



Army Support During the Hurricane Katrina Disaster

James A. Wombwell

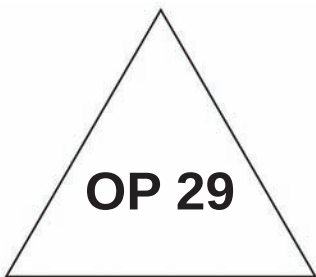


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Foreword

The Combat Studies Institute (CSI) is pleased to announce its latest publication in the Long War Series, Occasional Paper 29, *Army Support During the Hurricane Katrina Disaster*, by Mr. James A. Wombwell. In August 2005, Hurricane Katrina made landfall as a Category 3 storm and was the costliest hurricane as well as one of the five deadliest storms in the history of the United States. It caused extensive destruction along the Gulf coast from central Florida to Texas. The most severe loss of life and property damage occurred in New Orleans, Louisiana, where the levee system catastrophically failed, flooding the city and large tracts of neighboring parishes.

In preparation for and reaction to the hurricane, the United States Northern Command established Joint Task Force *Katrina* at Camp Shelby, Mississippi, to act as the Active component's on-scene commander. Some 22,000 Active-Duty personnel eventually assisted with relief-and-recovery operations in Mississippi and Louisiana. At the same time, all 50 states, the District of Columbia, and 3 territories sent approximately 50,000 National Guard personnel to deal with the storm's aftermath. These men and women were instrumental in the rescue-and-relief mission, often using their own initiative and resources in the chaotic aftermath of the storm.

Because the media coverage of this great national disaster tended toward the sensational more than the analytical, many important stories remain to be told in a dispassionate manner. One such story is the response by US Army personnel, both the Active and Reserve components, within the broader governmental effort to mitigate the horrific effects of the storm. James Wombwell's study offers just such a dispassionate analysis of the Army's response to the natural disaster by providing a detailed account of the operations in Louisiana and Mississippi. Much good work was done by the Army team, but Wombwell shows that there is still room for improvement.

Sadly, we have not seen the end of natural disasters in the United States, ensuring that the US Army once more will be called upon to provide assistance in their aftermath. The insights gained from the Army's experience following Hurricane Katrina, as delineated in James Wombwell's study, will make that future response even more focused and efficient. *CSI—The Past Is Prologue!*

Dr. William G. Robertson
Director, Combat Studies Institute

Preface

Like many Americans, I followed the events in Mississippi and Louisiana with great interest in the days after Hurricane Katrina struck the Gulf coast. The pictures of the destruction wrought by the storm were overwhelming. I was appalled by the predictions that the storm and subsequent flooding killed up to 10,000 people. The reports of looting, rape, and murder sickened me. As I listened to the media reports, I wondered how we could allow such things to happen in our country. Where were the vast resources of our Federal Government and, more to the point, the United States military? Consequently, as I approached this project, I had to overcome a number of preconceived notions.

What I soon learned was that the United States Army's response to Hurricane Katrina was both broad in that a wide range of units with a variety of skill sets assisted with the relief effort and deep in that large numbers of Army troops answered the call for help. An in-depth examination of the actions of all of the Army units involved in the relief effort was not, therefore, feasible. Instead, this occasional paper highlights the actions of some of the thousands of soldiers involved in the operation. I hope it will be useful to soldiers in the field when they are confronted with similar situations in the future.

As with any project of this size, a number of people were kind enough to provide me with support and assistance. Since this was my first foray into writing for the Combat Studies Institute, I would especially like to thank Mr. Kendall Gott for showing amazing patience and support and Colonel Timothy Reese and Dr. William G. Robertson for reviewing the draft and making it much better. The same goes for Marilyn Edwards, whose fine editing greatly improved my work.

Many other people also helped. Lieutenant Colonel Al Koenig of the Joint Task Force *Katrina* History Office was incredibly helpful. He provided me with many documents, including two impressive collections of oral history interviews conducted by Army Military History Teams. Those interviews were crucial to my understanding of the actions taken by Army personnel during this crisis and serve as one of the important foundations of this study. Similarly, the staff of the Center for Army Lessons Learned (CALL) gave me access to hundreds of documents that were collected during the relief operation. Dr. John Lonnquest sent me an advanced copy of the US Army Corps of Engineers impressive study of its Hurricane Katrina related operations. Similarly, Dr. John W. Brinsfield, the US Army Chaplain Corps Historian, gave me a history of the Chaplain

Corps, which covered the actions of the many chaplains who responded to the catastrophe. Among the people kind enough to grant interviews or provide pertinent documents were Lieutenant General William B. Caldwell IV, Lieutenant General Russel L. Honoré, Major General Tod Carmony, Brigadier General Lonnie Culver, Brigadier General Gary Jones, Colonel Bryan Owens, Colonel Tom Johnson, Colonel Barry Keeling, Lieutenant Colonel David Napier, Lieutenant Colonel Vince Mercadante, and Lieutenant Colonel Tami Zalewski. I would also like to thank my wife Paula and daughters Natalie, Katherine, and Heather for putting up with long hours at the office as I worked on this book. This Occasional Paper would not have been possible without the help of all of those listed above as well as many others not mentioned. As always, responsibility for any errors in fact or judgment resides solely with me.

Contents

	<i>Page</i>
Foreword.....	iii
Preface	v
List of Tables.....	viii
List of Figures	ix
Chapter 1. Introduction	1
Chapter 2. History and Doctrine	9
Historical Background.....	9
Total Force Response to Civil Assistance	17
Laws, Directives, Plans, and Doctrine Related to Civil Support	19
Summary	27
Chapter 3. The Storm	35
Chapter 4. Louisiana	45
Prelandfall Preparations	45
Immediate Response Operations	50
Airborne Search-and-Rescue Operations.....	51
Airborne Evacuations	58
Ground Operations.....	58
Superdome	60
Ernest N. Morial Convention Center	66
Recovery Operations	69
National Guard in Louisiana.....	69
Summary	94
Chapter 5. Mississippi.....	111
Prelandfall Preparations	112
Immediate Response Operations	115
Recovery Operations	123
Task Force <i>Quick</i>	128
Task Force <i>Wright</i>	129
Task Force <i>Lee</i>	132
Task Force <i>Kiefer</i>	135
Other Task Forces	136
Summary	136

	<i>Page</i>
Chapter 6. Title 10 Operations	145
Prelandfall Preparations	145
Immediate Response.....	152
Recovery Operations	164
Task Force <i>All American</i>	165
Aviation Support	173
Logistics Support	173
Medical Support.....	175
Veterinary Support	176
Mortuary Support.....	177
Reserve Component Support	177
US Army Corps of Engineers	179
Title 10 Support in Mississippi	180
Summary	182
Chapter 7. Conclusions	195
Analysis Using FM 3-28, <i>Civil Support Operations</i>	197
Chapter 1, Civil Support Operations Overview	197
Chapter 2, Integrating Army Operations With National Doctrine.....	204
Chapter 3, Provide Support in Response to a Disaster	206
Chapter 4, Support to Law Enforcement	208
Chapter 6, Legal Considerations.....	209
Chapter 7, Sustainment	210
Summary	213
Glossary	217
Bibliography	221
Appendix A. Hurricane Katrina Chronology	245
Appendix B. Louisiana National Guard Task Organization	253
Appendix C. Mississippi National Guard Task Organization	261
About the Author.....	267

Table

1. National Guard Troop Activations	5
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Figures

1. Hurricane Katrina's track	35
2. Comparison of Hurricanes Camille and Katrina	36
3. Storm surge in Mississippi	39
4. Flood damage in New Orleans	40
5. Louisiana National Guard task organization as of 28 August 2005	46
6. Airborne search and rescue in New Orleans	52
7. A Blackhawk helicopter lands on the freeway near the Interstate 10 intersection for Baton Rouge and Slidell, Louisiana, to pick up citizens awaiting evacuation	55
8. An Army UH-60 helicopter flies near the Superdome	61
9. Army National Guard soldiers assist citizens during the evacuation of the Superdome	64
10. National Guard response to Hurricane Katrina	70
11. Louisiana National Guard task organization as of 2 September 2005	71
12. Task Force <i>Santa Fe</i> task organization.....	79
13. Ohio National Guard soldiers use a johnboat they found to perform a search-and-rescue mission in downtown New Orleans	84
14. A survivor sits among the rubble in his Gulfport, Mississippi, neighborhood	111
15. Damage to the Ocean Springs Bridge	114
16. Alabama National Guard aircrew delivers supplies in Columbia, Mississippi	119
17. Soldiers from the 216th MP Company, Arkansas Army National Guard, provide security in Gulfport, Mississippi.....	122
18. Mississippi National Guard task organization as of 4 September 2005.....	125
19. Mississippi task forces.....	127
20. Soldiers from B Battery, 134th Field Artillery Battalion, Ohio National Guard, hand out diapers and personal hygiene supplies at a point of distribution in Poplarville, Mississippi	133
21. Lieutenant General Russel Honoré meets with congressional leaders on board the USS <i>Iwo Jima</i>	150

	<i>Page</i>
22. A US Army US-60 helicopter from the 4th Infantry Division maneuvers for a rescue	159
23. A CH-47 Chinook helicopter from the Army Reserve's B Company, 5th Battalion, 159th Aviation Regiment, lifts three large sandbags	162
24. Orleans Parish operating areas	168
25. A soldier from the 307th Engineer Battalion, 82d Airborne Division, navigates his Zodiac boat through a flooded neighborhood	169
26. Major General William B. Caldwell IV and Command Sergeant Major Wolf Amacker greet Archbishop Phillip Hannan, the former Archbishop of the Archdiocese of New Orleans and an 82d Airborne paratrooper during World War II	170
27. A soldier from the 307th Engineer Battalion, 82d Airborne Division, marks a flooded home after searching the premises	171
28. Personnel from the 21st Chemical Company conduct decontamination operations	172
29. Crewmembers load a FEMA urban search-and-rescue team boat onto a CH-47 Chinook helicopter flown by the Army Reserve's B Company, 5th Battalion, 159th Aviation Regiment	178
30. Louisiana Task Force <i>Pelican</i>	253
31. Task Force <i>Santa Fe</i>	254
32. Task Force <i>Cyclone</i> (38th Infantry Division)	261

Chapter 1

Introduction

Much to the chagrin of *The Weather Channel*, hurricanes do not strike the United States with great frequency. Since 1951, three hurricanes have, on average, hit the United States every 2 years. Normally, only one of those three is a major hurricane, graded a Category 3 or higher hurricane.¹ Unfortunately, nothing about Hurricane Katrina was normal. Instead, Hurricane Katrina was one of the strongest, largest, and most devastating hurricanes to ever hit the continental United States.

Hurricane Katrina began as Tropical Depression 12 on Tuesday, 23 August 2005.² Tropical Depression 12 was upgraded to Hurricane Katrina late Thursday afternoon, 25 August, and a few hours later, it slammed into Florida.³ The hurricane passed over Florida and entered the Gulf of Mexico where the warm waters enabled it to continue to grow in strength. Over the next few days, as the hurricane made its approach on the Gulf coast, emergency managers throughout the region scrambled to prepare for the storm. By Friday, 26 August, Hurricane Katrina had grown into a Category 3 storm and it was getting stronger by the hour.⁴ National Hurricane Center officials warned that it could get even bigger and began comparing it to Hurricanes Camille and Andrew, two of the most devastating hurricanes to ever strike the United States.

In the face of such dire warnings, both state and Federal officials began implementing their emergency plans. Louisiana Governor Kathleen Blanco declared a state of emergency on Friday, 26 August, and activated 2,000 National Guard soldiers.⁵ Governor Haley Barbour followed suit later that afternoon when he, too, declared a state of emergency in Mississippi and authorized the callup of the state National Guard.⁶ The next day, Governor Blanco mobilized 2,000 more Louisiana National Guard troops, initiated the state's evacuation plan, and asked President George W. Bush to declare a Federal state of emergency in Louisiana.⁷ President Bush acceded to Governor Blanco's request Saturday evening and issued a Federal state of emergency declaration for Louisiana. That was a significant action because it authorized the prelandfall deployment of Federal assistance to Louisiana, a measure rarely taken by Presidents.⁸ The President signed similar declarations on Sunday, 28 August, and declared Florida a Federal disaster area.⁹

Based on past experience, emergency management officials in Louisiana and Mississippi expressed confidence that they were prepared. Bill Dorient, the Operations Officer for the Louisiana Office of Emergency

Planning, commented that, “We’re planning for a catastrophic event . . . thanks to the help of FEMA [Federal Emergency Management Agency] . . . we’re way ahead of the game.”¹⁰ Although the coastal evacuations were not going as well as they expected, Mississippi emergency management officials expressed similar confidence. Search-and-rescue assets were in place; National Guard troops were on station in the three coastal counties; and there was enough food and water on hand, officials estimated, to last 24 to 36 hours.¹¹ FEMA officials also thought they had the situation under control. Bill Lokey, the Federal coordinating official in Louisiana said, “We’re meeting all of the state objectives as last we heard, and planning is going well.”¹²

Although Hurricane Katrina was downgraded to a Category 3 storm before it made landfall near Buras, Louisiana, at 0610 central daylight time (CDT) on Monday, 29 August, it was still an incredibly large and powerful storm. Twenty-four hours before landfall, Hurricane Katrina’s winds extended out for 460 miles, making it twice as large as Hurricane Andrew.¹³ Hurricane Katrina’s maximum sustained winds exceeded 127 miles per hour when it struck Louisiana, which is the high end of a Category 3 hurricane, and the barometric pressure was the third lowest ever recorded at landfall.¹⁴ The storm surge along the western Mississippi coast ranged from 24 to 28 feet. It was high enough to obliterate a number of towns along the coast. Although the storm surge was not as high in Louisiana, it still ranged from 10 to 19 feet, which was enough to raise the level of Lake Pontchartrain and cause the levees to fail in New Orleans.¹⁵

Hurricane Katrina left most survivors stunned and in shock. Jim Brinson, of the Mississippi Office of Homeland Security, described the apocalyptic scene in Mississippi, “Going down [Route] 49 and seeing all these people just dazed and confused—you know, I’ve been to bad areas all over the world in the military; I’ve seen, you know, entire cities that have been bombed out . . . and these folks are just dazed. . . . The further south we went, the worse and worse it got.”¹⁶

The emergency response system, as envisioned under the National Response Plan (NRP), almost collapsed due to the immensity of the destruction wrought by Hurricane Katrina. Many first responders fell victim to the storm’s wrath. Since the storm knocked out virtually all means of communications, most victims could not call for help, and Emergency Operations Centers could not dispatch surviving first responders to assist victims. Finally, even if first responders survived and were in contact with their dispatch centers, they were often unable to reach victims because of flooded or debris-strewn roads. Consequently, the NRP was under extreme pressure from the very beginning of the crisis.

Once the storm subsided and the shock wore off, those who lived through the hurricane wondered how they were going to survive the aftermath. Fire Chief Pat Sullivan reported that Gulfport, Mississippi, was completely destroyed. “We’re in that critical time that people can be rescued,” Sullivan said, but “if we don’t get out there and do it now, then they’re going to die.”¹⁷ In Bond, Mississippi, which was devastated by the storm, Dorothy Maxwell said, “I ain’t got nothing to eat and I’m hungry. . . . They got to send us something. We got nothing. People back here are going to starve.”¹⁸ Similar concerns echoed throughout Mississippi and Louisiana in the days following the storm.

Some places, such as New Orleans, seemingly descended into anarchy. There were reports that as many as 25 percent of the New Orleans police force walked off the job. “They indicated that they had lost everything and didn’t feel that it was worth them going back to take fire from looters and losing their lives,” said Colonel Henry Whitehorn of the Louisiana state police.¹⁹ New Orleans Mayor Ray Nagin claimed that the city was overrun by “drug-starving crazy addicts, drug addicts, that are wreaking havoc. And we don’t have the manpower to adequately deal with it. We can only target certain sections of the city and form a perimeter around them and hope to God that we’re not overrun.”²⁰ With a death toll thought to be in the thousands, bodies were reportedly everywhere. Mayor Nagin told reporters that he was more worried about the living than the dead, saying, “We’re not even dealing with dead bodies. . . . They’re just pushing them on the side.”²¹ There were also reports of horrific scenes of rape and murder at the Superdome and Convention Center, where tens of thousands of people took shelter.²² Even though looting was not as prevalent in Mississippi as it was in New Orleans, Governor Barbour still felt obliged to warn looters that they would be treated “ruthlessly.” “Looting will not be tolerated, period, and rules of engagement will be as aggressive as the law allows,” Barbour said. “Security goes hand-in-hand with search and rescue.”²³

In the midst of such chaos, many local officials, victims, and media pundits began to question the adequacy of the Federal Government’s and, by extension, the Army’s response to the crisis. On 1 September, *The Times-Picayune*, New Orleans’ major newspaper, ran an editorial that asked: “Where Is the Cavalry?” The article recounted the anarchy gripping the city and then stated, “The lack of law enforcement presence is stunning . . . there seems to have been no strategy to get the hundreds of military and law enforcement officers on the ground who were needed to establish order immediately.”²⁴ Two days later, in a strongly worded editorial, the *Biloxi Sun Herald* pleaded for help and questioned why a massive National Guard presence wasn’t already visible. The newspaper asked why it had taken so

long to deliver basic commodities such as food, water, ice, gasoline, and medicine. “We are not,” the paper wrote, “calling on the nation and the state to make life more comfortable in South Mississippi, we are calling on the nation and the state to make life here possible.”²⁵ So, the question many began to ask was, where is the cavalry and why has it taken them so long to get there?

But the cavalry was on the way—in fact, it had been there from the beginning. The day that Hurricane Katrina struck, there were 5,982 National Guard soldiers and airmen on state active duty in Louisiana and 3,838 on state active duty in Mississippi.²⁶ They began conducting search-and-rescue missions, providing security, and delivering needed commodities to victims as soon as the storm passed. In the days that followed, the number of soldiers, sailors, and airmen increased dramatically, to more than 72,000 Active, Reserve, and Guard members at the peak. They brought with them 346 helicopters, 68 fixed-wing aircraft, and numerous trucks and other vehicles.²⁷

The United States Army’s response to Hurricane Katrina is a story of two different phases and three different operations. During the first phase—the immediate response period—the Army, predominately National Guard forces, reacted to the situation much as it has on numerous other occasions. Both states executed their plans with the forces they had on hand, although they requested and received additional support from other states. It quickly became clear that the “normal” way of doing business would not work because Hurricane Katrina was not a run-of-the-mill hurricane and the damage it inflicted was anything but normal. On 31 August, the Chief of the National Guard Bureau, Lieutenant General H. Steven Blum, asked other states to send whatever aid they could to Louisiana; there were more than 15,000 National Guard soldiers and airmen in both states. The next day, 1 September, when *The Times-Picayune* asked where the cavalry was, there were almost 20,000 National Guardsmen on duty in both states, including more than 12,000 in Louisiana. By the time the *Biloxi Sun Herald* released its editorial, there were more than 13,000 National Guardsmen in Mississippi. On 7 September, a week after Lieutenant General Blum made his appeal, there were almost 46,000 Guardsmen in both states, a fourfold increase in the number of National Guard troops in the region.²⁸ Table 1 shows the activations of the National Guard. Similarly, there were about 2,000 Active-Duty personnel in the two states providing support on 31 August. A week later, more than 18,000 Title 10 soldiers, sailors, and airmen were involved in the relief operation. Active component support peaked at 22,000 on 12 September.²⁹ Those were unprecedented levels of support for an extraordinary event.

Table 1. National Guard Troop Activations*

Date	Louisiana			Mississippi		
	LA NG	Other States	Total	MS NG	Other States	Total
8/30/2005	5,804	178	5,982	3,822	16	3,838
8/31/2005	5,804	663	6,467	3,822	1,149	4,971
9/1/2005	5,804	2,555	8,359	3,823	2,861	6,684
9/2/2005	6,779	5,445	12,224	3,823	3,719	7,542
9/3/2005	6,779	10,635	17,414	3,823	6,314	10,137
9/4/2005	6,779	12,404	19,183	4,017	9,399	13,416
9/5/2005	6,779	16,162	22,941	4,017	10,999	15,016
9/6/2005	6,779	20,510	27,289	4,023	11,095	15,118
9/7/2005	6,779	22,589	29,368	4,023	11,388	15,411
9/8/2005	6,779	23,476	30,255	4,023	11,506	15,529

*From Steve Bowman, Lawrence Kapp, and Amy Belasco, CRS RL33095, *Hurricane Katrina: DOD Disaster Response* (Washington, DC: Congressional Research Service, 19 September 2005), 11.

