness Division, Region II, FEMA, conducted on Jan. 20, 2006, transcript p. 161-162.

158 Brinson interview, Dec. 14, 2005, p. 40.

159 Brinson interview, Dec. 14, 2005, p. 50.

160 USAR, Executive Summary. The FEMA teams deployed were a mix of larger, approximately 80 person “Type I” teams and smaller “Type III” teams consisting of 20-30 people.

161 Written statement of Gov. Haley Barbour, Mississippi, for the U.S. Senate, Committee on Homeland Security and Governmental Affairs, hearing on *Hurricane Katrina: The Role of Governors in Managing Catastrophe*, Feb. 2, 2006, p. 3.

162 Committee staff interview of Lt. Col. Lee Smithson, Director of Military Support, Mississippi Army National Guard, conducted on Jan. 25, 2006, transcript pp. 30-31.

163 Lt. Col. Smithson interview, Jan. 25, 2006, pp. 28, 42.

164 Brinson interview, Dec. 14, 2005, p. 36. A FEMA report on search and rescue in Mississippi indicates that field operations for FEMA teams ended a couple of days later, on September 10, 2005. USAR, Executive Summary.

165 Brinson interview, Dec. 14, 2005, p. 62. Mississippi Governor Haley Barbour, among others, has noted the efforts of Coast Guard personnel in particular in conducting rescue efforts. Written statement of Gov. Barbour, Senate Committee hearing, Feb. 2, 2006, p. 3.

166 Sullivan interview, Dec. 7, 2005, pp. 104-105.

167 National Guard Bureau, *National Guard After Action Review: Hurricane Response*, “National Guard Timeline,” Dec. 21, 2005, pp. 10-12. Provided to Committee.

168 National Guard Bureau, “Current Intelligence,” briefing slide, Aug. 29, 2005, 2 a.m. Provided to Committee.

169 Written Statement of Maj. Gen. Bennett C. Landreneau, Adjutant General, Louisiana, for the U.S. Senate, Committee on Homeland Security and Governmental Affairs, hearing on *Hurricane Katrina: The Defense Department's Role in the Response*, Feb. 9, 2006, p. 4.

170 National Guard Bureau, *National Guard After Action Review: Hurricane Response*, “Army National Guard.” Dec. 21, 2005, p. 72.

171 Office of the Assistant Secretary of Defense for Homeland Defense, “Katrina Helicopter Flow into JOA.” Provided to Committee.

172 Office of the Assistant Secretary of Defense for Homeland Defense, “Katrina Helicopter Flow into JOA.” Provided to Committee.

173 Committee staff interview of Capt. Rick Snyder, U.S. Navy, Executive Officer, USS *Bataan*, conducted on Nov. 14, 2005 (untranscribed). The “Lessons Learned” inputs from USS *Bataan* state that although the three MH-60 aircraft were employed in SAR missions, the two heavy-lift MH-53 helicopters could not be used for Search and Rescue “due to their inability to provide direct support of hoisting survivors from rooftops or out of the water.” USS *Bataan*, Combined

Bataan Lessons Learned Form, “Airborne Communications.” Provided to Committee.

174 Committee staff interview of Capt. Bruce Jones, U.S. Coast Guard, Commanding Officer, Air Station New Orleans, LA conducted on Nov. 9, 2005 (untranscribed).

175 Committee staff interview of Col. Daniel Shanahan, U.S. Army, Commander, 1st Air Cavalry Brigade, 1st Cavalry Division, U.S. Department of Defense, conducted on Feb. 23, 2006 (untranscribed).

176 Insung Lee, e-mail to HSOC.SWO and others, “HSOC #4317-05 HC Katrina – DoD Update 311145 Aug 05m,” Aug. 31, 2005, 11:50 a.m. Provided to Committee; filed as Bates no. WHK-12712.

177 JTF-Katrina, Commander’s Assessment, Sept. 2, 2005. Provided to Committee.

178 Committee staff interview of Cmdr. Thomas Quinn, U.S. Navy, Director of Operations, Commander Naval Air Forces, Atlantic, conducted Nov. 15, 2005 (untranscribed).

179 U.S. Northern Command, “USNORTHCOM Hurricane Katrina Timeline,” draft, p. 16; JTF-Katrina, Commander’s Assessment, Sept. 3, 2005. Provided to Committee.

180 Office of the Assistant Secretary of Defense for Homeland Defense, “Hurricane Katrina Mission Assignments (MA’s) Recap,” Dec. 2, 2005. Provided to Committee.

181 FEMA, Mission Assignment, 3212EM-LA-DOD-01, Aug. 28, 2005. Provided to Committee.

182 FEMA, Mission Assignment, 1604DR-MS-DOD-01, Aug. 30, 2005, 12:16 a.m.; FEMA, Mission Assignment, 1604-DR-MS-DOD-02, Aug. 30, 2005, 12:43 a.m. Provided to Committee; filed as Bates no. DHS 0000803.

183 FEMA, Mission Assignment, 1604DR-MS-DOD-07, Aug. 30, 2005, 10:03 p.m. Provided to Committee; filed as Bates no. DHS 0000848.