Meanwhile, as the number of National Guard forces grew, the operation devolved into three separate operations. President Bush tried to achieve unity of command during the first week of the crisis by counseling Governor Blanco to request federalization of the National Guard. She chose not to do so, and President Bush never broached the subject with Governor Barbour. Consequently, three separate operations evolved. In Louisiana, all National Guard forces operated under the command of Task Force *Pelican*, which controlled all assets and dispersed them to subordinate task units upon request. The National Guard Bureau sent a divisional headquarters to Louisiana to help with command and control. The 35th Infantry Division (Task Force *Santa Fe*) did not have operational control over all of the forces operating in its area of operations, so it focused on providing logistics and other support to the parish task forces. Individual task forces coordinated their efforts with the civilian authorities, relief agencies, National Guard units, and Active component forces operating in their areas. Mississippi used the divisional headquarters sent to that state in a much different manner. The 38th Infantry Division, Task Force *Cyclone*, controlled all units in the state and reported directly to the state adjutant general. Each county task force had a good mix of forces, including engineers, medical personnel, and aviation units. Finally, the Active component—Joint Task Force *Katrina*—led by Lieutenant General Russel L. Honoré, provided support to both states. Most of the Active component's support was, however, focused on Louisiana and, more specifically, New Orleans. Title

10 troops began arriving in force about a week after Hurricane Katrina struck the city. Active component soldiers used their experiences from Iraq and other operations to bring order to an often confused situation in New Orleans. They managed to bring disparate relief groups together and forge effective interagency operations in the city. They worked closely with National Guard task forces, in some cases embedding National Guard soldiers in with Active units to counteract the impact the Posse Comitatus Act imposed on Active component operations, but there was limited contact with Task Force *Pelican*. Thus, in many ways, the Active component operation was superimposed on the situation. Although the relief effort was slow to get started, within 3 weeks of Hurricane Katrina striking Mississippi and Louisiana, relief missions gave way to recovery activities, and National Guard and Title 10 soldiers began phasing out of the operation.

Despite that enormous effort, months after the storm had passed, the question remained: Where were the military forces, and why did it take them so long to respond? That question, among others, spawned investigations by both the United States Senate and House of Representatives, a study by the Government Accountability Office,³⁰ and an examination of the lessons learned by the President. This occasional paper examines the effectiveness of the United States Army's response to Hurricane Katrina, focusing on what the Army did and how it responded in the face of a large-scale disaster unlike any other ever faced before. As President George W. Bush said several weeks after the hurricane struck the Gulf coast, "It [Katrina] was not a normal hurricane—and the normal disaster relief system was not equal to it."³¹ The cavalry was indeed there, in the form of the National Guard, and it did respond in a timely manner, but the magnitude of the disaster dwarfed its response initially. Instead of thousands of troops, it took tens of thousands of troops to save lives, bring relief, reestablish order, and restore the region to some semblance of normality. It also took the skills resident in America's soldiers to overcome the chaos and destruction delivered by Hurricane Katrina to the Gulf coast.

Notes

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Chapter 2

History and Doctrine

The United States Army has a long tradition of service during times of national disaster. Since the late 1800s, American soldiers, whether Active component or National Guard, have used their skills and capabilities to help their fellow Americans in the aftermath of a broad range of disasters, such as fires, floods, and hurricanes. Over time, the Army's role in such situations has been codified in a number of laws, directives, and doctrines that govern how the Army will respond in the event of a disaster. It is, therefore, necessary to examine the response to past incidents as well as the evolution of the laws and doctrine to understand how and why the Army responded as it did to Hurricane Katrina.

Historical Background

During the early years of the Republic, the Army was not actively involved in disaster relief. This was due in part to the Founding Fathers' aversion to large standing armies. Not only were there very few Federal troops available to provide such assistance but those few that were available were dispersed throughout the country and there was no means to rapidly transport them to the scene of a disaster. Even if Federal troops had been available, there was no constitutional justification for intervention. Again, following the Founding Fathers' principles, most Presidents considered such intervention inappropriate.

After 4 years of increased Federal involvement in everyday life during the Civil War, attitudes toward Federal intervention began to change. The Army was responsible for administering several Federal assistance programs in the South at the end of the war, the most important of which was the Freedmen's Bureau. Congress established the Freedmen's Bureau in 1865 to facilitate the transition of former slaves into American society. During its existence, the bureau did more than provide assistance to the newly freed slaves. It helped citizens of all races during several periods of epidemic, flood, and famine.¹

One of the most significant events occurred in 1867 when severe flooding, coupled with an extremely poor crop yield, resulted in a food shortage throughout the South. At the request of the Director of the Freedmen's Bureau, General O. O. Howard, Congress authorized the bureau to spend \$50,000 to provide emergency relief. The Army purchased corn and wheat in bulk and delivered those commodities to local county agents in seven Southern States. Local agents, rather than the Army, distributed

the food to those in need.² It is important to note, however, that the Federal effort supplemented rather than replaced the relief efforts of local governments and voluntary associations. Northern charity organizational contributions, for example, exceeded the Freedmen's Bureau effort by a factor of 100.³

The Army's actions during the post-Civil War period also led to restrictions on the use of the Army as an instrument of domestic law enforcement. Before Reconstruction, the Army helped suppress rebellion and enforce laws on several occasions. In October 1794, President George Washington federalized 10,000 militiamen and used them to suppress the Whiskey Rebellion in western Pennsylvania.⁴ Colonel Robert E. Lee used Federal troops to crush John Brown's insurrection at the Harper's Ferry arsenal in 1859.⁵ But the extensive use of the Army by President Ulysses Grant to enforce voting laws and suppress the Ku Klux Klan in the South during Reconstruction proved too much for some Congressmen.⁶ Soon after the election of 1876, which brought about a shift in power in Congress, Southern Congressmen enacted the Posse Comitatus Act (Title 10 United States Code (USC) 1385) to prevent further Federal interference with the internal affairs of their states.⁷ This act prohibited the Army from acting in a law enforcement capacity domestically, including searching for, pursuing, or arresting suspected criminals.⁸ Southern Congressmen used this law to end the Federal military occupation of the South.

Congressional restrictions on domestic law enforcement activities did not inhibit in any way an expanded role for the Army in domestic relief missions. Since the Army established posts throughout the country, it was one of the few Federal departments with a national presence, plus the Army's purchasing and transportation system enabled it to respond relatively quickly during times of crisis. Consequently, during the last three decades of the 19th century, soldiers provided assistance at least 17 times when floods, fires, droughts, insect plagues, disease, and tornadoes struck the Nation.⁹

The great Chicago fire of October 1871 serves as an example of the type of assistance the Army provided during the late 19th century. The fire burned 3½ square miles of the city, killed hundreds of people, destroyed hundreds of homes and buildings, and left more than 100,000 people homeless. Lieutenant General Philip Sheridan, Commander of the Division of the Missouri, lived in Chicago. Using the immediate response authority, Sheridan directed Army troops to create firebreaks to stop the fire from spreading. When the mayor declared martial law, he asked Sheridan to use his troops to restore order. Sheridan also provided assistance to the victims,

who were fed using Army rations and given Army blankets and tents for shelter. Soldiers continued to provide security and support through the end of the year.¹⁰

Similarly, the Pennsylvania National Guard provided help when the South Fork Dam broke on 31 May, 1889, unleashing 20 million gallons of water on the citizens of Johnstown, Pennsylvania.¹¹ A wall of water 40 feet high killed more than 2,200 people, destroyed 1,600 homes, and caused \$17 million in damages.¹² Two days later, unable to cope with the consequences of the disaster, the local sheriff asked the governor of Pennsylvania for help. The governor responded by sending 550 soldiers from the 14th Regiment, Pennsylvania National Guard, to help. The Guardsmen provided security, sheltered and fed the victims, and assisted with debris removal and repairs until mid-July.¹³

By the turn of the century, Government activism was prevalent in many aspects of national life, including disaster relief. Congress endorsed the professionalization of disaster management by granting the American Red Cross a charter in June 1900 that tasked the organization with developing a national disaster relief capability. A few months later, in September 1900, the Red Cross was put to the test when a hurricane devastated Galveston, Texas, killing more than 6,000 people. The Army assisted the Red Cross by providing troops, food, and tents.¹⁴

Several years later, when an earthquake struck San Francisco on 18 April 1906, Brigadier General Frederick Funston used the immediate response authority to respond to the disaster. Acting on his own authority, Funston deployed some 1,700 soldiers to guard the US Treasury and US Mint buildings, patrol the streets to prevent looting, and help with firefighting. As the fires spread, consuming more and more of the city, Funston directed his troops to demolish buildings to create firebreaks to contain the fire. Although martial law was never declared, over the next few months, US Army and California National Guard soldiers maintained a strong presence in the city, which effectively suppressed lawless behavior. They also provided medical assistance, distributed food and other supplies to the needy, and established a tent cantonment that was used as temporary lodging by the homeless. The Army turned over responsibility for security to the civil government on 1 July 1906.¹⁵

The Army was frequently involved in flood relief operations during the 20th century. In 1912, President William Howard Taft directed the Army to assist citizens subjected to massive flooding by the Mississippi River. Soldiers rescued people and livestock trapped by the floodwaters and provided food, clothing, and shelter to the victims. At this time,

reimbursement for disaster relief operations had not been codified, and President Taft had to cajole Congress into reimbursing the Army for its costs, some \$1.24 million.¹⁶

Reimbursement became a bigger issue during the 1927 Mississippi River floods—the worst flooding in national history. Tens of thousands of people were stranded by the floods. National Guardsmen from six states were called to state active duty to help their beleaguered fellow citizens. For the first time, the National Guard used aviation assets to assist with search-and-rescue missions.¹⁷ Secretary of Commerce Herbert Hoover managed the operation along with the American Red Cross. The Active Army provided logistics support and loaned more than \$2.6-million worth of equipment. Most of the loaned equipment was not returned, so the Army had to request a supplemental appropriation from Congress to cover the costs of the operation.¹⁸ For the next decade, concerns about reimbursement drastically limited the Active component's participation in disaster relief missions. In 1929, the War Department went so far as to advise corps commanders that supplies could not be dispensed without approval from the War Department and that such support would not be considered unless the supported agency agreed to reimburse the War Department.¹⁹

Since the War Department put limitations on Active-Duty support, the National Guard moved to the forefront during disasters. When a hurricane hit Rhode Island in 1938, the entire Rhode Island National Guard, 2,094 soldiers, was brought onto state active duty to conduct search-and-rescue missions, provide security, and help with cleanup.²⁰ More than 8,000 National Guardsmen from eight states were activated in the wake of Hurricanes Connie and Diane, which hit the east coast in 1955. National Guard helicopters were used for the first time during this relief operation.²¹

By the late 1930s, the Active Army resolved its reimbursement issues with the Red Cross and began supporting disaster relief missions again. Funding concerns also diminished when President Franklin Roosevelt quickly authorized reimbursement for several flooding relief missions in 1936 and 1937.²² Although World War II curtailed Army participation in disaster relief operations, the Army resumed support for this mission at the end of the war. When the *Grand Camp* blew up in the port of Texas City, Texas, on 16 April 1947, the Army responded quickly. The blast killed almost 600 people and injured nearly 3,000 others. The Army reopened an inactive hospital and sent a large medical contingent to provide medical treatment to the injured. Over the next few days, Army medical personnel treated 121 civilian patients.²³

In 1950, Congress passed the first of several laws that sought to establish a Federal disaster relief bureaucracy. The Federal Disaster Relief Act of 1950 provided for an automatic Federal response and authorized a new agency to coordinate Federal relief efforts.²⁴ But the new agency failed to find a permanent home and bounced around under the control of a number of Federal departments over the next 12 years until it became the Office of Emergency Planning in 1961. By this time, the Army acknowledged the primacy of civilian coordination of disaster relief operations in its doctrine and established liaisons with the Office of Emergency Planning.²⁵

When Hurricane Camille struck the United States in August 1969, the Office of Emergency Planning coordinated the Federal response. Hurricane Camille was an incredibly powerful Category 5 hurricane when it hit the Mississippi coast near Bay St. Louis, Mississippi, on 17 August 1969. The storm killed 143 people along the Gulf coast, most of whom did not evacuate because they discounted the danger the storm posed.²⁶ Both National Guard and Active component troops responded to the disaster along the Gulf coast. Almost 3,900 Mississippi National Guardsmen were called up to assist with the relief operations.²⁷ More than 16,000 Active-Duty troops were brought in to help as well. Since the storm struck some military bases situated along the coast, many soldiers, sailors, and airmen responded initially under the immediate response authority. Once the magnitude of the devastation was recognized, many others were sent to the Gulf States to conduct search-and-rescue missions; clear debris; and distribute food, water, and medical supplies. Army helicopters flew more than 600 medical evacuation missions during the relief operation.²⁸ When the storm dumped more than 20 inches of rain on rural southwest Virginia in a 5-hour period on the evening of 19 August, the resultant flooding killed 113 more people. About 700 Virginia National Guardsmen provided relief to those stricken counties.²⁹

The Nation's emergency response bureaucracy continued to evolve throughout the next few decades. By the late 1970s, more than 100 Federal agencies were involved in some aspect of disaster response. In an effort to bring order to that confusing situation, President Jimmy Carter created the Federal Emergency Management Agency (FEMA) in 1979. Soon thereafter, Congress passed the Robert T. Stafford Disaster Relief Act. These two pieces of legislation were supposed to simplify and improve the Nation's disaster response capabilities, but events in 1992 proved otherwise.³⁰

Two major hurricanes hit the United States during the 1992 storm season. Hurricane Andrew ravaged the south coast of Florida on 24

August 1992. Until Hurricane Katrina, Andrew was considered the most destructive natural disaster to ever hit the United States. In south Dade County, 100 square miles were completely destroyed, and 200 more square miles were significantly damaged.³¹ In the United States and throughout the Caribbean, 60 people were killed. Hurricane Andrew caused \$33 billion in damages, leveled 80,000 homes, displaced 250,000 people, and produced 20 million cubic feet of debris that required removal.³² Then, on 11 September, Hurricane Iniki struck Kauai, the westernmost island in the Hawaiian Island chain. A Category 4 hurricane, Iniki was the most devastating hurricane to ever hit the Hawaiian Islands and, up to that time, one of the most destructive to ever hit the United States.³³ Three people were killed, 14,340 homes were damaged or destroyed, 7,000 people were left homeless, and 8,000 more needed food and water. Almost 70 percent of the island sustained damage from the storm, which was later estimated at \$1.6 billion.³⁴

In both cases, Active component and National Guard troops responded to the disasters. The Hurricane Andrew relief mission was predominately an Active-Duty mission. The governor of Florida activated 600 National Guardsmen before the storm struck. Although they were in position to conduct search-and-rescue missions once the storm passed, they were quickly overwhelmed by the magnitude of the destruction. Consequently, President George H. W. Bush decided to use Active forces to relieve suffering in the state. Joint Task Force (JTF) *Andrew* was established on 28 August. More than 22,000 soldiers from the 82d Airborne Division, 10th Mountain Division, 1st Corps Support Command, and other services participated in this mission.³⁵ Because they were not immediately pushed into the area devastated by the storm, the units involved had time to plan and tailor their forces to the expected tasks. Their initial focus was on tending to the needs of the survivors by providing food, water, shelter, medical support, and security. As the situation stabilized, these units shifted to the second phase of operations: recovery. During this phase, they restored public services, repaired schools, cleared roads, and removed debris.

Two units involved in the Hurricane Andrew relief operation were the 20th Engineer Brigade and the 1/22d Infantry of the 10th Mountain Division. The 20th Engineer Brigade received notification that it would deploy to support Hurricane Andrew relief efforts late in the day on 27 August, 3 days after the storm struck. The brigade's assault command post arrived in Florida at 0530 the next morning and headed toward its operating area. What the engineers found appalled them. Five days after the hurricane had struck, the situation on the ground was still bad. The relief mission was disorganized, little aid was getting to those in need, roads

were blocked by debris, electricity was out everywhere, and telephone communications were mostly inoperable. Based on that assessment, the engineers decided to add extra bucket loaders to their equipment list.³⁶ By 2 September, four engineer battalions had deployed to the area.³⁷ Once the initial relief missions, such as road clearance, were completed, the emphasis shifted to recovery missions. The engineers cleared debris so that disaster assistance centers, life support centers, and mobile kitchens could be set up to provide critical support to the victims. They also began restoring schools and removing the debris piled up at schools, parks, and other public places.³⁸ Conditions continued to improve so that, by 20 September, the engineers were able to redeploy.³⁹

The 1/22d Infantry assumed duties as the division ready force (DRF) for the 10th Mountain Division on 28 August 1992. As a lead element in the Nation's rapid deployment force concept, the DRF had to be ready to deploy on 18 hours' notice.⁴⁰ The battalion got word at 1800 on 29 August that it would be deploying as part of JTF *Andrew* to provide disaster relief to Florida citizens. The next morning, the battalion embarked and flew to Florida. When it arrived, it was assigned an operating area and told to get to work. Based on its mission assignment, the battalion prioritized its work as follows:

- Dispose of any item judged a hazard to the health of citizens or soldiers.
- Distribute food and water.
- Remove debris.
- Ask residents what help they needed to restore their lives.⁴¹

The battalion was also responsible for several mobile kitchens, which served almost 900,000 meals during the first 33 days of operation. Debris removal missions were conducted using organic equipment such as handsaws and chain saws and contracted bulldozers and dump trucks. One officer in the battalion recalled that contractors would work for the first military unit that contacted them, so units competed with one another to commandeer as many dump trucks as possible so that they could clear more territory.⁴² By the end of September, the situation on the ground began to improve and the battalion began planning its redeployment. It returned to Fort Drum, New York, on 7 October, after 40 days of relief operations.⁴³

The importance of quickly withdrawing Active component troops from disaster relief missions is underscored by the experiences of 1/22d Infantry. Less than 2 months after it returned to Fort Drum, the battalion

was notified that it was to deploy to Somalia in December 1992 as part of Operation RESTORE HOPE. Although the deployment was eventually delayed until April 1993, the battalion's experience shows that national missions can emerge at any time and that early redeployment of Active component units is an important goal.⁴⁴

Roles were reversed during Hurricane Iniki. In this instance, the National Guard provided the bulk of the relief-and-recovery support. Before the storm hit, Hawaii National Guard soldiers mobilized to their armories on the island. As in Florida, they were in position to respond after the storm passed. Once the winds died down, 800 additional National Guard soldiers were flown over to Kauai from the island of Hawaii to help. They set up security patrols; distributed food, water, and ice; provided medical assistance as required; and provided communications support, power generation, shelter, and election support. At the peak, more than 3,100 National Guard soldiers performed those missions.⁴⁵

As the relief mission shifted to recovery, one of the main tasks was to restore the island's electrical power. The storm had uprooted more than 5,000 electrical power poles, shutting down the island's entire power grid.⁴⁶ The National Guard brought in generators to provide electrical power to essential utilities such as sewage and water plants.⁴⁷ Later, a National Guard colonel, who also happened to be the Vice President of Operations for the Hawaiian Electric Company, coordinated the repair of the island's power grid.⁴⁸ This example clearly reinforces the value of using the National Guard as the military's first response organization.

Although a wide range of Active component resources were mobilized for the relief operation, the governor of Hawaii did not call on them for help during the relief operation. Later, 3,600 Active-Duty troops helped the National Guard and civilian contractors clean up the island during two recovery missions, GARDEN SWEEP and GARDEN SWEEP II. During these two missions, Active component and National Guard troops picked up and disposed of more than 35,000 tons of debris.⁴⁹

The Army has a long and rich tradition of providing support to American citizens in time of need. Even when there was no clear doctrine applicable to this mission, soldiers used their core competencies and skills to perform a wide range of missions that brought relief to their fellow Americans. One by-product of the skill and compassion soldiers have displayed during these types of missions is that Americans have come to expect that, if the situation is dire, the Army will step in and help.

Total Force Response to Civil Assistance

The immense damage wrought by Hurricane Katrina so quickly and so completely overwhelmed local and state responders that immediate Federal support was required. Among the Federal resources available to the President was the US Army. The *Strategy for Homeland Defense and Civil Support*, which was published just 2 months before Hurricane Katrina struck, explains the necessity for using the Total Force—Active-Duty forces, US Army Reserve, and National Guard—to carry out both the homeland defense and homeland security missions.⁵⁰ Homeland defense is defined as “the protection of US sovereignty, territory, domestic population, and critical defense infrastructure against external threats or aggression.”⁵¹ Homeland security, which is defined as “a concerted national effort to prevent terrorist attacks within the United States,” includes recovery from attacks, whether manmade or natural disasters.⁵² The Department of Defense (DOD) is the lead agency for homeland defense and provides support to the Department of Homeland Security (DHS) for homeland security. As Paul McHale, Assistant Secretary of Defense for Homeland Defense, told Congress, using the Total Force to assist with civil support missions is important because it “preserves the historic Federal relationship between the various levels of government while, at the same time, recognizing the unique capabilities of the Total Force to respond immediately to American citizens who are desperately in need.”⁵³

The capabilities and assets of all three components of the US Army were crucial to the Hurricane Katrina relief-and-recovery mission. Active component forces operate under Title 10 of the USC, and in most circumstances, they only provide support when state and local governments request assistance through FEMA. Despite that restriction, local commanders can plan and take action under their immediate response authority. In the days before Hurricane Katrina struck, many Army commanders directed their staffs to begin planning for the emergency and pre-positioning assets before the hurricane hit.⁵⁴ First Army personnel, for example, began tracking the storm from its inception off the coast of Africa. As the storm developed, the staff began making plans to deploy defense coordinating officers and other personnel to the affected states. By the time the storm hit, many Army units were prepared to provide a broad range of support when authorized to do so by the President.⁵⁵ Active component forces participated in the Hurricane Katrina relief effort under the command of Lieutenant General Russel L. Honoré, Commander of Joint Task Force *Katrina*.

Although there are limitations on the use of US Army Reserve personnel for civil support operations, they also contributed to the relief operation in several ways.⁵⁶ Most significant, almost 200 Army Reserve emergency preparation liaison officers serve as a liaison between the Army, FEMA, and state emergency officials in the event of disaster.⁵⁷ In addition to the emergency preparation liaison officers, several Army Reserve aviation and transportation units performed various missions in the affected states. Since those units were on Active Duty during the operation, they operated as part of JTF *Katrina*.

The third element in the Total Force is the National Guard. The National Guard is unique in that its forces operate under one of three different statuses. The Adjutant General of Washington, Major General Timothy J. Lowenberg, explained in testimony before the US House of Representatives in 2003 that there are two distinct National Guard organizations. First, there is the “National Guard of the several states,” which is a state military organization maintained under the Militia Clause of the US Constitution. National Guard forces perform under one of two statuses as part of the “National Guard of the several states”: state active duty or Title 32 status. When on state active duty, the National Guard conducts state missions under the command of the governor at state expense. National Guard troops are also under the command of the governor when in a Title 32 status, but the Federal Government covers the cost because they are performing missions in support of the Federal Government. In both cases, since they are under the command of the governor, National Guard forces are not subject to the Posse Comitatus Act. Lowenberg described the other National Guard organization as the “National Guard of the United States.” National Guard forces in this status operate under Title 10 just like Active component forces. Consequently, the President, not the governor, serves as their commander, and they are subject to the Posse Comitatus Act.⁵⁸

Unlike their Active-Duty and Reserve counterparts, National Guard units were among the many first responders in Mississippi and Louisiana. The governors of both Mississippi and Louisiana placed thousands of National Guard soldiers on state active duty before landfall. Consequently, they were in position to move into the disaster area before the storm had completely passed and to provide immediate relief to citizens affected by the storm. In the days after Katrina made landfall, tens of thousands of additional National Guard troops flowed into Mississippi and Louisiana from other states as well. These soldiers were also activated on state active duty orders. Although they remained under the command of their respective governors, operational control was shifted to the governor of the state to which they deployed. On 7 September 2005, Acting Deputy Secretary of

Defense Gordon England approved the redesignation of those forces from state active duty to Title 32 status retroactive to 29 August.⁵⁹

All three components of the Army made significant contributions to the Hurricane Katrina relief-and-recovery efforts. They saved lives, transported and distributed needed commodities, removed debris and repaired damage, and restored order where only chaos existed. At its height, more than 72,000 Active, Reserve, and National Guard soldiers, sailors, and airmen were involved in the relief mission, making it the largest such operation in US history.⁶⁰

Laws, Directives, Plans, and Doctrine Related to Civil Support

The legal framework that governs the Army's response to domestic disaster encompasses a number of laws, policies, directives, regulations, and doctrines. Among the pertinent laws are the Stafford Act, the Posse Comitatus Act, and the Economy Act. The Robert T. Stafford Disaster Relief and Emergency Assistance Act (Title 42 USC 5121 et seq.) of 1979 establishes the statutory framework for Federal emergency relief operations. Under the auspices of this act, the President, at the behest of the governor, can declare an emergency or major disaster in the affected state. Once made, the declaration opens the way for extensive Federal assistance to the state and local governments. More specifically, the President can direct the Department of Defense to assist with relief operations by providing food, water, ice, and shelter to victims; conducting search-and-rescue missions; and using engineering assets to remove debris and to open up vital roads and public buildings.⁶¹ Additionally, the President can direct DOD to perform "emergency work" for up to 10 days without making an emergency or disaster declaration.⁶²

The Economy Act (Title 31 USC 1535) authorizes Federal agencies to purchase goods and services from another Federal agency if they cannot be obtained more cheaply through open purchase or contract. Congress passed this law in 1932 to eliminate duplication and waste within the Federal Government. It applies to disaster response situations because other Federal agencies can request this support from DOD even if the President has not declared an emergency under the Stafford Act.⁶³

The Posse Comitatus Act (Title 10 USC 1385) of 1878 is an important limitation on the ability of Active-Duty Title 10 forces to act within the United States. This act specifically prohibits all Title 10 troops from assisting with domestic law enforcement activities. Since the law does not apply to National Guard soldiers on state active duty or in a Title 32 status, they can assist local law enforcement authorities.⁶⁴ There are, however, exceptions to this law. Under the Insurrection Act of 1807 (Chapter 15 of

Title 10), the President has the authority to use Federal troops to suppress insurrection and domestic violence. Thus, the President can use Title 10 forces to perform law enforcement missions if he chooses to invoke the Insurrection Act.⁶⁵

Also, a number of relevant policies and directives relate to disaster relief operations. The President amended Executive Order 12656 in February 2003, placing FEMA under the newly established Department of Homeland Security.⁶⁶ At the same time, he issued Homeland Security Presidential Directive 5 (HSPD 5), which was supposed “to enhance the ability of the United States to manage domestic incidents by establishing a single, comprehensive national incident management system.”⁶⁷ The objective of HSPD 5 was to “ensure that all levels of government . . . have the capability to work efficiently and effectively together, using a national approach to domestic incident management.”⁶⁸ HSPD 5 directs the Secretary of Defense to support domestic relief operations when instructed to do so by the President. But it also emphasizes that the Secretary of Defense retains command and control over the military, even when operating in support of the Department of Homeland Security during a disaster situation.⁶⁹

One main aspect of HSPD 5 was the development of a National Response Plan (NRP) that integrated “Federal Government domestic prevention, preparedness, response, and recovery plans into one all discipline, all hazards plan.”⁷⁰ The NRP, which replaced the Federal Response Plan, was designed to do that. When announcing the implementation of the NRP in January 2005, then Secretary of Homeland Defense Tom Ridge asserted that it was a “brand new way of doing business. It’s an all-hazards, multi-disciplined, cross-jurisdictional way of standardized, predictable practices and procedures for federal governments to work with the state and the local and tribal governments in the private sector to protect the nation.”⁷¹ He also noted that the plan was a group effort among Federal, state, and local officials, professional emergency managers, police officers, firefighters, public health workers, and public engineers.

As designed, the NRP was supposed to enable the initial “response to be handled at the lowest possible organizational and jurisdictional level.”⁷² In the event of an incident of national significance, which is defined as “an actual or potential high-impact event that requires robust coordination of the Federal response in order to save lives and minimize damage,” the NRP would be implemented.⁷³ The National Response Plan would, it was claimed, “provide the means to swiftly deliver federal support.”⁷⁴ A coordinated Federal response was to be managed using emergency

support functions (ESFs). The ESFs are modular in nature and delineate the responsibilities of both the lead and supporting agencies in detailed annexes in the NRP. Although the Department of Defense is the lead agency for only one ESF—Public Works and Engineering (ESF #3)—it has supporting responsibilities for all other ESFs. The 15 ESFs and lead agencies follow:

- ESF #1, Transportation (Department of Transportation)
- ESF #2, Communications (DHS/National Communications System)
- ESF #3, Public Works and Engineering (DOD)
- ESF #4, Firefighting (Department of Agriculture)
- ESF #5, Emergency Management (DHS/FEMA)
- ESF #6, Mass Care, Housing, and Human Services (DHS/FEMA)
- ESF #7, Resource Support (Government Services Administration)
- ESF #8, Public Health and Medical Services (Department of Health and Human Services)
- ESF #9, Urban Search and Rescue (DHS/FEMA)
- ESF #10, Oil and Hazardous Materials Response (Environmental Protection Agency)
- ESF #11, Agriculture and Natural Resources (Department of Agriculture)
- ESF #12, Energy (Department of Energy)
- ESF #13, Public Safety and Security (Department of Justice)
- ESF #14, Long-Term Community Recovery (DHS/FEMA)
- ESF #15, External Affairs (DHS)⁷⁵

Unfortunately, when Hurricane Katrina hit the Gulf coast a mere 8 months after the NRP was enacted, it was still in the initial implementation and testing phase. Consequently, the procedures laid out in the NRP were neither fully understood nor tested. Moreover, the vast scope of the damage wrought by Hurricane Katrina undermined the effectiveness of the NRP as well. As one writer notes:

. . . as the incident management requirements grow in complexity and scope, the management of it tends to become increasingly “ad hoc” even with the improved structures of organization called for in the NRP. That is because personal and professional relationships and processes built and relied upon at local and state levels are simply not resident when complex requirements exist and there are uncoordinated cross-jurisdictional issues and issues of competing or unclear authorities with higher echelons of government.⁷⁶

So, even though there was a new emergency management structure in place, it did not function as effectively as the framers of the plan hoped during the Hurricane Katrina relief mission.

In addition to the Federal statutes and policies on disaster relief, there were also several Department of Defense directives on the subject. DOD Directive 3025.1, *Military Support to Civil Authorities*, provides the overall framework of the DOD disaster response program. Under this directive, the Secretary of the Army is the executive agent responsible for responding to all requests for military assistance.⁷⁷ All DOD resources are potentially available for civil support operations as long as civilian resources are applied first, the request is for assistance beyond the capabilities of civilian responders, and DOD resources are used efficiently.⁷⁸ It also acknowledges the primacy of the National Guard in civil support operations, stating “Army and Air National Guard forces, acting under State orders . . . have primary responsibility for providing military assistance to State and local government agencies in civil emergencies.”⁷⁹ Finally, it authorizes military action in the event that “imminently serious conditions” require immediate response by military commanders to “save lives, prevent human suffering, or mitigate great property damage.”⁸⁰ Among the immediate response actions authorized are—

- Rescue, evacuation, and medical treatment of victims.
- Public services emergency repairs.
- Debris removal to facilitate emergency responder movement.
- Mortuary support.
- Decontamination assistance/advice.
- Traffic management.
- Distribution of and security for food, water, and other essential commodities.
- Damage assessment.
- Emergency communications support.⁸¹

There is an associated manual, DOD 3025.1M, *Manual for Civil Emergencies*, that further amplifies the directions contained in DOD 3025.1. It provides specific guidance for oil and other hazardous materials spills, radiological incidents, wild fires, health and medical services, mass immigration crises, animal disease control situations, and postal emergencies. The manual also explains the duties and responsibilities of the defense coordinating officer and the emergency preparedness liaison officer.

The defense coordinating officer is described as “the focal point of any DOD response to a particular disaster.”⁸² Consequently, the defense coordinating officer must be familiar with military capabilities and understand how to access those resources. In 2005, defense coordinating officers were Title 10 colonels (O-6s) serving as brigade commanders in First or Fifth Army. Their defense coordinating officer duties were additional rather than primary duties. Since 2006, Active component colonels serve as permanent defense coordinating officers in each of the 10 FEMA regions. Responsibilities of the defense coordinating officer include the following:

- Validating requests for assistance from the Federal coordinating official.
- Establishing liaison among the various military components, state organizations, and Federal agencies.
- Ensuring that all mission assignments are carried out.
- Working with the Federal coordinating official and state coordinating official to coordinate National Guard (state active duty) and Active component missions to ensure maximum effectiveness and minimize duplication of effort.
- Maintaining an audit trail of mission assignments.

The Defense Coordinating Element serves as the headquarters staff for the defense coordinating officer. As with the defense coordinating officer, an Active component Defense Coordinating Element is assigned to each of the 10 FEMA regions. The Defense Coordinating Element staff can be augmented by emergency preparedness liaison officers.⁸³ To facilitate coordination, the defense coordinating officer and Defense Coordinating Element will normally set up operations at or near the Federal coordinating official at the Joint Field Office. The Federal coordinating official will conduct a damage assessment, and the defense coordinating officer should participate in that assessment so that he or she can better identify potential DOD tasks. Although the defense coordinating officer can be activated before a disaster if it can be reasonably expected that military assistance will be required, he or she cannot commit military forces until the President declares an emergency.

The *Manual for Civil Emergencies* also addresses the command relationship when a joint task force is formed. The relationship between the two is dictated by the “seniority, size of the task force, duration of the response effort, and the JTF mission.”⁸⁴ The defense coordinating officer normally reports to the JTF commander if the commander is a

general officer. The responsibility for clarifying the relationship lies with the supported commander, which was United States Northern Command during the Hurricane Katrina relief operation. The manual recommends that the two staffs remain separate since they have different missions and responsibilities. The defense coordinating officer's focus is on mission validation and coordination with the Federal coordinating official and state coordinating official while the JTF commander is concerned with carrying out those missions using his assigned Active component forces.⁸⁵

Emergency preparedness liaison officers are Army Reserve colonels (O-6s) who act as DOD liaison officers, coordinating "military assistance to other Federal Agencies and State governments under an ALL HAZARDS disaster environment."⁸⁶ In the event of an emergency or disaster situation, regardless of whether the President makes an emergency or disaster declaration, emergency preparedness liaison officers are activated to serve as a liaison between the parent service, Federal agencies, and state government organizations. Each service designates an emergency preparedness liaison officer for each state and each FEMA region and to specific government agencies such as FEMA. If the President declares an emergency or disaster, the supporting commander may assign an emergency preparedness liaison officer as a liaison officer for the defense coordinating officer.

DOD 3025.15, *Military Assistance to Civil Authorities*, is the governing document for all civil support operations, including terrorism response and disaster support. This directive delineates the methods for requesting assistance and establishes the criteria that will be used to test the validity of the request. These criteria are legality, lethality, risk, cost, appropriateness, and readiness. If the request for assistance meets these criteria, it is then forwarded to the Secretary of the Army for approval. If the mission is in response to a terrorist attack, it must be approved by the Secretary of Defense rather than the Secretary of the Army.⁸⁷

Joint Publication (JP) 3-26, *Homeland Security*, discusses DOD's role in the national strategy for homeland security. The Department of Defense supports this strategy through its missions of homeland defense and civil support. This publication explains both missions and delineates the command relationships and interagency responsibilities of each. With regard to civil support, JP 3-26 reinforces the guidance articulated in DOD 3025.1 and DOD 3025.15, emphasizing that the department will provide support if all other authorities are overwhelmed and request support. JP 3-26 also updates the civil support chain of command, which was revised in March 2003 when the role of DOD executive agent for military support

to civil authorities was transferred from the Secretary of the Army to the Assistant Secretary of Defense for Homeland Defense. All requests for assistance now flow through the Joint Director of Military Support where they are checked against the criteria listed in DOD 3025.15 and forwarded to the Assistant Secretary of Defense for Homeland Defense if valid.⁸⁸

Field Manual (FM) 100-19, *Domestic Support Operations*, which was published on 1 July 1993, was the guiding Army doctrine at the time of Hurricane Katrina. Doctrine is the common language and understanding the Army uses to conduct operations. It should be “detailed enough to guide operations, yet flexible enough to allow commanders to exercise initiative when dealing with specific tactical and operational situations. To be useful, doctrine must be well known and commonly understood.”⁸⁹

The Army’s domestic support doctrine is based on the concept of “unmet needs.” Local and state authorities are responsible for the safety and welfare of their citizens, but they can request assistance from the Department of Defense if, during an emergency situation, there are needs that they are unable to meet. The operative concepts are that local and state resources are inadequate for the mission in hand and that the affected authorities specifically request DOD assistance.⁹⁰ Army resources will be provided on a temporary basis; they are not a permanent replacement for local, state, or Federal organizations or resources that have been rendered temporarily inoperable due to the disaster.

FM 100-19 describes three stages of a domestic relief operation: response (relief), recovery, and restoration. During the response phase, the focus is on saving lives and restoring life-sustaining functions in the affected area. Once life-saving operations subside, the emphasis shifts toward recovery, which entails restoring community infrastructures to a level sufficient to allow day-to-day operations by government entities. The last phase is restoration, during which the community is restored to its predisaster norm. Since the military’s role in disaster response is temporary, most military forces will disengage during the early part of the restoration phase, if not before.⁹¹ Moreover, since the support offered is temporary, military leaders should plan toward that end state, ensuring that civilian leaders are aware of the milestones leading up to mission completion and redeployment.

“Most domestic support operations,” the manual explains, “are logistical in nature.”⁹² According to the manual, logistics planners should get involved early in the planning process, and logistics command and control cells, including robust communications support, should deploy as soon as possible so they can assess the situation on the ground. Leaders

must also ensure that supplies flow “smoothly and continuously” into the affected area and that “resource management is fully integrated into all phases of the operation.”⁹³

Logistics support comes in many forms. Two of the most important forms are contracting support and military support. Since contracting often uses local sources, it is the preferred method of support. All classes of supply can be contracted out to support both the citizens affected by the disaster and the troops deployed in response to the disaster. Moreover, contracting provides flexibility. It can be used to bridge gaps until sufficient forces are built up, or it can augment military support, thus reducing the need for additional troops. Military support comes in a variety of forms as well. It could be accessing military installations; transporting food and supplies by trucks or helicopters; or providing life-sustaining support, such as distributing food and water, or engineering support, such as restoring utilities or clearing debris.⁹⁴

FM 100-19 also emphasizes that using Army core competencies is fundamental during civil support operations. Basic soldier skills, such as command and control, logistics management, search and rescue, engineering, and first aid, are extremely valuable. Aviation units can help with logistics distribution, search and rescue, command and control, and damage assessment. Engineer units can clear debris, repair government facilities, and restore basic utilities. Intelligence personnel can assist with damage assessment, and military police can provide security. Communications units can help restore services and fill the gaps until those systems are restored. Medical teams can treat injured citizens and fill the medical gap until civilian medical resources are mobilized.⁹⁵

The US Army’s civil support doctrine can be boiled down to four central tenets:

- Unless homeland defense considerations take precedent, the Army will provide civil support assistance during times of crisis. The Secretary of Defense will, however, retain control of Army and other service forces. FEMA mission assignments will be treated as requests that can be denied if they do not meet the criteria in DOD 3025.15.
- The Army will focus on satisfying “unmet needs.” Since disaster response starts at the local level, local and state resources should be used first. If they prove inadequate, then the military will help, if requested. But the first military responder is the National Guard, operating under the command of the governor. The National

Guard is explicitly recognized as having primacy during relief operations. National Guard units are the best military units to use because they are local and they are often much more experienced in civil support operations than the Active and Reserve components. Nothing mentioned previously will, however, preclude the use of military forces in the event of an emergency. Local commanders can, under the “immediate response” clause, act to save lives and alleviate suffering in their local area if they deem their support necessary.

- Responders will use their core competencies to assist their fellow citizens. Although Army logistics will probably be the capability most desired, soldiers have a broad range of skills, honed in many settings, that may prove useful during civil support operations.
- Army assistance is temporary. Early in the relief operation, objectives should be set and end states identified so that the recovery mission can be turned over to civil authorities and military forces redeployed so they are available for national taskings.

Summary

By the time Hurricane Katrina struck the Gulf coast in August 2005, the role of the US Army in civil support operations was clearly established both by historical precedent, national policy, and Army doctrine. For nearly 150 years, the Army provided assistance during times of civil distress, whether in response to flooding, fires, earthquakes, or hurricanes. Although primary responsibility for responding to such situations has, over time, shifted to the National Guard, there are many recent examples of Active Army involvement as well.

Support for this mission is grounded in both national policy and Army doctrine. The Stafford Act authorizes the Department of Defense to provide disaster relief support such as food, water, ice, and shelter; to help with search-and-rescue operations; and to assist with debris removal and the cleanup and repair of public buildings and vital roadways. More recently, the National Response Plan assigns the US Army Corps of Engineers specific responsibility for ESF #3, Public Works and Engineering, and the Department of Defense as a supporting agency for all other emergency support functions. Those support functions include a wide range of missions such as transportation, communications, firefighting, medical care, logistics support, temporary shelter, search and rescue, hazardous materials cleanup, plant and animal safety, food sanitation, safety and security, and public information.

According to Lieutenant General Honoré, the purpose of doctrine is to “teach you to do the right thing.”⁹⁶ Even using that general guidance, the doctrine presented in FM 100-19 appears to be inadequate. It does little more than give four tenets that provide general guidance: the Army will respond to requests for assistance, it will attempt to resolve “unmet needs” by providing assistance if local or state resources prove inadequate, soldiers will use their core competencies to assist fellow citizens, and such support is temporary. The manual is short on details and provides little guidance on how to satisfy unmet needs. There are no anticipated task lists or mission planning checklists that planners can use to train, equip, and sustain forces involved in disaster relief operations. There are few real-world examples or lessons learned from previous missions. There is little information about the organization and structure of local and state emergency organizations. Moreover, many of the doctrinal publications were out of date when Hurricane Katrina struck. Few of the military publications accurately reflected the current Federal emergency management structure. DOD Directive 3025.1, *Military Support to Civil Authorities*, for example, indicated that the Secretary of the Army rather than the Director of Military Support was the executive agent in charge of civil support operations. While FM 100-19 described the three phases of disaster response operations, it did not adequately explain how to accomplish each phase. Even though the manual asserted that most domestic support operations are logistical in nature, it provided few details on how logistics could be used to accomplish the mission. Thus, when the Army faced one of the biggest domestic crises in our Nation’s history, the doctrine in place at the time was not sufficient for the task.