184 Col. Shanahan interview, Feb. 3, 2006.

185 Vice Adm. Crea interview, Jan. 3, 2006, p. 52.

186 USS *Bataan*, Combined Bataan Lessons Learned Form, “Aircraft Support Effectiveness.” Provided to Committee (“BATAAN’s MH-60Ss were tasked with providing direct support for the transportation of Task Force Officials underutilizing the capability of a SAR capable aircraft complete with rescue swimmers. ... The New Orleans area contained many land based helicopter assets with no hoist capability that could have carried out this tasking thus freeing up BATAAN’s hoist capable H-60s to provide rescue assistance when the need was at its greatest.”). National Guard Bureau, *National Guard After Action Review: Hurricane Response*, pp. 67-68 (elaborates on the importance of the availability and readiness of hoist-equipped aircraft.).

187 USS *Bataan*, Combined Bataan Lessons Learned Form, “Coordination of Rescue Aircraft.” Provided to Committee.

188 National Search and Rescue Committee, *United States National Search and Rescue Plan*, 1999, Nov. 2, 2000. <http://www.uscg.mil/hq/g-o/g-opr/nsarc/nsp.htm>. Accessed on Feb. 27, 2006 [hereinafter *United States National Search and Rescue Plan*, 1999].

189 *United States National Search and Rescue Plan*, 1999.

190 *United States National Search and Rescue Plan*, 1999 (emphasis added).

191 *NRP*, Urban Search and Rescue Annex, p. ESF #9-1.

192 Vice Adm. Crea interview, Jan. 3, 2006, pp. 75-76. “Theoretically, you’d want to have different sectors or search areas, but the magnitude of the people popping up, my guys would say they would fly in – they’d see one person on a roof, they’d fly in to get them, and the noise of the helicopter, all of a sudden other people would start poking their heads out, you know? So instead of having one person, now they had 50 people, or they’d, you know, break a hole through the roof, get that one guy out, and he’d say, ‘I’ve got ten more people inside the house,’ which, you know, would clearly exceed the capability of that – you know, particularly if it was one of our smaller helicopters. So then you’d have to draw in more.” Vice Adm. Crea interview, Jan. 3, 2006, p. 57.

193 Committee staff interview of Rear Adm. Joseph Kilkenny, U.S. Navy, former Joint Force Maritime Component Commander, Joint Task Force Katrina, conducted on Nov. 30, 2005 (untranscribed).

194 U.S. Second Fleet, Fleet-14, *Katrina Lessons Learned*, “JTF Katrina Search and Rescue,” p. 27. Provided to Committee.

195 U.S. Second Fleet, Fleet-05, *Katrina Lessons Learned*, “JTF Katrina Air Command and Control,” p. 13. Provided to Committee. (“Inadequate Command and control allowed some search areas to be missed while others were searched multiple times.”).

196 Col. Shanahan interview, Feb. 23, 2006.

197 National Guard Bureau, *National Guard After Action Review: Hurricane Response*, “Army National Guard,” Dec. 21, 2005, p. 90 (“All FAA and Military air traffic control and air command and control systems were rendered inoperable as Katrina passed. ... There was no known preplanning for the Command and Control of ... diversified participants each having different radios, frequencies and some with little or no ... rescue training.”).

198 National Guard Bureau, *National Guard After Action Review: Hurricane Response*, “Army National Guard,” Dec. 21, 2005, p. 73 (“There was no overall control, flight following, or separation of the many agency aircraft engaged around New Orleans, LA and Gulfport, MS creating potentially unsafe condition. A plan is required to facilitate the employment of military ATC assets in such cases.”).

199 Committee staff interview of Rear Adm. Dan Lloyd, U.S. Coast Guard, former Chief, Interagency Coordination Group, U.S. Northern Command, conducted on Dec. 8, 2005, transcript pp. 116-117.

200 U.S. Second Fleet, Fleet-05, *Katrina Lessons Learned*, "JTF Katrina Air Command and Control," p. 13. Provided to Committee.

201 Vice Adm. Crea interview, Jan. 3, 2006, pp. 43-44.

202 Joint Task Force Katrina, Message to *USS Bataan*, "JTF Katrina FRAGO-2 to Hurricane Katrina EXORD," Aug. 31, 2005, 1634Z. Provided to Committee.

203 Col. Shanahan interview, Feb. 23, 2006.

204 Capt. Robert Reiningger, e-mail to Maj. Gen. Richard Rowe, "Re: Bataan," Sept. 1, 2005, 10:54 a.m. Provided to Committee.

205 Committee staff interview of Brig. Gen. Harold Moulton, Director, Standing Joint Headquarters-North, U.S. Northern Command, conducted on Dec. 5, 2005, transcript pp. 25-26, 55-56.

206 Brig. Gen. Moulton, Dec. 5, 2005, p. 58.

207 *USS Bataan*, Combined Bataan Lessons Learned Form, "Airborne Communications." Provided to Committee.

208 Vice Adm. Crea, Jan. 3, 2006, pp. 54-55.

209 Brig. Gen. Moulton, Dec. 5, 2005, p. 56.