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Chapter 3

The Storm

Hurricane Katrina began as a tropical depression in the Caribbean on 23 August 2005. The next morning, as it continued to grow in strength, Tropical Depression 12 was reclassified as a tropical storm.¹ Over the next 2 days, Tropical Storm Katrina took a leisurely northwesterly track through the central Bahamas toward Florida (figure 1). By the late afternoon on 25 August, it had built up enough force to be classified as a minimal Category 1 hurricane. Less than 2 hours later, Hurricane Katrina hit the coast of Florida between Hallandale Beach and North Miami Beach. Even though Hurricane Katrina's sustained winds did not exceed 80 miles per hour, the hurricane inflicted significant wind and flood damage in the state and, more ominously, killed 14 people.²

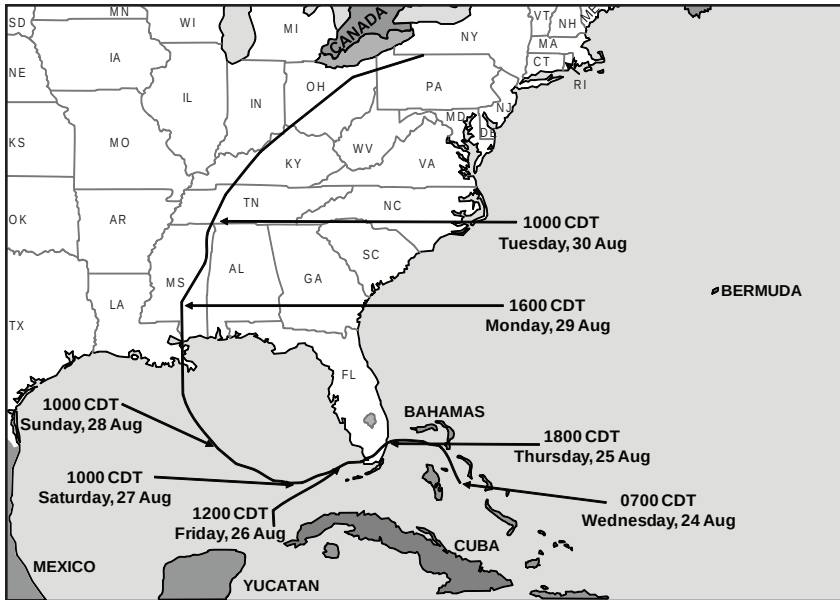


Figure 1. Hurricane Katrina's track.

During a FEMA video teleconference held the day after Hurricane Katrina struck Florida, Max Mayfield, Director of the National Hurricane Center (NHC), warned that, while Hurricane Katrina was a “solid Category 2” hurricane at the moment, it would soon strengthen into a Category 3 hurricane and he expected that it would get even stronger before it made landfall.³ Hurricane experts were not sure where it would strike the Gulf coast although they expected Hurricane Katrina to turn north and hit the

Florida Panhandle or Alabama late Sunday night, 28 August, or early Monday, 29 August. Mayfield also cautioned everyone to be prepared for “significant storm surge from wherever the system makes landfall.”⁴

Sure enough, Hurricane Katrina continued to grow and was upgraded to a Category 3 hurricane at 0500 CDT* on Saturday, 27 August.⁵ By this time, the NHC had revised its track for Hurricane Katrina and was now warning everyone from the Florida Panhandle to Lake Charles, Louisiana, to be alert. Moreover, Hurricane Katrina was heading for an area of deep warm water in the central Gulf of Mexico that would feed the storm even more. Officials at the NHC worried that Hurricane Katrina would strengthen into a Category 4 or possibly even a Category 5 hurricane before it made landfall.⁶ Searching for a comparative storm, another representative offered this advice, “You remember Camille and its 26 feet. I would advise all the folks that are in the potential path of this storm to be looking at their maximum off the surge models.”⁷ Figure 2 shows a comparison of Hurricanes Camille and Katrina.

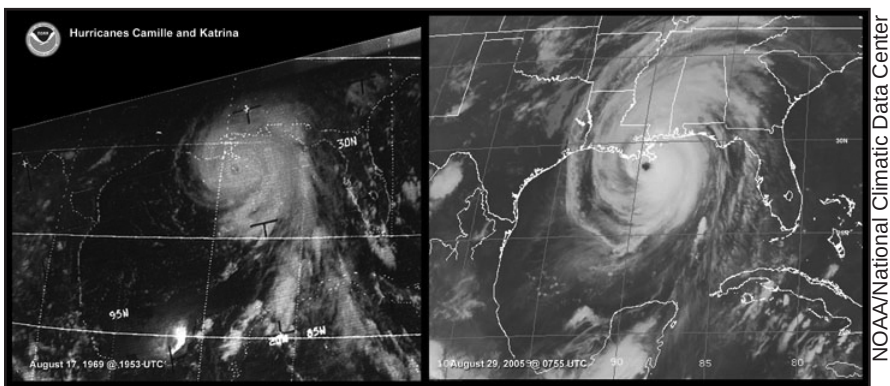


Figure 2. Comparison of Hurricanes Camille and Katrina.

Hurricane Katrina continued building into a larger, more powerful storm. At 0200 on Sunday, 28 August, Hurricane Katrina reached Category 4 strength. Five hours later, when its winds increased to more than 160 mph, Hurricane Katrina was declared a Category 5 hurricane.⁸ Hurricane Katrina reached its maximum sustained winds, 175 mph, around 1000 that day.⁹ Although it never matched their intensity, Hurricane Katrina was much larger than both Hurricanes Camille and Andrew. At its peak strength, Hurricane Katrina’s hurricane force winds extended out 105 miles from the eye of the storm, and its tropical storm level winds extended

*All times are in central daylight time.

out an additional 125 miles.¹⁰ By way of comparison, Hurricane Camille's hurricane force winds extended out 75 miles.¹¹ During the noon FEMA video teleconference on Sunday, 28 August, Max Mayfield desperately tried to make the other listeners understand the immense size and magnitude of the storm. He said, "This is a very large hurricane . . . this is a Category 5 hurricane, very similar to Hurricane Andrew in the maximum intensity, but there is a big, big difference. This hurricane is much bigger than Andrew. . . ." ¹² Mayfield went on to say that "this hurricane is so large that no matter where it hits it's going to have an impact over a very, very large area."¹³ Those were prophetic words, for Hurricane Katrina's extraordinary size complicated the relief effort by devastating the power, communications, and transportations systems many miles beyond the coast when it made landfall on 29 August.

Hurricane Katrina roared ashore near Buras, Louisiana, at 0610 on Monday, 29 August. At landfall, Hurricane Katrina's winds blew in excess of 120 mph, and its pressure was the third lowest on record for a storm making landfall in the United States. Two hours later, with the eye of the storm 40 miles southeast of the city, New Orleans Lakefront Airport recorded wind gusts as high as 86 mph. At the same time, Gulfport, Mississippi, which was in the dangerous right-front quadrant of the storm, reported sustained winds of 94 mph and gusts up to 100 mph. By 1000, when Hurricane Katrina made its second landfall near the Mississippi-Louisiana border, it was still a very strong storm, with winds estimated at 121 mph.¹⁴

By noon, everyone in the national response chain of command was well aware of the potential consequences of the storm. There did, however, seem to be some good news that morning. Max Mayfield noted that the eye of the storm passed to the east of New Orleans, sparing the city from the storm's most destructive winds.¹⁵ While he expected the storm surge to be in the 10- to 15-foot range in Louisiana, Mayfield said he did not think the levees in New Orleans would be breached.¹⁶

Hurricane Katrina moved north-northeast the rest of the day. When it hit Laurel, Mississippi, 100 miles north of the coastline, its winds were still blowing at hurricane strength. The storm was not downgraded to a tropical storm until 1900, when it was 30 miles northwest of Meridian, Mississippi. It finally petered out into a tropical depression on Tuesday, when it reached Clarksville, Tennessee.¹⁷

As Hurricane Katrina passed through the region, it left behind a broad swath of death and destruction. Although initial assessments seemed to indicate that New Orleans had "dodged a bullet," that optimistic evaluation

was soon overturned when it was realized that three of the levees protecting the city had failed. Within hours, 80 percent of the city was flooded, precipitating the largest search-and-rescue mission in American history.¹⁸ Many of the parishes surrounding New Orleans, such as St. Bernard and Plaquemines, suffered equally as much damage as New Orleans. The Mississippi Gulf coast was also devastated. Haley Barbour, Governor of Mississippi, later commented that “the 80 miles across the Mississippi Gulf Coast is largely destroyed. A town like Waveland, Mississippi, has no inhabitable [*sic*] structures—none.”¹⁹ Cities such as Gulfport and Pascagoula were also heavily damaged.

The immense size and strength of Hurricane Katrina combined to turn a disaster into a catastrophe. Although larger and more powerful hurricanes have hit the United States, few had the combined attributes of Hurricane Katrina. Only four other hurricanes have struck the United States with greater wind force: the Labor Day hurricane that hit the Florida Keys in 1935²⁰; Hurricane Camille, which struck the Gulf coast in 1969; and two more recent hurricanes that pummeled Florida, Hurricanes Andrew (1992) and Charley (2004).²¹ Only two of those hurricanes exceeded Hurricane Katrina’s intensity: the Florida Keys hurricane in 1935 and Hurricane Camille.²² Hurricane Katrina was also a huge storm: its hurricane force winds extended more than 100 miles from its eye.²³ Consequently, Hurricane Katrina wreaked damage over an incredibly large area. More than 93,000 square miles, roughly the size of Great Britain, were affected by the storm.²⁴ Few hurricanes have produced storm surge to match Hurricane Katrina. The maximum observed storm surge was 27.8 feet, which was recorded in Pass Christian, Mississippi. A 20-mile stretch along the western end of the Mississippi coast was hit with a storm surge ranging from 24 to 28 feet. The storm surge along the eastern end of the Mississippi coast averaged 17 to 22 feet. Not only did the storm surge decimate towns such as Waveland and Pass Christian along the coast, it reached inland as far as 12 miles and battered many towns that never expected to encounter storm surge. In New Orleans, the heavy surge raised the level of Lake Pontchartrain to the point where the levees failed in three places, flooding 80 percent of the city up to a depth of 20 feet.²⁵ The massive amounts of storm surge, rather than the hurricane’s high winds and rain, caused the majority of the destruction along the coast.

In many ways, Hurricane Katrina was a much bigger and stronger storm than Hurricane Camille, which was the previous gold standard for storms along the Gulf coast. Although Hurricane Katrina was the third-most intense storm to strike the United States, Hurricane Camille was the second-most intense storm.²⁶ While Hurricane Camille was a much



Figure 3. Storm surge in Mississippi.

stronger Category 5 hurricane with winds approaching 190 mph, those winds only extended out about 75 miles from the eye of the storm. Thus, Hurricane Camille affected a much smaller geographic area when it hit the Mississippi coastline in 1969.²⁷ Similarly, Hurricane Katrina's storm surge was almost unprecedented. It matched the heights reached during Hurricane Camille in the Saint Louis Bay area, but farther east, in Biloxi and Gulfport, it exceeded the previous highs by 5 to 10 feet.²⁸

There were two important consequences of the strength and size of the storm:

- The immense storm almost completely destroyed the region's communications infrastructure. More than 3 million telephone customers lost service, more than 2,000 cell phone towers were knocked out, and thirty-eight 911 call centers were lost.²⁹ The loss of communications isolated many first responders, who are important elements in the National Response Plan. Without communications, those first responders who were not incapacitated by the storm were left both literally and figuratively in the dark. Since they had no power, they had neither lights nor the use of other electronic or electrical equipment. With their communications systems down, they were also blind to what was going on around them. The



Technical Sergeant Kevin J. Gruenwald, USAF

Figure 4. Flood damage in New Orleans.

destruction of the communications infrastructure dramatically affected the ability of first responders to assess the damage on the ground and report up the chain of command. It took hours, for example, for the news about the failure of the levees in New Orleans to filter back to officials in Baton Rouge.

- The storm's size and fury inhibited immediate response. Even if first responders survived and knew what was going on around them, it was not safe for them to respond to those in need until the winds subsided. Since Hurricane Katrina was a very large hurricane, it took a long time for the storm to pass through the region. Louisiana was subjected to hurricane force winds for 11 hours. During those 11 hours, all that most emergency personnel could do was wait for the winds to diminish.³⁰ Once the storm passed, emergency personnel stationed outside the immediate danger area had difficulty entering the affected areas because of downed trees, broken power lines, and flooded roads.

Despite all of the preparations made by local, state, and Federal agencies, the magnitude of the storm almost completely overwhelmed everyone: victims, local first responders, state emergency officials, and FEMA. The Nation's emergency response system, which was predicated on local emergency personnel providing immediate response to those in need, failed. As Governor Kathleen Blanco noted, "When your whole

system, your whole civilized system goes down, this is pretty much what you get left with. . . . We have no communications, no running water, no electricity, no real help.”³¹

The damage inflicted on the Gulf coast by Hurricane Katrina was devastating. It is estimated that more than 1,330 people were killed during the storm, making it the third most deadly hurricane and the fourth most deadly natural event in American history.³² Despite Hurricane Camille’s greater strength and intensity, only 256 people died along the Gulf coast and in rural southwest Virginia where the storm caused massive flooding.³³ Hurricane Katrina was also the most costly hurricane in American history. Estimates of the cost exceed \$100 billion. Even adjusting for inflation, Hurricane Katrina caused almost twice as much damage to the Gulf coast and inland areas as Hurricane Andrew inflicted on Florida in 1992.³⁴ More than 300,000 homes were destroyed by Hurricane Katrina; Hurricane Andrew ruined some 80,000.³⁵ Hurricane Katrina created more than 118 million cubic yards of debris; Hurricane Andrew produced 20 million cubic yards of debris.³⁶

Additionally, Hurricane Katrina was an environmental disaster. There were six major oil spills of more than 100,000 gallons and four of more than 10,000 gallons. All totaled, some 7.4 million gallons of oil poured into the Gulf waters. Only the 1989 *Exxon Valdez* oil spill, which dumped some 11 million gallons of oil into Prince William Sound, Alaska, exceeds Hurricane Katrina in terms of oil released into American waters. In addition to oil, a wide range of other, often more toxic, materials were let loose into the environment. Three of the 16 Superfund toxic sites in the region were flooded, as well as 466 chemical sites and 31 hazardous waste sites. Also damaged or destroyed were 170 water and sewage treatment plants.³⁷

Hurricane Katrina was an incredibly destructive hurricane. It was also a unique natural disaster in that the hurricane’s characteristics combined to make it more devastating than almost any previous hurricane. Its size and strength resulted in unprecedented damage throughout the Gulf coast, especially to the region’s road and communications systems, which further degraded both states’ ability to respond to the growing crisis. The extensive flooding in New Orleans and the surrounding parishes forced emergency personnel to focus on search and rescue instead of other relief missions. Roads were impassable because of debris or flooding, which prevented emergency personnel from reaching those in need and relief personnel from efficiently delivering needed aid. Hurricane Katrina was not a normal hurricane, and the resultant catastrophe required a response by the United States Army that went well beyond the normal as well.

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18. United States Executive Office of the President, *The Federal Response to Hurricane Katrina* (Washington, DC: Government Printing Office, 2006), 6.
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Chapter 4

Louisiana

Hurricane Katrina was an extraordinary event that required an unprecedented response. In Louisiana, the response required, at its peak, almost 27,000 National Guard troops.¹ Those troops conducted airborne, waterborne, and ground search-and-rescue missions; delivered relief aid and medical assistance to those in need; repaired levees; cleared debris; and provided security for citizens and their property. Even though Louisiana had a hurricane response plan, it was inadequate in the face of an overwhelming disaster such as Hurricane Katrina. Consequently, the response in Louisiana was ad hoc; National Guard leaders responded to situations as they occurred and used whatever resources were available at the time to resolve the issue. Many parishes were in desperate need of assistance, so National Guard leaders organized task forces, often composed of out-of-state National Guard personnel, and sent them wherever they were needed. The story of the Army's response to Hurricane Katrina is the story of disparate military units, whether National Guard, Active component, or Reserve component, overcoming unimaginable challenges to restore the conditions for normal life in numerous devastated communities.

Prelandfall Preparations

On Friday, 26 August, Governor Kathleen Blanco declared a state of emergency for Louisiana in anticipation of Hurricane Katrina striking the state. She authorized the State Adjutant General, Major General Bennett C. Landreneau, to call up 2,000 National Guard soldiers onto state active duty.² By the end of the day, almost 1,800 National Guardsmen were on duty.³ On Saturday, as the predictions regarding the hurricane became more dismal, Governor Blanco ordered an additional 2,000 Guardsmen onto state active duty. By late that evening, more than 3,000 Louisiana National Guardsmen were on station in preassigned locations throughout the state.⁴

The next day, Sunday, 28 August, Landreneau established Task Force (TF) *Pelican* (figure 5). TF *Pelican* served as the command and control headquarters for all National Guard troops serving in the state throughout the crisis. Brigadier General Gary L. Jones assumed command of the task force later that evening. Initially, five functional task forces were organized under TF *Pelican*:

- Aviation (TF *Eagle*).

- Engineering (TF *Castle*).
- Security (TF *Defender*).
- Logistics.
- Search and rescue.⁵

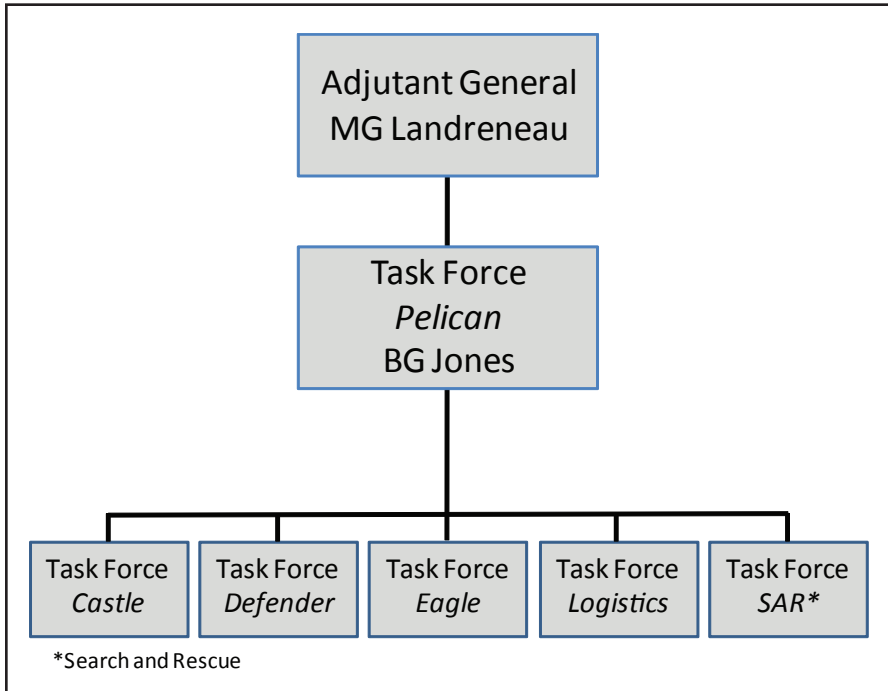


Figure 5. Louisiana National Guard task organization as of 28 August 2005.

TF *Eagle* controlled all National Guard aviation units. During the hurricane relief operation, this task force conducted aviation search-and-rescue missions; delivered food, water, and other supplies; and helped the Corps of Engineers repair the levees by dropping sandbags into the breaches. All engineer units were assigned to TF *Castle*, which cleared roads, removed storm debris, restored public facilities, and assisted the Corps of Engineers with levee repairs. The engineers also helped with search and rescue and distribution of relief supplies. TF *Defender* controlled most of the military police units deployed to the state. This task force supervised security operations throughout the state and assisted with the distribution of aid. Major General Landreneau established two other task forces to help with logistics and search-and-rescue operations.

Throughout the weekend, Louisiana National Guard soldiers worked diligently to prepare the state for the coming storm. Colonel Barry Keeling, the state aviation officer, began repositioning air assets to protect them from the high winds Hurricane Katrina was expected to produce. He was unable to acquire enough hanger space at either the Baton Rouge or Hammond airports, so he negotiated space in Beaumont and Houston, Texas. He also set up ground support, including heavy expanded mobility tactical truck (HEMTT) fuel tankers, at the Hammond airport.

Keeling took several actions to prepare for the expected postlandfall search-and-rescue mission. First, he organized a roving helicopter cell, consisting of four UH-60 Blackhawk and two UH-1 Huey helicopters. The helicopters were relocated to Houston at 1500 on Sunday. They planned to return to Louisiana and commence search-and-rescue operations as soon as Hurricane Katrina's winds decreased to 45 knots (52 miles per hour), the level at which it was safe for the aircraft to fly. Keeling ordered the Blackhawks to return first, since they could operate in worse weather conditions.⁶ Anticipating the need for a significant number of helicopters to support the potential search-and-rescue mission, Keeling also requested additional aviation assets through the Emergency Management Assistance Compact (EMAC) on 26 August. He asked for two UH-60 helicopters with hoists and four CH-47 helicopters along with aviation maintenance support.⁷

At the same time, Keeling established TF *Eagle* to control the state's aviation assets. TF *Eagle* consisted of the State Aviation Office staff; 204th Air Traffic Services Group; 1/244th Aviation Regiment; 812th Medical Company (Air Ambulance); Detachment 2, 106th Aviation Intermediate Maintenance (AVIM); the Reconnaissance and Interdiction Detachment (RAID); and Operational Support Airlift (OSA) Detachment 38. Aviation personnel set up TF *Eagle*'s tactical operations center (TOC) at Jackson Barracks in New Orleans and manned a tactical command post in Pineville, Louisiana.⁸

While Keeling organized the state's aviation assets, other National Guard forces implemented the state's emergency response plan. They positioned high-water vehicles, boats, engineering equipment, supplies, and other assets throughout the state. Aviation liaison officers deployed to 13 parishes where they provided advice to local officials on how to best use National Guard aircraft for search-and-rescue missions.⁹ Engineers from the 225th Engineer Group, along with OH-58 Kiowa helicopters, helped the Louisiana state police evacuate the southernmost parishes and the greater New Orleans area. The evacuation began at 1600 on Saturday, 27

August.¹⁰ One of the main features of the evacuation plan was contraflow, which involved the use of all lanes of the highway system for outbound travel only. National Guard soldiers and airmen helped by erecting barriers and directing traffic. In accordance with the plan, the southern parishes were evacuated first. Once those parishes were evacuated, citizens from the metropolitan New Orleans area were allowed to leave. Over the next 25 hours, approximately one million people, or 90 percent of the Louisianans living in Hurricane Katrina's path, fled southeastern Louisiana, making it the most successful evacuation in American history.¹¹ Despite the success of the evacuation operation, more than 100,000 people remained in New Orleans Sunday evening. Unfortunately, many of those remaining in the city were unable to self-evacuate, and since the city had no plan to evacuate them, they were still there when the storm struck.

The Superdome was the center of much prelandfall activity. Under the state's emergency operations plan, the Superdome was a "special needs" shelter. Citizens who needed special assistance, such as oxygen or refrigeration for medicine, could get that medical support there. It was not, however, set up to provide care to those in need of constant medical attention.¹² The Louisiana Special Response Team conducted a reconnaissance of the facility early Saturday morning, anticipating that it would be responsible for providing security there the next day. Army National Guard troops began flowing into the Superdome Sunday morning, 28 August. Forty-six members of the Special Response Team arrived at 0700.¹³ The Louisiana National Guard also sent a substantial medical contingent. Early Sunday morning, 71 medical personnel from the Louisiana Medical Command (MEDCOM), Company A/111th Medical Battalion, and the Air National Guard deployed to the Superdome. The MEDCOM, which is a component of the Army National Guard, included 3 doctors, 5 nurses, and 30 other medical personnel. Company A/111th Medical Battalion sent 1 doctor, 1 nurse, 2 physician's assistants, and 14 medics. To assist with security, 220 soldiers from the 225th Engineer Group also deployed to the Superdome. The Air Guard sent 100 security personnel to the Superdome as well. Later in the day, TF *Castle* sent a six-person forward operations element to the Superdome to provide command and control of the security forces.¹⁴

When the city of New Orleans opened the Superdome as a special needs shelter at 1000 Sunday morning, 28 August, there were more than 450 Louisiana National Guard security and medical personnel in place. Critical care patients began arriving almost immediately. By the end of the day, National Guard medical personnel had more than 500 patients under their care. Thousands of people converged on the Superdome after

city officials opened it to all citizens as a “shelter of last resort” at noon on Sunday. As people waited patiently in line, soldiers conducted security checks at the access points to weed out contraband and weapons. By 1700, more than 2,500 citizens self-evacuated to the Superdome, many of whom brought their own food and water. Conditions at the Superdome were satisfactory at that point in time—there were lights, running water, working toilets, and air conditioning. National Guard soldiers delivered 9,792 meals, ready to eat (MREs), and 13,440 one-liter bottles of water late Sunday afternoon.¹⁵ That brought the total number of MREs prestaged at the Superdome to 43,776 and the liters of water to 90,000, so leaders at the Superdome thought they had plenty of food and water.¹⁶

The 225th Engineer Group mobilized 1,485 soldiers as part of *TF Castle*. Among the 220 soldiers from the 527th Engineer Battalion at the Superdome was First Lieutenant Stewart Adams. He commanded a 30-person quick reaction force (QRF) that performed security checks at the Superdome entrances. When his soldiers arrived there, they found long lines of people waiting to get inside. His troops were trained in riot and crowd control, so they immediately began to screen people as they entered the building.¹⁷ Other engineers spread out around the state. *TF Castle* allocated 120 soldiers to the New Orleans Police Department and 64 more to the Jefferson Parish Sheriff’s Department to assist with evacuations and security missions. Three hundred engineers provided security at shelters around the state. Others helped the Louisiana state police with the ground evacuation mission. The rest of the 225th, some 800 soldiers, went to Camp Beauregard, near Pineville, Louisiana. Since Camp Beauregard was out of Hurricane Katrina’s expected path, they could safely wait out the storm there and then quickly move into the affected areas and provide humanitarian aid after the storm passed.¹⁸

Although 3,800 soldiers from the 256th Brigade Combat Team were overseas in Iraq, approximately 6,800 other Louisiana Guardsmen were available for mobilization when Hurricane Katrina struck. By late Sunday evening, more than half of them were on state active duty, ready to provide support to the citizens of Louisiana if needed.¹⁹ Some were at the Superdome providing security and medical support to people unable to evacuate from the city. Others were positioned around the state, providing assistance to local officials. A few others displaced to Texas where they also waited out the storm. The remainder was at Camp Beauregard, waiting out the storm. This was an unprecedented response by the state of Louisiana. Never before had so many troops been mobilized in reaction to a potential disaster.²⁰

Immediate Response Operations

The many posthurricane investigations clearly indicate that few people in Louisiana understood the gravity of the situation throughout most of the day on Monday as the storm raged about them. During the noon FEMA video teleconference, Bill Lokey, the Federal coordinating official for FEMA in Louisiana gave this update:

. . . we got over 300,000 without power. We have got approximately 15,000 people in the Superdome, which is going to need relief soon with water and food . . . there is eight to ten feet of water in St. Bernard parish. In New Orleans parish, we have got water in the eastern part. And down in the ninth ward that borders St. Bernard parish, we're going to have serious search-and-rescue efforts that are going to need to take place once we can get back in. . . . We are pretty much inundated right now, and our next priorities are going to be search and rescue and saving lives.²¹

When Governor Blanco was asked about the levees during the same conference call, she said:

We keep getting reports in some places that maybe water is coming over the levees. We heard a report unconfirmed. I think we have not breached the levees. We have not breached the levee at this point in time. That could change, but in some places we have floodwaters coming in New Orleans East and . . . St. Bernard Parish where we have waters that are eight to ten feet deep, and we have people swimming in there, that's got a considerable amount of water itself.²²

While she was hopeful, Governor Blanco acknowledged that she did not know whether New Orleans had “dodged a bullet” or not when she said, “I can't say that I feel that sense that we've escaped the worst. I think we don't know what the worst is right now.”²³

The lack of situational awareness caused by the dearth of damage reports led to rampant confusion and speculation. The idea that Hurricane Katrina was not as bad as it could have been quickly gained momentum. The Associated Press, for example, reported:

The storm passed just to the east of New Orleans as it moved inland, sparing this vulnerable below-sea-level city its full fury and the apocalyptic damage that forecasters

had feared. . . . An estimated 40,000 homes flooded in St. Bernard Parish just east of New Orleans . . . it was bad, but city officials had expected much worse. Only a last minute jog to the east saved New Orleans from catastrophe. A city that has become famous for near misses took a hard punch, but not the knock-down it could have been. . . . Officials said a levee broke on one canal, but did not appear to cause major problems.²⁴

Similar assumptions were repeated by the Department of Homeland Security Operations Center in its 1700 situation report (SITREP) on 29 August. Such reports no doubt put a damper on the sense of urgency that should have been resonating throughout the Federal Government at that time.²⁵ Although reports of breaches in the levees had been coming in all day, it was not until 1800, when a FEMA public affairs officer observed the destruction firsthand from a Coast Guard helicopter, that the scope of the problem was truly understood.²⁶

Louisiana and FEMA emergency managers spent much of Monday planning how they would conduct search-and-rescue missions and distribute humanitarian aid in a flooded operational environment. Although the Louisiana emergency management plan established preplanned collection points where people could gather or be dropped off for further evacuation, many of the designated sites were under water. Consequently, the Superdome became the default collection point, even as it became increasingly isolated by the rising flood waters.²⁷ The flooding also disrupted the distribution of relief aid, such as food, water, and ice. Jeff Smith, Deputy Director for Emergency Preparedness with the Louisiana Office of Homeland Security and Emergency Preparedness, indicated that the state had received commodities from FEMA, but it was unable to distribute them in significant quantities because of the flooding.²⁸

Airborne Search-and-Rescue Operations

Although they had no idea how bad the situation really was, Louisiana emergency management officials did understand that search and rescue was their primary mission. The Coast Guard began flying search-and-rescue missions around 1500 Monday afternoon. The high winds, 50 to 60 miles per hour, made these operations particularly difficult.²⁹ The roving helicopter cell established by Colonel Keeling returned to Baton Rouge Monday afternoon. The Blackhawks began flying missions about 1600, just a few hours after the storm passed through New Orleans. The Hueys followed suit soon thereafter.³⁰ By the end of the day, the Army National Guard had 15 helicopters from the 1/244th Command Aviation Battalion,



Master Sergeant Scott Reed, USAF

Figure 6. Airborne search and rescue in New Orleans.

812th Air Ambulance Company, and the RAID in the air flying search-and-rescue missions.³¹ But search-and-rescue missions were fairly limited on Monday because of the wind and rain; most survivors had to wait until Tuesday, at the earliest, for rescue.

By Tuesday, as the true extent of the destruction became apparent, Louisiana officials made a calculated decision to focus on saving lives. Jeff Smith later testified that “we made a conscious choice that life-saving was, by far, the most critical activity during the first days. Saving lives is more important than the evacuation of those who, while miserable, had food, water, medical care, and shelter.”³² With help from FEMA and EMAC resources, Smith reported that Louisiana would have 300 boats performing search and rescue by the end of the day on Tuesday.³³

Army National Guard helicopters resumed search-and-rescue operations in New Orleans on Tuesday morning. One of the pilots involved in those early rescue missions recalled the difficulties they confronted. First Lieutenant Timothy Cleighton, a UH-60 pilot for the Louisiana Army National Guard, said that he did not fly a mission the first day; only the most experienced pilots were allowed to fly on Monday because of the high winds. When Cleighton flew into the city on Tuesday, he was left with a feeling of emptiness—New Orleans was full of water, almost totally destroyed. It was utter chaos. TF *Eagle* was supposed to control flight operations, but it was so busy that pilots conducted their own missions.

Military aircraft could communicate with one another, but they could not talk to civilian aircraft. It was, he said, amazing that no air mishaps occurred. They saw people everywhere—on roofs and congregating on plots of dry land. Without a set mission, they picked up people wherever they could. Since his aircraft did not have a hoist, he had to land and let people climb on board. Although he and his crew were unarmed, he said that they never felt threatened by those they rescued. Later, Border Patrol officers were embarked to provide security. During that day, Cleighton and his crew rescued about 75 people. Initially, they took folks to the Superdome. Later, as word about the conditions at the Superdome spread, citizens refused evacuation to the Superdome, so pilots resorted to generalities, telling them they were taking them to FEMA. Eventually, because of the overcrowded conditions at the Superdome, pilots were directed to drop people off at the “cloverleaf, which was an elevated section of Interstate 10 about a mile into Jefferson Parish that served as a makeshift collection point.”³⁴

The number of helicopters involved in the search-and-rescue mission quickly increased over the next several days as additional forces flowed into the state. The first out-of-state helicopters to arrive were two UH-60 Blackhawks from Oklahoma. They arrived on late Monday night, 29 August, in response to an EMAC request for helicopter support submitted before Hurricane Katrina made landfall. The helicopters joined the search-and-rescue operation Tuesday morning.³⁵ Army National Guard helicopters flew almost 4,000 sorties, rescuing more than 11,000 people and moving more than 12,000 other people from dropoff points to evacuation sites during the first 5 days of operations. They also delivered 600 tons of food and water and 631 tons of other cargo through Friday, 2 September.³⁶

Texas also responded quickly, sending eight UH-60 Blackhawk helicopters, two CH-47 Chinook helicopters, and one C-23 airplane on Tuesday, 30 August.³⁷ Texas helicopter crews evacuated 6,865 people, delivered almost 1,900 cases of MREs and 1,800 cases of water, and put almost 3 million pounds of sand and other materials into the levee breaches.³⁸ The helicopter detachment brought a six-person communications team, which went to the Superdome and served as the primary communications conduit for the Louisiana Joint Operations Center.³⁹

Two CH-47 helicopters from Company F, 131st Aviation Regiment, Georgia Army National Guard, arrived in New Orleans on Wednesday, 31 August. Along with three UH-60s from the 171st Aviation Battalion, which arrived the next day, they assisted with levee repairs by dropping sandbags into the breaches. The CH-47s also helped with firefighting by using buckets to drop water on fires that plagued the city. Three UH-1

Huey helicopters from the 148th Medical Company conducted a number of air rescues of people trapped on the roofs of houses and buildings.⁴⁰

Wisconsin sent two UH-60 helicopters from the 1/147th Aviation Battalion, three UH-1s from the 832d Medical Company, and a C-26 aircraft from the Operational Support Airlift Command, Detachment 52. The helicopters arrived in Louisiana on 2 September and immediately began search-and-rescue operations. While deployed, UH-1 crews rescued 132 people, including 59 by hoist, picked up 13 pets, and delivered 8 tons of cargo while the UH-60 crews transported 315 passengers and delivered 3 tons of supplies.⁴¹

During one particularly challenging mission, the crew of an UH-1 from the 832d Medical Company went to great lengths to rescue a citizen. The crew spotted a man in a boat who indicated that he wanted to be rescued. He proceeded to a telephone pole where he tied up his boat. Since the helicopter crew could not safely approach that spot because of the telephone and power lines, the crew used hand signals to get him to move to another location. This time, he tied to a light pole, which was again inaccessible to the helicopter. The crew finally lowered the medic onto a partially submerged automobile to give the man an idea of where he needed to go. By this time, he was showing signs of exhaustion, so the helicopter pilot maneuvered behind the man and used the rotor wash to push him toward the submerged vehicle. Once in position, he was hoisted into the aircraft and taken to safety.⁴²

Since the flooding rendered most of the preplanned collection sites unusable, the Superdome became the focal point of the Louisiana National Guard's search-and-rescue operation. Jeff Smith spoke to the issue during the FEMA video teleconference saying, "We are having some issues with our collection points. A lot of the points that were pre-identified for collection points are inundated, they are under water. . . . We're basically having to use the Superdome as a collection point at this time."⁴³ But the Superdome, with only one landing pad, was not configured for large-scale flight operations. Something had to be done so, at first light Tuesday morning, 30 August, Lieutenant Colonel Garrett Jensen, Commander of TF *Eagle*, took action. After coordinating with the Superdome heliport manager, Jensen took control of flight operations at the Superdome and established landing patterns and control points. Jensen commandeered some National Guard soldiers and constructed 12 improvised landing pads by removing light poles from 2 elevated parking lots and pushing parked cars over the railings to clear enough space for helicopters to land. With the arrival of two Navy air controllers, there were enough personnel to support 24-hour flight operations at the Superdome.⁴⁴

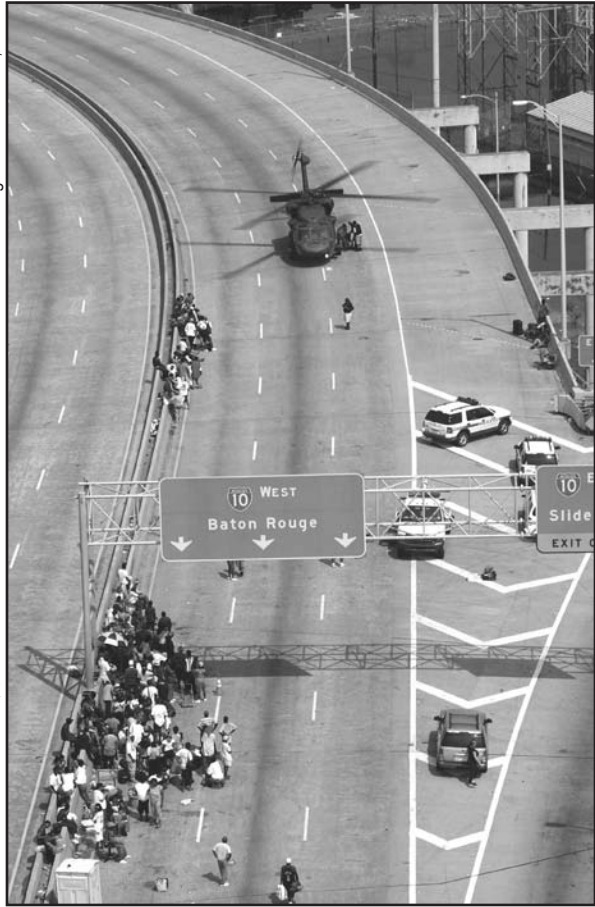


Figure 7. A Blackhawk helicopter lands on the freeway near the Interstate 10 intersection for Baton Rouge and Slidell, Louisiana, to pick up citizens awaiting evacuation.

Rescue workers also used a number of informal rescue sites, which were nothing more than isolated spots with dry ground, usually located on highway overpasses. The most important of these were the “cloverleaf,” the I-10/I-610 split, the St. Bernard exit, and the Elysian Fields exit.⁴⁵ Many people just gravitated toward these places, which were soon dubbed “lily pads,” looking for some place dry to rest and wait to be rescued. Others were brought there after they were plucked from their homes by boat or helicopter. TF *Eagle* worked hard to keep these people supplied with food, water, and medical supplies. A routine soon developed: helicopters dropped off the people they rescued at the Superdome, uploaded food and water, delivered those commodities to the lily pads, and then went back out to look for more people.⁴⁶ That routine remained in effect until 1 September when the Superdome was shut down as an evacuation point. After that decision, rescue teams dropped evacuees off at one of the lily pads for

further evacuation by other means.⁴⁷ Some 65,000 people escaped the city via the lily pads by Saturday, 3 September. More than 26,000 of them eventually flew away on aircraft; the rest left New Orleans in buses.⁴⁸

Flooding further complicated the search-and-rescue mission because several facilities in the city, including the New Orleans Parish jail and many hospitals, required evacuation. The hospitals were even more problematic since many were designated as collection points. Once again, the fallback position was the Superdome. The hospital evacuations involved a two-step process: patients were picked up at the hospital and dropped off at the Superdome where a second helicopter flew them to the airport for further transfer to hospitals around the state and Nation. On Tuesday, the day after Hurricane Katrina hit, TF *Eagle* coordinated the rescue of 11 neonatal patients in incubators from Baptist Hospital and the evacuation of 11 patients on ventilators from the Department of Veterans Affairs (VA) Hospital.⁴⁹ The next day, some patients were rescued from the Chalmette Hospital, and a pregnant woman, who was hemorrhaging and expected to die unless she got immediate medical attention, was transported to the Louisiana State University (LSU) Medical Center in Baton Rouge.⁵⁰ Sixty more patients were evacuated from Baptist Hospital, and 20 patients, many in critical condition, were removed from the St. Bernard Parish jail on Thursday.⁵¹ Although there was a constant flow of civilian air ambulances departing with patients, they could not keep up with the influx.⁵²

One of the biggest challenges confronting the search-and-rescue missions during the first few days of operations was coordinating all of the disparate aviation assets after Title 10, National Guard, Coast Guard, civilian, and other agency aircraft converged on the region. When Hurricane Katrina struck, the National Search-and-Rescue Plan was out of date and did not incorporate the National Response Plan (NRP). The National Search-and-Rescue Plan assigned the Coast Guard responsibility for managing maritime rescue operations and the Air Force responsibility for land-based rescues. Conversely, the National Response Plan focused on ground-based search and rescue (Emergency Support Function (ESF) #9, National Urban Search and Rescue) and did not address how the Coast Guard and Air Force fit into the plan.⁵³ Moreover, neither plan addressed large-scale disasters such as Hurricane Katrina. With conflicting statutory guidance, no one was officially in charge of helicopter search-and-rescue operations for the first few days. Air Force Brigadier General Harold Moulton, the general charged with controlling all Title 10 air assets, arrived on Saturday, 3 September. He explained the conduct of air operations before he arrived: “If you had a helicopter you flew it in, you found somebody on

top of the roof, you grabbed them, and you took them to safety.”⁵⁴ Despite the large number of helicopters operating in New Orleans, miraculously, there were no aviation incidents.

Although it had a limited number of personnel and assets, TF *Eagle* successfully controlled all search-and-rescue operations in the vicinity of the Superdome. On Tuesday, National Guard helicopters flew 512 missions. They conducted 366 initial rescues and 303 secondary rescues and delivered 167 tons of cargo.⁵⁵ The number of National Guard aircraft operating in Louisiana increased to 35 helicopters and 2 fixed-wing aircraft on Wednesday, 31 August, with the arrival of 16 more aircraft from Texas, Georgia, and Florida. With the influx of additional aircraft, the number of missions conducted increased significantly. The next day, 1 September, National Guard aircraft picked up 6,444 people in both primary and secondary rescues, transported 1,197 patients and 5,341 other passengers, delivered 217 tons of food and water, and hauled 248 tons of cargo and sandbags.⁵⁶ Rescue operations peaked on 3 September, when National Guard aircraft rescued 4,734 people in primary and 4,258 in secondary missions.⁵⁷

Despite the doctrinal limitations, TF *Eagle* made the air rescue operation work by closely coordinating operations with the Coast Guard and Active component air controllers. Two days into the relief operation, it set up search sectors, based on major roads and waterways, to improve the search routine and reduce duplication of effort.⁵⁸ After Brigadier General Moulton arrived, he worked to establish a common search strategy and communications interoperability among the various agencies conducting search-and-rescue missions. On Thursday, 1 September, FEMA established a supply and refueling base at Zephyr Field, which improved on-station time since aircraft did not have to go to Louis Armstrong International Airport or Belle Chasse Naval Air Station. By collocating the supply depot with the refueling point, helicopters could refuel and load supplies simultaneously, thus eliminating the need to transport massive amounts of supplies to the Superdome.⁵⁹

Another important air mission began on Tuesday, 30 August, when the Corps of Engineers began using helicopters to drop sandbags into the breach in the 17th Street Levee. TF *Eagle* dispatched two UH-60 helicopters to help on Tuesday. They picked up 3,000-pound sandbags and watched them disappear into the water when dropped on their target. The UH-60 helicopters were augmented by CH-47 Chinooks and additional UH-60 Blackhawks the next day, and they eventually succeeded in closing the breaches.⁶⁰

Airborne Evacuations

The situation at the Louis Armstrong International Airport was chaotic at best. Because of the storm, only a skeleton crew remained at the airport. Since there was never any intention or plan on the part of the state or city to use the airport for mass evacuations, airport personnel were totally unprepared for the massive influx of people that occurred several days after Hurricane Katrina struck. They had no food or water supplies; medical support was nonexistent; and with only a few Federal air marshals onsite, security was limited. Flight operations were further complicated because ground personnel at the gates could not communicate with the tower and all flights were visual flight rules (VFR) only.⁶¹ Order was not restored at the airport until the 82d Airborne Division arrived on Saturday, 3 September.⁶²

There were problems at the airport from the beginning. When the storm struck New Orleans, some 800 people with valid airline tickets were stranded at the airport because their flights were canceled. They sat there for 2 days, waiting for the airlines to pick them up. When the airlines finally sent in planes on Wednesday, 31 August, airport officials talked them into filling all the empty seats with evacuees.⁶³ On Thursday, 1 September, the situation at the airport got worse when thousands of unexpected evacuees began arriving. FEMA urban search-and-rescue teams started dropping off people at the airport when officials closed the Superdome to further evacuees. On top of that, hundreds of well-meaning rescuers brought folks in using their personal vehicles and buses.⁶⁴

On Friday, 2 September, officials decided to begin mass air evacuations. Department of Defense and civilian aircraft began flying out people around the clock. The evacuation was temporarily suspended later that day because the surge of people into the airport overwhelmed the staff, but operations quickly resumed. Air evacuations continued at a frantic pace through Monday, but the pace slowed considerably after that, and the last evacuation flight departed on Friday, 9 September. The airport opened for commercial flights on Tuesday, 13 September, a little more than 2 weeks after Hurricane Katrina struck.⁶⁵

Ground Operations

The situation quickly deteriorated for the National Guard ground forces in New Orleans. The National Guard's Joint Operations Center was located at Jackson Barracks, which is the headquarters for the Louisiana National Guard. National Guard leaders considered Jackson Barracks a safe location since it had withstood many storms over the years. Consequently, they pre-positioned a large number of troops, high-water vehicles, and

boats there as well. Unfortunately, it is also one of the lowest points in the city, and by 0730, the compound was inundated with 10 feet of water.⁶⁶

Brigadier General Gary Jones assumed command of Task Force *Pelican* Sunday evening at about 1830. He arrived at his command center in the Jackson Barracks complex around midnight. After a quick brief from the staff, Jones went to sleep, confident that the Joint Operations Center, a three-story hardened building, would withstand Hurricane Katrina's wind and rain. Even though the Joint Operations Center lost electrical power around 0400, all systems continued to operate effectively on the gas-powered backup generator.⁶⁷

As the day passed, the situation in the command center got progressively worse. The Joint Operations Center lost all power when the lines that supplied natural gas to the emergency generators were cut.⁶⁸ Water began to rise rapidly, increasing from perhaps 1-foot deep to more than 10 feet deep in 30 minutes.⁶⁹ Jones recalled seeing roofs and vehicles float by.⁷⁰ Captain Kenneth Baillie, an intelligence officer working in the Joint Operations Center, watched cars and other large objects float past his building. At first, they were caught by the concertina wire on the top of the fence at Jackson Barracks, but it was not long before they were flowing freely over the fence.⁷¹ As the flood waters continued to rise, Jones got word that 20 soldiers were trapped in another building. The water had already reached the second floor of their building and they had to get out. Jones sent out a rescue party by boat, which brought the soldiers back to the Joint Operations Center. Although the first floor of the Joint Operations Center was situated 6 feet off the ground, by this time it was inundated with 4 feet of water. On top of that, the toilets were beginning to back up.⁷² After the storm knocked down the 800-megahertz radio tower, thus severing the Joint Operations Center's primary means of communications, Major General Landreneau decided to redeploy the Joint Operations Center's primary staff to the Superdome.⁷³ It moved to the Superdome before dark that evening. The command group set up its operations center between the Superdome and the New Orleans Arena but had to move to an elevated parking lot a short while later as water began to rise outside the Superdome.⁷⁴

Minutes after the wind and rain began to subside, National Guard soldiers began to organize for search-and-rescue missions. The National Guard staged 18 flat-bottom boats at Jackson Barracks, and the Department of Wildlife and Fisheries, which was responsible for search and rescue in Louisiana, pre-positioned many more boats there as well. But the Wildlife and Fisheries boats were left attached to their trailers, so as the floodwaters rose, the boats dangled by the chains connecting them to their submerged

trailers. Brigadier General Brod Veillon, the Assistant Adjutant General of Louisiana, directed the National Guard's search-and-rescue effort. He sent out soldiers in boats with bolt cutters to "liberate" the Wildlife and Fisheries boats. As Veillon motored through the flooded streets of New Orleans, he expected to find a few people in need of rescue. Instead, he and his troops found hundreds. Although it was difficult maneuvering the boats because of the wind and rain, Veillon said that soldiers drove their boats right up to the roofs of houses to bring people on board. On several occasions, they chopped holes in the roofs of houses to free people trapped in their attics.⁷⁵ The soldiers rescued dozens of people in St. Bernard and Orleans Parishes and took them to the Joint Operations Center.⁷⁶ Waterborne search-and-rescue operations continued until it was too dark to safely operate, at which point they shut down and waited for daylight.

The next morning, it quickly became clear that their position at Jackson Barracks was untenable, so Jones evacuated the rest of the TF *Pelican* staff. The first people to leave were several dozen citizens who were picked up and brought back to Jackson Barracks the previous night. Soldiers took them by boat to a levee where UH-60 helicopters transported them to the Superdome. The rest of the TF *Pelican* staff soon followed, leaving only a small security detachment behind at Jackson Barracks.⁷⁷

Superdome

Even as additional National Guard troops converged on the Superdome, the conditions there began to deteriorate. When the storm hit early Monday morning, approximately 12,000 people were in the Superdome. The Superdome lost power before Hurricane Katrina made landfall. Although a generator provided limited lighting, there was no longer air conditioning in the stifling hot building. The storm punched holes in the Superdome roof, letting in rain. Concerned that the roof might collapse, National Guardsmen moved everyone off the field and up into the stadium seats or the plaza-level walkway.⁷⁸ With thousands of people jammed into the concourses, conditions became even more uncomfortable. On Tuesday, the situation got worse when the sewage system failed, precipitating a sanitation crisis.⁷⁹ Toilets backed up and the stench was almost unbearable. The number of people seeking refuge at the Superdome more than doubled to 25,000 to 30,000 by Wednesday.⁸⁰

Amid this growing crisis, National Guard soldiers managed to provide adequate food, water, and medical support to those in need. They distributed food and water to people at the Superdome twice a day, from 0900 to 1100 and 1900 to 2100, which was not always easy.⁸¹ In the aftermath of the storm, FEMA had difficulty getting food and other supplies to the



Figure 8. An Army UH-60 helicopter flies near the Superdome.

Superdome. As food stocks dwindled, the food situation at the Superdome became a concern. Luckily, on Wednesday, 31 August, National Guard helicopters discovered several trailers full of MREs in Harahan, Louisiana. FEMA lost track of a shipment of MREs when the FEMA-contracted truck drivers abandoned their trailers in Harahan because the flooding blocked their path to the Superdome. At that point, Blackhawk helicopters were dispatched to the scene. The crews broke into the trailers and delivered the food to the Superdome.⁸² Later, as supplies increased, Guardsmen passed out food and water continuously.⁸³

The troops assigned to the Superdome also performed rescue missions. When the National Guard received word that the flooding endangered the remaining patients at the Tulane Medical Center, a group of soldiers from the 527th Engineer Battalion went to the rescue. Driving through 3 feet of water, the engineers dodged floating cars, freezers, and other debris during their trip to the hospital. They evacuated 21 people, including a number of patients on ventilators.⁸⁴

The work of the medical team at the Superdome underscores the exceptional efforts made by soldiers to sustain life and provide relief to the citizens of the city. The National Guard medical team worked with the FEMA National Disaster Medical Assistance Team (DMAT). Colonel Patricia Prechter, Deputy Commander of the Louisiana Medical Command, noted its mission was to provide medical support to people

who did not need much direct care. Many of the people who congregated at the Superdome needed continual care. Some had been homebound, others were on dialysis, and at least six of the patients rescued from the Tulane Medical Center were on ventilators. The National Guard medical team provided medical assistance as best it could, but it lacked the equipment and medicines to effectively care for many of the patients.⁸⁵ The medical team's task was made even more difficult when the FEMA National DMAT withdrew from the Superdome because team members were concerned about their personal safety and security.⁸⁶ As conditions in the Superdome continued to deteriorate, National Guard leaders on the scene decided to move the special needs patients. Tuesday evening, National Guard troops began moving approximately 150 patients, many of whom were in wheelchairs or on stretchers, to the New Orleans Arena, which was located across a walkway from the Superdome.⁸⁷ Conditions there, Colonel Prechter recalled, were not much better since the building had no electricity, water, or toilets.⁸⁸

Another challenge that complicated the mission at the Superdome was the prevalence of wild rumors. Major Ed Bush, a National Guard public affairs officer, described it: "the Superdome itself was its own little microcosm. . . . A lot of them [evacuees] had AM radios, and they would listen to news reports that talked about the 'dead bodies at the Superdome' and the 'murders in the bathrooms of the Superdome,' and the 'babies being raped at the Superdome,' and it would create terrible panic."⁸⁹ Although Bush was originally assigned to the Superdome to deal with the media, his job soon morphed into disseminating information to the evacuees and squashing rumors that were causing unrest and undue concern. Bush recalled that he and two other soldiers walked around the Superdome constantly making announcements to keep everyone informed of the situation as best they could. When people approached him with wild stories, he asked them questions until they realized that they were reacting to unfounded rumors.⁹⁰

The soldiers at the Superdome confronted another significant challenge when the rising flood waters threatened to knock out the facility's backup generator. Although the generator provided only limited emergency lighting, National Guard leaders on the scene considered the generator vital to security inside the Superdome. Without those lights, they worried that the Superdome might descend into anarchy. Acting quickly, Task Force *Eagle* airlifted in sandbags and pumps, and engineers from the 527th Engineer Battalion installed them. When they realized that the pump hose was not long enough to reach the outer wall, the engineers quickly improvised a solution. After obtaining additional fire hoses from around

the Superdome, one engineer, Corporal Howland, worked in chest-deep water to rig the fire hoses to the pump, thus saving the generator. Because of Howland's initiative and skill, the Superdome never lost power.⁹¹

The evacuation of the Superdome touches on the issues of unified command and unity of purpose. The absence of a unified command negatively affected the Superdome evacuation mission. Although all agencies involved no doubt sought to carry out the evacuation as soon as possible, the mission did not go smoothly, suggesting a lack of unity of purpose as well. Governor Blanco took the first step toward evacuating the Superdome on Monday when she asked FEMA to obtain buses for evacuating the citizens of New Orleans. When she visited the Superdome the next day, she quickly recognized that conditions were so bad that those seeking refuge there required immediate evacuation. When the requested buses did not arrive later Tuesday, Governor Blanco again asked FEMA for help. FEMA finally sent a request for buses to the Department of Transportation early Wednesday morning, and the first Department of Transportation contracted buses arrived at mile marker 209 (La Place, Louisiana) at 0630 Wednesday morning, 31 August.⁹² While Governor Blanco prodded FEMA to provide buses, similar assets sat unused. Although all of the city's school buses were left on a flood plain where they were damaged by the rising waters, 200 Regional Transit Authority buses, which were parked on higher ground near the Poland Street Wharf, were available for use.⁹³ Unfortunately, Regional Transit Authority officials failed to inform the city of their availability until 3 days after the storm made landfall.⁹⁴

While the state and FEMA tried to acquire buses, National Guard forces under Brigadier General Jones began planning the evacuation. Jones spoke with Major General Landreneau early Wednesday morning and expressed concern about the capacity of his staff to execute the evacuation mission while also providing security, performing engineer missions, and conducting other operations. He recalled that it "was probably beyond the capability, not of my troops, but of my planning staff to execute . . . I asked for support."⁹⁵ Landreneau agreed and informed him that they would ask for additional assistance. But he warned, "Until you get relieved of that mission, that is your mission."⁹⁶ So Jones and his staff began figuring out the best route to use to get the people at the Superdome out.

The evacuation mission was, of course, complicated by the flood water surrounding the Superdome. The water was as deep as 6 feet in some places. After reconnoitering the area, National Guard leaders determined that they could evacuate everyone through the Hyatt Hotel via a raised walkway, where buses could pick up the evacuees in relatively



Photographers Mate First Class Brien Aho, USN

Figure 9. Army National Guard soldiers assist citizens during the evacuation of the Superdome.

shallow water. National Guard officers met with the Hyatt's managers to discuss the plan, and they readily agreed to the use of their property as the embarkation point.⁹⁷

Although Jones now had a viable plan, the lack of buses stymied his effort to evacuate the Superdome. A few buses trickled in during the day on Wednesday and six busloads of special needs patients evacuated around 2100 that night, but most people remained stuck in the squalor, filth, and heat of the Superdome.⁹⁸ The fitful progress of the evacuation mission caused frustration among those remaining in the Superdome and concern among the National Guard soldiers providing security, who worried that those irritated by the delay might turn to anger or violence.

The lack of progress also annoyed Governor Blanco. Around 1700 on Wednesday afternoon, she asked Lieutenant General Russel Honoré to coordinate the evacuation of New Orleans. Honoré, in turn, directed Brigadier General Mark Graham to carry out the mission.⁹⁹ Graham, Deputy Commanding General of the US Fifth Army, and a small staff had just arrived in New Orleans from Fifth Army headquarters to provide additional support for the defense coordinating officer, Colonel Daskevich. Graham spent the rest of the evening planning the evacuation mission in coordination with FEMA and the National Guard. They executed the plan devised by the National Guard, with the addition of Graham's staff as command and control nodes at both the Superdome and mile marker 209.

The relief operation was set to begin at 1000 Thursday morning. The initial rescue mission was delayed at Governor Blanco's request so that some of the buses could be used to rescue some 5,000 people stranded at the cloverleaf.¹⁰⁰ Responding to Governor Blanco's directive, Brigadier General Graham sent a command and control element to the cloverleaf as well and ran both operations simultaneously. The evacuation plan went as follows: 10 buses departed mile marker 209, escorted by two state troopers. The buses exited I-10 and proceeded to the Loyola Street entrance to the Hyatt Regency Hotel. The Louisiana National Guard selected this road because it only had 1½ feet of water on it. Checkpoints were established along the route to ensure that the buses were safe. Meanwhile, Guardsmen began moving the evacuees from the Superdome to the buses via the outdoor concourse to the mall, which connected to the Hyatt. National Guard troops lined the path to ensure that only those who had been staying at the Superdome got onto the buses. As soon as a fleet of buses arrived at the Hyatt, the next group was directed to begin its approach.¹⁰¹ Operations continued around the clock until the Superdome was emptied Saturday morning. During this operation, 822 buses were used to evacuate New Orleans residents.¹⁰²

The operation might be best described as organized chaos. It proved difficult to maintain order once the word was passed that relief buses were en route. People surged toward the causeway exit where they stood for hours in the hot sun, unwilling to lose their place in line. National Guard security personnel were stationed every few feet, trying to keep order. Concerned that the elderly and children would be injured in the crush to get out, they worked diligently to keep the evacuees calm. Despite their best efforts, many people fainted or descended into hysteria, which made maintaining order even more difficult.¹⁰³ Communications limitations increased the complexity of the mission as well. The FEMA liaison team at the Superdome was unable to communicate with the state Emergency Operations Center, so they coordinated their piece of the operation with the Regional Response Coordination Center (RRCC) and the National Response Coordination Center (NRCC) instead. Consequently, Louisiana emergency operations leaders had only limited situational awareness throughout the entire operation.¹⁰⁴ Since National Guard leaders wanted to evacuate the Superdome inhabitants as quickly as possible, they made no effort to manifest evacuees at the embarkation point. Consequently, no one knows for sure how many people were actually evacuated from the Superdome.

With the crowds gone, all that was left in the Superdome were mounds of trash and the echoes of what had transpired there. The numerous media

reports of murder and rape at the Superdome were, in retrospect, way overblown. None of the six people who died at the Superdome were victims of crime.¹⁰⁵ Colonel Pat Santos, a Louisiana Army National Guard officer present at the Superdome, offered this explanation of why there was so little violence at the Superdome, despite the massive influx of people into the building. He said, “The only reason things did not get totally out of hand was that the National Guard represented a force in being, since the New Orleans Police Department was under-represented.”¹⁰⁶ National Guard soldiers continued to operate out of the Superdome for several more days before they, too, moved on to other missions. On 6 September, the Joint Operations Center moved to the Giles Long Center in Carville, Louisiana.¹⁰⁷

Ernest N. Morial Convention Center

In the lore of Hurricane Katrina, the Convention Center superseded even the Superdome with its tales of horror and neglect. But unlike the Superdome, there was no city-designed plan to make the Ernest N. Morial Convention Center a “shelter of last resort.” Consequently, when Mayor Ray Nagin opened the center to citizens on Tuesday as an alternative to the Superdome, no stockpiles of food or water were in place, no National Guard troops were onsite to provide security, and no medical personnel were there to provide medical support to the hundreds in need of assistance. Further complicating the issue, Mayor Nagin inexplicably failed to inform FEMA, the state Emergency Operations Center, or the National Guard that he had opened the Convention Center to the public. Although it served as a dry place of refuge, the people who congregated there were left on their own for a number of days.¹⁰⁸

The situation at the Convention Center clearly illustrates the lack of situational awareness leaders had to deal with. Brigadier General Jones recalled that he knew nothing about the situation at the Convention Center until Wednesday, 31 August, when a reconnaissance patrol reported that 15,000 or more people were congregating there.¹⁰⁹ He quickly passed that information on to Major General Landreneau. With his personnel assets stretched to the limit, and no request from the city or state for assistance, Landreneau told Jones to stick to his mission at the Superdome.¹¹⁰ This was an important decision since it doomed those people seeking refuge at the Convention Center to several more days of hardship.

With no food, water, or security, the situation at the Convention Center was grim. It turned into “a living hell that became the symbol of all that went wrong in Katrina’s aftermath.”¹¹¹ There were media reports of gunfire, sexual assaults, and robberies. There were reports of 30 to 40 bodies stored

in a freezer at the Convention Center, including a 7-year-old girl whose throat had been cut.¹¹² Although there was a small police presence at the Convention Center, the police officers were quickly overwhelmed and retreated from the building.¹¹³

There was, however, a substantial contingent of National Guard troops at the Convention Center. More than 200 engineers from the 528th Engineer Battalion arrived there on Sunday. They intended to use the Convention Center as a staging area for engineering missions after the hurricane passed. The obvious need of the thousands of people stranded there put the engineers in a predicament. Although they were physically in a position to help, the engineers were not trained in crowd control and the limited amount of food, water, and other supplies they had on hand was not sufficient to provide for the thousands of people congregating at the Convention Center. With no orders to the contrary, the engineers stuck to their assigned mission instead of attempting to assuage their fellow citizens' suffering. Over the next few days, they conducted search-and-rescue missions, removed debris, cleared roads, and repaired a breach on the west side of the 17th Street Levee.¹¹⁴ The battalion also sent out assessment teams to outlying parishes to determine what assistance, if any, those parishes needed.¹¹⁵

The situation at the Convention Center grew worse and worse over the next 4 days as rescuers dropped off more and more people there, which was one of the highest points in the city. Little in the way of food or water came along with the influx of people plucked from the flooded city. The police brought in some water and there were several other deliveries by air, but overall, the amount of supplies delivered there was wholly inadequate. The only food the evacuees received in the 3 days following the storm came from looters who broke into stores in the neighborhood. By Friday, nearly 20,000 people were stuck at the Convention Center awaiting rescue.¹¹⁶

The situation finally turned for the better when the New Orleans Director of Homeland Security and Public Safety finally asked Major General Landreneau for assistance early Friday morning. Landreneau passed the mission to Brigadier General Jones around 0700 Friday morning. He was directed to secure the building and provide relief to the desperate citizens milling about near the Convention Center.¹¹⁷ Around noon on Friday, Lieutenant Colonel Jacques Thibodeaux, Commander of the Louisiana Special Response Team, led a contingent of more than 1,000 National Guard troops from Louisiana, Texas, Oklahoma, Nevada, and Arkansas to the Convention Center. Because of the wild rumors regarding the conditions at the Convention Center, they went in armed and ready

to deal with violence, but they secured the center without incident in 15 minutes. One reporter described the scene:

Just how many had died was not clear, though the breadth of the horror was in plain sight. On the sidewalk, a woman with short gray hair lay dead on her side, legs drawn up toward her belly. The elderly woman whose corpse had become a recurring image Thursday on the television news still lay slumped, a day later, in her wheelchair. Young and old swooned in the hot, fetid air . . . many repeated stories they had heard of rapes and killings. . . .¹¹⁸

Despite all that they had been through, most people were genuinely glad to see the National Guard. The comments of one woman, who said “I feel great to see the military here. I know I’m saved,” summed up the attitude of many survivors of the Convention Center debacle. With order restored, food and water was quickly distributed to everyone there. The next day, Thibodeaux coordinated the evacuation of some 19,000 people from the Convention Center. The operation began about 1000, and by 1830, 14,000 people had left by bus, 2,000 departed by ferry, and 3,000 critical care patients were flown out by helicopter.¹¹⁹

The relief process clearly failed those ensconced at the Convention Center. The lack of awareness about the situation there represents the worst-case scenario for the relief operation. Although the mayor opened the center as a place of refuge, he neglected to inform anyone at the state Emergency Operations Center that he had done so. The rescue workers dropping people off there either did not inform their chain of command that they were doing so or that information got lost in confusion and chaos of those first few days after the storm hit. The New Orleans Police Department was obviously aware of the situation since it dispatched police officers there on Wednesday and dropped off water on several other occasions. But once again, it is not clear that they passed that information along to either the city or state Emergency Operations Center. Even though the engineers from the 528th Engineer Battalion were aware of the situation, they apparently did not inform their chain of command either, since Brigadier General Jones did not find out about the people congregating at the Convention Center until Wednesday. Even then, Jones did not send assistance because his troops were stretched thin by their current missions. The only people who seemed aware of the situation were the media. When FEMA Director Michael Brown told Ted Koppel on *Nightline* Thursday night that he just learned about the situation at the Convention Center that day, Koppel pointedly asked if FEMA officials watched television because, he said,

the media reported the situation days earlier.¹²⁰ Despite those failures, the people at the Convention Center were finally rescued. Once the National Guard acted, soldiers brought in food, water, and medical assistance in overwhelming quantities. In a little more than 24 hours, everyone was evacuated from the center. Moreover, the situation there was not as dire as reported in the media. Certainly, people were tired, hungry, thirsty, and hot, but murderers, rapists, and other criminals did not run rampant at the Convention Center. Subsequent investigations uncovered few serious crimes, and as it turned out, officials only recovered the bodies of four deceased persons from the center.¹²¹

Recovery Operations

By the end of the first week, the tide began to turn in Louisiana. Although rescue operations continued, everyone who sought refuge at the Superdome and Convention Center had been evacuated, and thousands of National Guard and Active-Duty troops were beginning to pour into the state in what became the largest domestic deployment of forces since the American Civil War. At the peak, more than 72,000 Active, Reserve, and National Guard personnel participated in the Hurricane Katrina relief effort.¹²² The military response was truly a joint effort—not only was every service involved, but every state sent forces as well. The US military rescued people in need, provided critically needed humanitarian aid, and set the conditions for restoration of life in the region.

National Guard in Louisiana

When Hurricane Katrina hit, almost 6,000 National Guardsmen were on state active duty in Louisiana. Three days later, the number of Guardsmen in Louisiana doubled to more than 12,000 (figure 10).¹²³ The focus of the Louisiana soldiers over the first few days was rescuing people in New Orleans and the surrounding parishes, clearing primary roads of debris, and delivering relief supplies to those in need. As the number of troops in the state increased, the National Guard took on additional tasks. National Guard soldiers conducted house-by-house searches in New Orleans and, later on, in outlying parishes by both boat and on foot; helped the New Orleans Police Department restore order in the city; established relief distribution points; and cleared debris from public buildings and roadways.

Initially, the Louisiana National Guard organized its forces into five primary task forces, but as the number of personnel in the state grew, the task organization changed (figure 11). Several task forces were added to Task Force *Pelican*, including Task Force *Belle Chasse* and Task Force

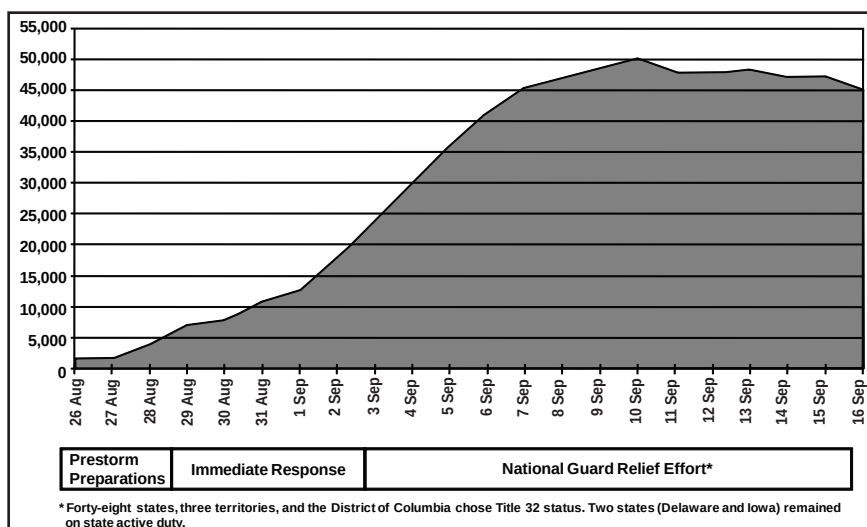


Figure 10. National Guard response to Hurricane Katrina.

Santa Fe. Reception, staging, onward movement, and integration (RSOI) was managed by TF *Belle Chasse*. There were two RSOI sites. The headquarters for TF *Belle Chasse* was at Belle Chasse Naval Air Station in suburban New Orleans. Those National Guardsmen who flew into New Orleans in-processed at that site while those who arrived by ground convoy in-processed at England Air Force Base near Alexandria. When it became clear that the magnitude of the support arriving from other states was too much for the Louisiana National Guard to control, the National Guard Bureau dispatched the headquarters for the 35th Infantry Division to help. When the Kansas National Guard unit arrived, it was designated as Task Force *Santa Fe* and given command and control responsibility for most out-of-state units operating in Louisiana. As out-of-state forces arrived, they were organized into task forces and dispatched to one of the parishes affected by the storm. The largest subtask force in TF *Santa Fe* was TF *Orleans*, which encompassed the city of New Orleans. In most cases, TF *Santa Fe* did not control aviation assets or engineers. Consequently, if any of its subunits needed such assistance, they had to request the support through TF *Santa Fe* and TF *Pelican*. The logistics task force was redesignated as TF *Griffin*. This task force, which also operated out of Belle Chasse Naval Air Station, assisted with the transportation and distribution of military and civilian supplies. TF *Pelican* continued to support search-and-rescue operations, conduct civilian evacuations, help with debris removal and levee repairs, distribute humanitarian aid (food, water, and shelter), and provide medical and security support throughout the state.¹²⁴

Task Force Eagle

By Saturday, 3 September, airborne rescue operations began to slow down. Most people who wanted to be rescued had been. Ground search missions increased in frequency and duration as the water level in the city receded. The focus of air operations shifted from rescues to distribution of supplies. Helicopters also helped by dropping sandbags to fill the levees, putting out fires, and conducting other support missions.

Pennsylvania Army National Guard aviators performed one of the more unusual support missions. The 2/104th Aviation Regiment used its CH-47 helicopters to transport food and water into areas where cattle were stranded. The floodwaters contaminated the cattle’s drinking water and isolated them from their food. The helicopters embarked a Department of Agriculture veterinarian who advised the aviators the best place to drop hay and water for the cattle. They used 2,000-gallon Bambi Buckets to dump fresh water into refrigerators, freezers, or any other object that could hold water.¹²⁵

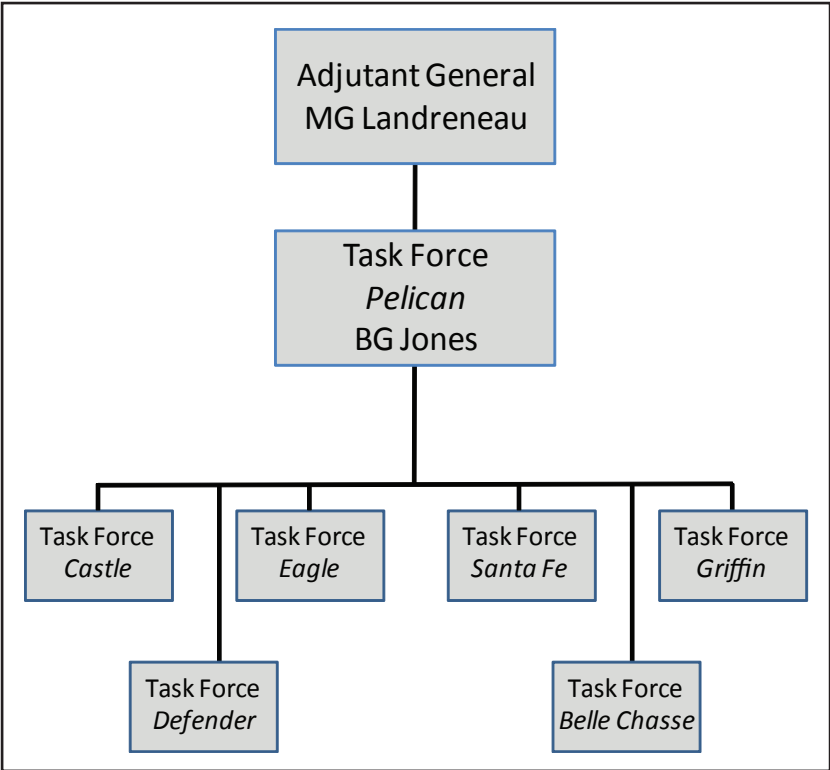


Figure 11. Louisiana National Guard task organization as of 2 September 2005.

Command and control of aviation units continued to improve as more air control assets flowed into the state. When the Nevada Army National Guard RAID unit, the 3/140th Aviation Security and Support Detachment, arrived in Louisiana, it took over command and control responsibilities for the OH-58 Kiowa units. The 3/140th Aviation managed flight operations for 16 reconnaissance aircraft from eight different states.¹²⁶ Two of those aircraft came from Alabama, which sent Kiowa helicopters to Louisiana.¹²⁷ Others came from Kentucky, which sent three UH-1 helicopters from the RAID of the 63d Aviation Group. That detachment arrived on 6 September and returned to Kentucky on 23 October. Their most dramatic mission involved assistance to US Treasury security personnel and Special Forces soldiers as they moved \$50 million to \$100 million from the flooded Federal Reserve Bank to a safer location.¹²⁸

By 9 September, 84 National Guard aircraft were operating under Task Force *Eagle*. They included 39 UH-60, 16 UH-1, 6 CH-47, and 14 OH-58 helicopters, as well as 5 C-12 and 2 C-23 fixed-wing aircraft.¹²⁹ From 29 August through 8 September, they flew almost 6,500 sorties, rescued more than 9,600 people, transported almost 35,000 citizens, and delivered more than 2,100 tons of cargo.¹³⁰

Task Force Defender

Task Force *Defender* controlled most of the military police (MP) units and parceled them out to various locations. The experiences of the 229th MP Company from the Virginia Army National Guard serve as examples of the types of missions performed by TF *Defender*. On arrival on Saturday, 3 September, the company was assigned to the task force and dispatched to Lake Charles. It assisted the local police there by assuming responsibility for security at two evacuation centers, the Lake Charles Civic Center and the Burton Coliseum on the campus of McNeese State University. In the aftermath of the storm, the need to provide security at the evacuation centers severely taxed the manpower resources of the Lake Charles Police Department. Consequently, the police officers welcomed the arrival of the MP company since it allowed them to resume their normal operations.¹³¹ Within a week of their arrival, the Virginia soldiers stabilized the security situation in Lake Charles and expanded their base of operations to include a number of outlying towns. They began delivering humanitarian aid, such as food, water, air mattresses, and other needed supplies, to those towns.¹³² Similarly, 45 Nebraska soldiers from the 192d MP Company deployed to Baton Rouge on 2 September. They provided security at nine Red Cross distribution centers and a shelter that accommodated some 4,500 evacuees.¹³³

Task Force Castle

The 225th Engineer Group served as the command group for Task Force *Castle*. Initially, the task force controlled its four organic engineer battalions, the 205th, 527th, 528th, and 769th Engineers. Later, the 1140th Engineer Battalion from Missouri and the 856th Engineer Battalion from Pennsylvania also joined the task force. Before Hurricane Katrina's landfall, Louisiana engineer battalions deployed throughout the state at key points so they could provide immediate assistance after the storm passed. On 4 September, TF *Castle* consolidated the disparate engineer units in the vicinity of the Alario Center in Jefferson Parish. Since they could not enter the city of New Orleans because of the flooding, they spent the next 3 weeks clearing roads, removing debris, assisting with levee repairs, and providing humanitarian support to the citizens of Jefferson Parish.¹³⁴

The 528th Engineer Battalion went to the Morial Convention Center in New Orleans before the storm struck. Once the storm passed, the battalion cleared major roads in the city, conducted search-and-rescue missions, distributed humanitarian aid, and carried out other engineer support missions from its base at the Morial Convention Center. On 31 August, the battalion moved to the Alario Center near Westwego in Jefferson Parish. One of its first missions in Jefferson Parish was repairing a 500-foot gap in the levee on the west side of the 17th Street Canal.¹³⁵ Other engineers cleared roads and provided humanitarian assistance. Road clearance was an especially important mission in the parish because some of the highways, such as US Highway 90, were now important east-west supply routes since all roads and highways passing through the city of New Orleans were impassable. Once they cleared major routes in the area, they moved to the suburb of Terrytown, which is just north of Belle Chasse near the Crescent City Connection going into New Orleans. They continued road clearance operations in the vicinity of Terrytown and also cleaned up schools and distributed humanitarian aid.¹³⁶

The 1140th Engineer Battalion from Missouri was alerted for deployment on Wednesday, 31 August. The 500-strong battalion arrived at Belle Chasse Naval Air Station on 6 September. After spending 2 days there waiting for orders, the battalion moved to the Alario Center and joined TF *Engineer*. Once there, it coordinated with Jefferson Parish officials to establish work zones on the south side of Lake Pontchartrain along Interstate 10 and US Highway 90. Using chain saws, front-end loaders, and Bobcats, 10 teams from the battalion cleared debris from roads, public buildings, hospitals, schools, parking lots, and other community areas.¹³⁷ One of the most vexing problems the battalion faced was determining

where to put the debris. The dirt was used as fill at the levee breach points, while the rest of the debris was properly disposed of under the guidance of the Corps of Engineers.¹³⁸

Task Force Belle Chasse

Task Force *Belle Chasse* was responsible for the RSOI of incoming troops. Arriving National Guard troops were assigned to either one of the task forces under TF *Pelican* or to one of the parish task forces. As time went by, units from other states arrived and assumed some of the logistics duties assigned to TF *Belle Chasse*.

Although already having more than 1,000 Wisconsin National Guard soldiers on Active Duty preparing to deploy overseas when Hurricane Katrina hit, Wisconsin sent about 450 soldiers to Louisiana to provide hurricane assistance. The 32d MP Company, 1157th Transportation Company, and a company from the 132d Support Battalion joined TF *Belle Chasse*. The 32d MP Company provided security at Belle Chasse Naval Air Station and escorts for personnel, including VIPs, traveling throughout the city of New Orleans.¹³⁹ During one mission, the military police escorted 40 New York City buses from Belle Chasse into downtown New Orleans. Once there, the security team helped the soldiers in the convoy perform search-and-rescue missions and put sandbags on the levees.¹⁴⁰

Other states also supported task force RSOI operations. Nebraska dispatched the 41st Rear Area Operations Center on 16 September. It coordinated the arrival of personnel, equipment, and supplies at Belle Chasse Naval Air Station.¹⁴¹ New Jersey sent a follow-on force to Louisiana on 28 September. Three hundred Army National Guard soldiers from the 1/114th Infantry Regiment, 2/102d Armor Regiment, a transportation platoon from the 250th Forward Support Battalion, 50th Main Support Battalion, 253d Transportation Company, 3/112th Field Artillery Brigade, 110th Engineer Detachment, 50th Personnel Support Battalion, and the Joint Forces Headquarters relieved forces that were scheduled to return home. Part of this contingent relieved Louisiana National Guard soldiers who had been working at Belle Chasse Naval Air Station since Hurricane Katrina struck. They served as the movement control cell at the airfield, responsible for coordinating both military and civilian relief flights into and out of Belle Chasse Naval Air Station.¹⁴²

Task Force Griffin

Task Force *Griffin* managed the logistics distribution system emanating from Belle Chasse Naval Air Station. Food, water, ice, medical supplies, and other commodities flowed into the airfield and were delivered to

points of distribution throughout Louisiana by TF *Griffin* personnel. As more and more National Guard units poured into the state, one of those newly arrived units, the 56th Stryker Brigade from Pennsylvania, took over this task.

Pennsylvania sent more than 2,500 soldiers, including the 56th Stryker Brigade, to Louisiana. This was the largest mobilization of Pennsylvania National Guard troops since Hurricane Agnes in 1972.¹⁴³ Some 120 soldiers deployed by Saturday, 3 September, including six water purification units. One thousand more left by ground convoy on Sunday, 4 September, in almost 450 vehicles. The remainder of the force, approximately 1,200 more soldiers, departed on 5 September by bus.¹⁴⁴

The Pennsylvania deployment illustrates some of the challenges encountered by National Guard forces deploying to the region. The main body arrived in Alexandria, Louisiana, on Wednesday, 7 September. At the time of their arrival, there was, apparently, some confusion regarding which command, TF *Santa Fe* (35th Infantry Division headquarters) or TF *Pelican* (Louisiana National Guard), had tactical control over units reporting for duty. The 56th Brigade Combat Team later commented in its after-action report:

After early coordination with what the Brigade thought was their higher HQ (35th ID), a move was planned and executed from Alexandria to St. Tammany airport to establish a FOB [forward operating base] and begin relief operations in an assigned AO [area of operations]. Shortly after buses carrying the Brigade's Soldiers arrived at the airport, the mission and assignment were cancelled, and the Brigade was ordered to return to Alexandria, a distance of 180 miles.¹⁴⁵

The brigade eventually took responsibility for managing the supply distribution system from FEMA and the Texas Bureau of Forestry. This mission required the brigade to operate over a vast geographic area, spanning several hundred miles. The brigade established two operations centers to better control the operation. The main tactical operations center was located on Belle Chasse Naval Air Station. A second command and control element took over the FEMA/Texas Bureau of Forestry incident command post and managed supply distribution operations in eastern Louisiana.¹⁴⁶

The brigade also operated 18 points of distribution (PODs) throughout the state.¹⁴⁷ The 1/111th Infantry Battalion operated in St. Tammany Parish. The battalion managed six points of distribution in the parish.

Since many people were unable to get to the distribution sites, either because of infirmity or lack of transportation, the battalion worked with local officials to identify drop points, such as fire and police stations, churches, and schools, where they could push supplies to ensure that everyone got the support they needed.¹⁴⁸ The 1/112th Infantry Battalion manned PODs in both St. Tammany and Washington Parishes. Later, when Hurricane Rita hit Louisiana on 24 September, the battalion moved west to Lake Charles, Louisiana. Within 48 hours, it established three points of distribution as well as a regional distribution site, which served as the receiving and distribution hub for the entire stricken area.¹⁴⁹ Another unit, the 1/108th Field Artillery, manned points of distribution and managed a regional supply area that provided support to citizens of New Orleans and Lafayette, Louisiana.¹⁵⁰

The actions of the Reconnaissance Platoon, Headquarters and Headquarters Company, 2/112th Infantry Battalion, are representative of a typical distribution mission. On Sunday, 11 September, 4 days after arriving in Louisiana, the battalion moved to a forward operations base at the Riverside Middle School in Jefferson Parish. The school, which is situated at the foot of the Huey P. Long Bridge on the south bank of the Mississippi River, sustained relatively minor wind damage and was not affected by the flooding. With the permission of school officials, the battalion moved into the school building and began cleaning up the campus. The soldiers removed debris, cleared fallen trees, and cleaned up water damage. Unlike many locations within Orleans Parish, conditions were relatively good at the school. A contractor set up operations on the campus and provided the soldiers with meals and showers. They used the school's air conditioning and computer systems once electrical power was restored. But they still did not have a mission to execute.¹⁵¹

The 2/112th's Reconnaissance Platoon finally received a mission assignment on Wednesday, 14 September. The platoon took over a point of distribution at the Bingo Palace in Gretna. Points of distribution were driveup resupply points for civilians affected by the storm.¹⁵² Since there was no guidance on how to run points of distribution operations, every site operated a little differently. The platoon commander, First Lieutenant Paolo Sica, commented that "the lack of established TTPs [tactics, techniques, and procedures] for this type of noncombatant operation was much less confounding than it was stimulating. . . . All that we needed to bring to this 'fight' was our Army Values [sic] and the ability to adapt."¹⁵³

The platoon ran one or two lanes of traffic with four or five stations. Four soldiers manned each station, offering food, water, ice, and tarps to citizens patronizing the site. Other soldiers unloaded trucks, greeted people

and explained the process before they reached the stations, or served as road guards to maintain an orderly traffic pattern. Since there were no rules, the noncommissioned officers took an active role in managing the distribution of supplies. They politely limited those obviously not in need or those they recognized as repeat visitors. A number of civilian organizations attached themselves to the site as well and were situated near the exit so people could easily access their services. The platoon worked hard to increase throughput so that they could serve more people. First Lieutenant Sica noted that the lines never backed up beyond a certain distance, and he surmised that the truly needy were willing to wait in line as long as necessary to get what they needed but the more well off skipped long lines and continued searching for sites with shorter lines.¹⁵⁴ During its mission, the platoon provided service to 14,323 vehicles and to 522 people who walked into the site.¹⁵⁵

Assisting the 56th Stryker Brigade was a contingent of Guardsmen from Virginia. Virginia sent some 170 soldiers, including the 229th MP Company, the 222d Quartermaster Detachment, a water purification unit, the 3647th Maintenance Company, and the 1710th Transportation Company, to New Orleans by ground convoy on Saturday, 3 September.¹⁵⁶ When the Virginia task force arrived on Tuesday, 6 September, TF *Griffin* assumed command of the quartermaster, maintenance, and transportation companies and sent them to New Orleans where they linked up with the 219th Quartermaster Company from Puerto Rico. Working together, these units produced and distributed potable water to the troops operating in the greater New Orleans area.¹⁵⁷

Other states, including Illinois, Nebraska, and Michigan, provided troops for TF *Griffin*. Illinois sent 210 soldiers from the 3637th Maintenance Company to Belle Chasse, where they provided transportation support to TF *Griffin*. Using the 50 high-water vehicles they brought with them, the Illinois Guardsmen delivered supplies and removed debris. They also maintained their vehicles and provided recovery and repair of other vehicles as needed.¹⁵⁸ The 1057th Transportation Company, which deployed from Nebraska on 19 September, transported food, water, and medical supplies to Red Cross assistance centers.¹⁵⁹ The 1460th Transportation Company from Michigan transported cargo containers, water, clothing, and bedding throughout southeastern Louisiana.¹⁶⁰

Task Force Santa Fe

Forces from other states began flowing into Louisiana almost immediately. When they arrived, engineer, military police, and aviation units usually joined the existing Louisiana task forces. The RSOI staff

assigned other types of units to ad hoc task forces that provided support to outlying parishes or sectors of New Orleans. Larger state forces remained under the control of their task force commander and were assigned responsibility for an entire parish. Smaller state forces combined with units from other states to form a parish task force.

As the numbers of troops continued to increase, it became clear that the Louisiana National Guard's command and control capabilities were not robust enough to handle the influx of personnel. Lieutenant General H. Steven Blum decided to send the headquarters unit for the 35th Infantry Division, Kansas Army National Guard, to Louisiana to help. The division Commanding General, Major General James R. Mason, had served as the Stabilization Force (SFOR) 13 multinational brigade commander in Bosnia in 2003, so he had significant experience in commanding disparate units.¹⁶¹

Mason received notice on Tuesday, 30 August, that the National Guard Bureau planned to send two divisional headquarters to the Gulf coast, but he was skeptical that they would actually be dispatched to the region. To his surprise, he got a call from the adjutant general of Kansas on Friday, 2 September, telling him he needed to go to Louisiana right away. The adjutant general sent a plane to pick him up that afternoon, and he flew to the former England Air Force Base near Alexandria, Louisiana, that evening.¹⁶²

When Mason arrived, only a small advanced force from the division was present. The rest of the headquarters group was coming by ground convoy from Kansas. He immediately drove to Baton Rouge where he met with the governor and Major General Landreneau and received his orders. As Commander of Task Force *Santa Fe*, Major General Mason reported to Brigadier General Gary Jones, Commander of Task Force *Pelican*. Once his staff was operational, he assumed control of all out-of-state units reporting for duty in Louisiana, with the exception of those forces already assigned to the existing task forces (figure 12). His missions were to save lives and restore order and security throughout the region.¹⁶³

Meanwhile, a convoy of about 40 vehicles left Kansas on Sunday, 4 September, with the rest of the divisional staff. The staff did not yet know where it was going or what support was available when it got there. Consequently, staff members took everything they could think of to make themselves self-sustaining: food, tents, medical support, and maintenance equipment.¹⁶⁴ Once they arrived in Alexandria on Tuesday, 6 September, they received further orders directing them to proceed to Belle Chasse Naval Air Station where they set up the task force headquarters.¹⁶⁵

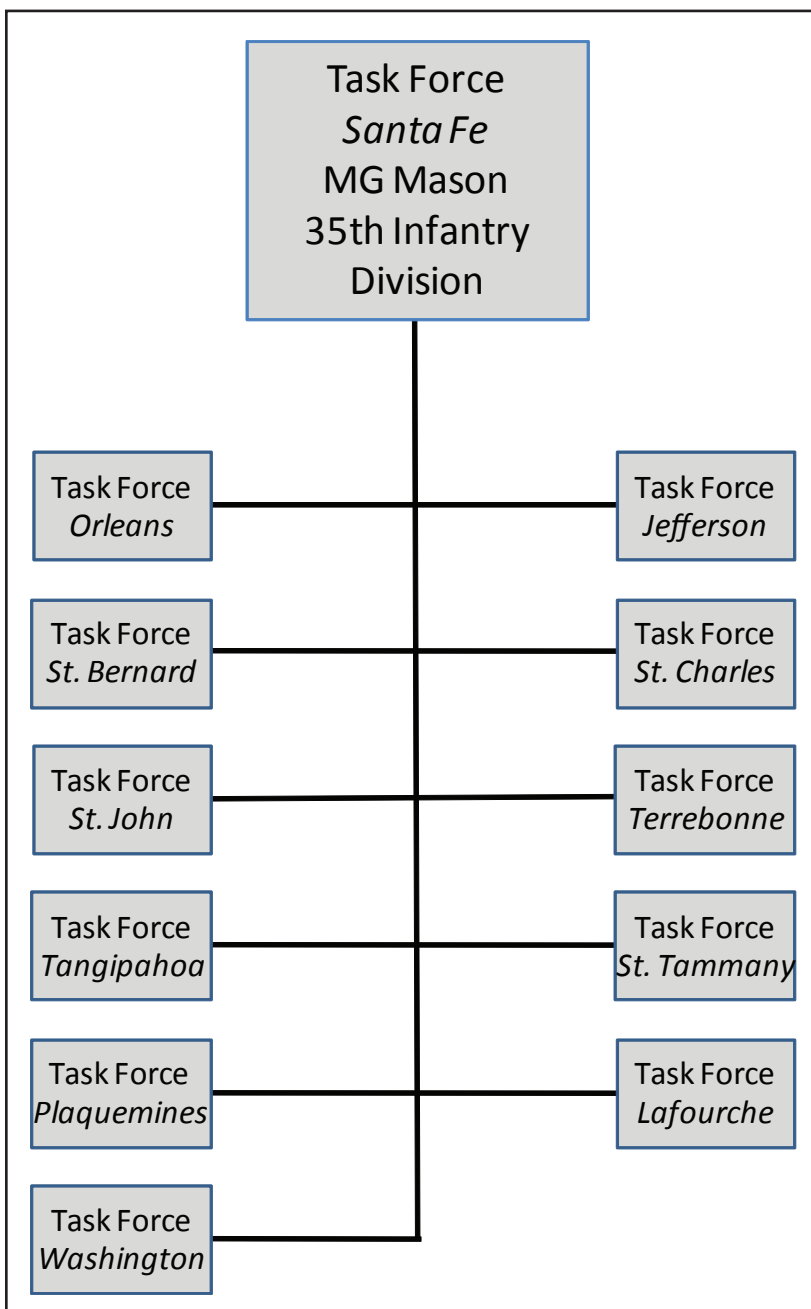


Figure 12. Task Force *Santa Fe* task organization.

TF *Santa Fe* faced several challenges. Some were environmental while others were organizational. The environmental challenges were the same ones that everyone in the region faced: lack of communications; no power; limited logistics support; and difficult working conditions because of flooding, debris, and heat. Colonel Tom Johnson, the task force chief of staff, recalled that one of the main responsibilities was providing support to the assigned units. Because of the austere conditions in Louisiana, he recalled that subordinate units “needed a lot of everything at once.”¹⁶⁶ If units in the field could not acquire what they needed through their own state sources, it was up to the task force to get them what they needed. Some units were proactive and took care of their needs; others required a great deal of assistance.¹⁶⁷

The task force logistics staff worked diligently to alleviate as many of the environmental challenges as possible. The rapid and often uncoordinated movement of National Guard forces into the region greatly complicated the logistics support mission. Many units passed quickly through the reception process and proceeded to their operating area before the task force staff collected data on their capabilities, strength, and needs. This arrangement forced TF *Santa Fe* to retroactively figure what resources each unit had and to determine what each unit needed. Among the support services provided by the TF *Santa Fe* logistics team were showers, toilets, fresh water, hot food, and laundry services.¹⁶⁸

There were other, equally difficult, organizational issues for the task force to overcome. Major General Mason recalled that some of the most important assets, such as aircraft and engineers, remained under the operational control of TF *Pelican* instead of TF *Santa Fe*. This arrangement inhibited his task force’s ability to rapidly apply forces where they were most needed. If a subordinate unit needed engineer or helicopter support, TF *Santa Fe* had to request assistance from TF *Pelican*. All too often during the early stages of the operation, by the time a response was received back through the chain of command, the resource requested had moved on or the need for it had passed.¹⁶⁹ Although the TF *Santa Fe* staff understood it was there to support TF *Pelican* and the state of Louisiana, this arrangement caused friction between the two staffs.¹⁷⁰

Major General Mason later recollected that he eventually worked through those issues with Brigadier General Jones, but just about the time operations began to run smoothly, Brigadier General John P. Basilica Jr., Commanding General of the 256th Brigade Combat Team, which returned from Iraq in September, replaced Brigadier General Jones. He came in and immediately ruffled feathers, intimating to the TF *Santa Fe* staff that

he was “going to get this situation straightened out.”¹⁷¹ Mason noted that Basilica’s arrival returned relations between the two staffs back to square one.¹⁷² Another officer on the TF *Santa Fe* staff summed up his frustration by saying, “The good part of all of this is we are in his way so we need to prepare battle handoff procedures.”¹⁷³

TF *Santa Fe* organized its forces into task forces based in the 13 parishes most affected by the storm. Orleans Parish, which encompasses the city of New Orleans, absorbed the brunt of the damage in the aftermath of the storm, and Mason allocated the majority of his troops there. The core of TF *Orleans* came from two brigades, the 45th Infantry Brigade from Oklahoma and the 41st Infantry Brigade from Oregon. Smaller state units combined into task forces to provide support to other parishes. The task force commander served as the primary liaison with the parish president and other local leaders. By establishing a personal, one-on-one relationship, military commanders sought to clearly demonstrate the Government’s concern for the local citizenry. Close liaison also enabled the task force commander to better understand the parish’s needs. The objective was to quickly and effectively meet each parish’s needs by conducting search-and-rescue missions, providing security support, distributing humanitarian aid, or removing debris and assisting with other cleanup operations.

The fluid nature of each National Guard unit’s deployment to the state complicated this mission. Since units in Title 32 status or on state active-duty orders remained under the command of their respective governors, on occasion they refused to acknowledge that they fell under the command of Task Force *Santa Fe*. Major General Mason noted wryly that discussions between the unit and task force staff continued until the unit needed food, water, or some other kind of support. At that point, the unit usually came around and accepted the command structure.¹⁷⁴ Gubernatorial control of deployed forces posed additional problems for TF *Santa Fe*. As noted earlier, when units flowed into the state, they did not always report in through Belle Chasse, making it difficult for the task force to track all of the units in theater. Even more vexing, since units served at the discretion of their governor, TF *Santa Fe* had little control over its force makeup. Several times, units with critical capabilities announced their impending departure with little or no warning. At that point, there was little Major General Mason could do other than call the unit’s adjutant general and personally appeal for an extension of the deployment. Sometimes his appeal worked, other times it did not.¹⁷⁵

Since voice and e-mail communications remained problematic, TF *Santa Fe* attached liaison officers to Task Force *Pelican* and many

of its subordinate task force staffs. The liaison officers tried to improve communications and coordination between the various staffs. Mason also hoped that those liaison officers could reduce friction between his staff and TF *Pelican*. TF *Santa Fe* dispensed so many liaison officers that it ran out of suitable candidates. The Kansas adjutant general sent TF *Santa Fe* additional officers from his personal staff to fill the gaps.¹⁷⁶ Despite this effort, relations between the two staffs remained difficult.

Other units, lower down the chain of command, did not experience the same kind of problems confronted by TF *Santa Fe* and TF *Pelican*. Time and time again, both Active component and National Guard officers commented that their troops had no problems working with one another. Out-of-state National Guardsmen worked closely with Louisiana Guardsmen to bring relief to the citizens of the state during thousands of missions. On numerous other occasions, Active component and National Guard soldiers joined forces to accomplish important missions. Brigadier General Myles Deering, Commanding General of the 45th Brigade Combat Team from Oklahoma, described his relationship with the 82d Airborne and other Active component forces as “seamless.” His forces worked side by side with the paratroopers in New Orleans, and they had no problems supporting each others’ operations.¹⁷⁷

But there are examples where cooperation and support broke down. For example, one adjutant general ruled out embedding his state’s soldiers with the 82d Airborne because that arrangement implied their subordination to an Active component unit.¹⁷⁸ Although many good people made this difficult command and control situation work, structural impediments inherent in the in-state–out-of-state relationship as well as the Active component–National Guard relationship sometimes inhibited operations.

Task Force Orleans

Task Force *Orleans* directed the National Guard’s main effort in New Orleans. Thousands of National Guard soldiers served in this task force during the recovery operation. They conducted both waterborne and ground searches, provided medical assistance, rescued and evacuated stranded citizens, distributed aid to those who chose not to evacuate, and assisted with the cleanup and restoration of the city. Troops from all over the Nation joined in the effort to provide relief and assistance to the victims of Hurricane Katrina.

The first Oklahoma unit to respond to the crisis in New Orleans was a 27-person quick reaction force. Soldiers from the 1345th Transportation Company arrived in New Orleans on Wednesday, 31 August. They immediately proceeded to the Superdome where they helped with

security. Thirty-three more soldiers flew into New Orleans on Thursday, 1 September, and helped restore order at the Convention Center the next day.¹⁷⁹ Brigadier General Deering arrived Friday, 2 September, and assumed duties as Commander of Task Force *Orleans*.¹⁸⁰ By 4 September, more than 2,300 Oklahoma National Guard soldiers were in Louisiana providing support to the stricken citizens of the state.¹⁸¹ That same day, Deering established his headquarters in the parking lot of a looted Wal-Mart store on Tchoupitoulas Street near the Garden District. One of his first actions was to establish relations with a wide range of civil officials. Deering sent liaison officers to meet with the acting mayor, the director of the Office of Emergency Preparedness, the New Orleans police chief, and the director of Public Utilities.¹⁸² TF *Orleans* soldiers began search-and-rescue operations in their sectors as soon as they arrived. Because of the flooding, they conducted both waterborne and ground searches. Over the next few weeks, the task force conducted numerous search-and-rescue missions, distributed tons of relief supplies to those in need, and reestablished law and order in the city.¹⁸³ By 15 September, both the hasty and primary searches were complete in the brigade's area of operation. During those searches, the task force helped more than 3,650 citizens evacuate their homes.¹⁸⁴

By flooding the streets with hundreds, if not thousands, of soldiers, the National Guard quickly restored order in New Orleans. In most cases, their mere presence was enough to deter criminals. That was not, however, always the case. During one such incident, an OH-58 Kiowa helicopter spotted a suspect in an SUV. Once the pilot ascertained that the man was up to no good, the crew vectored in soldiers from the 1/179th Infantry Regiment to apprehend the offender. As it turned out, the man had encountered a TF *Orleans* patrol earlier that evening and passed himself off as an official from the American Society for the Prevention of Cruelty to Animals (ASPCA). At that time, his vehicle was empty so the patrol let him pass. With the back of his SUV now filled with stolen goods, the second patrol detained him for the New Orleans police.¹⁸⁵

TF *Orleans* had organic engineer assets, which greatly increased its ability to restore its various sectors to operability. Through 23 September, TF *Orleans* engineers cleared more than 210 miles of roads and removed more than 2,000 cubic meters of debris. They also cleaned up one school, five hospitals and medical clinics, and four public facilities, including the Audubon Zoo.¹⁸⁶

In what was the largest mobilization of Oregon National Guard forces since World War II, almost 2,000 soldiers went to Louisiana to assist with Hurricane Katrina relief and recovery operations.¹⁸⁷ The 1186th MP



Specialist Sherree Casper, 153d Mobile Public Affairs Detachment

Figure 13. Ohio National Guard soldiers use a johnboat they found to perform a search-and-rescue mission in downtown New Orleans.

Battalion, the first unit to deploy, arrived on 2 September and immediately began security operations to support New Orleans police. The 41st Brigade Combat Team, which was the core of the Oregon contribution, trickled in over the next 7 days, with the last unit arriving on Thursday, 8 September. The 41st Brigade established Joint Task Force (JTF) *Pontchartrain* and took tactical control of a number of smaller state contingents. JTF *Pontchartrain* was responsible for operations over a large portion of Orleans Parish, including the Bywater, Lakeview, Gentilly, and 9th Ward Districts. The joint task force rescued some 2,300 people during the relief operation. When Hurricane Rita threatened the city in late September, JTF *Pontchartrain* was redesignated as JTF *Rita* and dispatched to western Louisiana where it coordinated relief operations in the affected parishes.¹⁸⁸

The conditions in which soldiers had to operate were some of the most challenging aspects of the relief operation. Sergeant Major Brunk Conley of the Oregon National Guard considered the conditions in New Orleans worse than what his unit encountered in Kuwait, Iraq, or Afghanistan, where he and many of his soldiers previously served. One soldier commented that the only difference was that no one shot at them in New Orleans.¹⁸⁹ Conley went on to say that, after the overseas assignments, many of the Oregon National Guard soldiers were “used to hard living. . . . But this is much more challenging. We have no creature comforts whatsoever.”

When the Guardsmen first got to their area of operations, they did not have portable showers or toilets, they slept in makeshift barracks without air conditioning, and their meals consisted almost exclusively of MREs.¹⁹⁰

With no showers or toilets, sanitation and disease prevention were significant concerns. They could not dig latrines since the water table in the city is only a few inches below the surface. JTF *Pontchartrain* eventually acquired three portable toilets 4 days into the operation. In the meantime, soldiers throughout the city had to be creative, using trash bags as toilets. There was also much concern about soldiers getting infections or worse while slogging through the muddy, slimy flood water. Since they did not have access to showers at first, soldiers used spray bleach and liquid hand cleansers to decontaminate themselves as best they could. Although JTF *Pontchartrain* soldiers received protective clothing and gloves, many considered those precautions inadequate.¹⁹¹

The 1/186th Infantry Regiment arrived in New Orleans on Tuesday, 6 September. After in-processing at Belle Chasse Naval Air Station, it moved into the city and occupied an abandoned zinc warehouse near the brigade headquarters for several days. Those accommodations were less than desirable because the zinc residue stained the soldiers' skin and clothes. From there, the battalion moved into the northwest quadrant of Orleans Parish, the Lakeview District, and set up the headquarters on the campus of Delgado Community College on 9 September. The community college building, which was used as a shelter by local residents for several days after the storm, was a mess. Trash filled the halls and classrooms, overflowing toilets reeked, and decaying laboratory animals made the second floor uninhabitable. The Oregon soldiers spent Saturday, 10 September, cleaning the building and removing debris from the lawn to make it habitable.¹⁹²

With the headquarters established, the soldiers began search-and-rescue patrols throughout their area of responsibility. Since 80 percent of their search area was under water, they conducted waterborne patrols at first.¹⁹³ A group of volunteers from Florida helped them by transporting search teams through the murky water in 18 boats. The waterborne mission posed a number of unique challenges. For example, the task force commander issued an order forbidding soldiers from wading through the flood waters, which were contaminated by oil, gas, chemicals, and decaying matter. Although the order was necessary due to safety concerns, it limited their access to some areas until the water receded. Additionally, reaching their search areas was often problematic since the routes used on previous days were often blocked by exposed obstacles as the water receded.¹⁹⁴ By 14 September, with some 40 percent of the assigned area of

responsibility accessible by land, the battalion expanded its ground patrols to more thoroughly check the houses in the district.¹⁹⁵

On Monday, 12 September, the battalion discovered its first deceased person. A search team spotted a hole in the roof of a house. Hoping to rescue someone, the soldiers peeled away a portion of the roof to gain access. Instead, they found the body of an elderly man who died sometime after the storm struck.¹⁹⁶ Since they were not authorized to recover bodies, they marked the location and notified the FEMA mortuary support team of his location.¹⁹⁷

Two days later, the battalion rescued its first victim, a 71-year-old man who rode out the storm and subsequent flooding in his home. Although surrounded, his home was not inundated by the flood waters and, he had plenty of food and drinking water so he stayed put. Once his supplies gave out, he asked some neighbors to get him help, and the National Guard came to the rescue.¹⁹⁸ Several days after that, the battalion rescued an 83-year-old nun who was down to her last reserves of food and water when a rescue team located her.¹⁹⁹

The 2/218th Field Artillery also operated in a flooded out area of the city, the Gentilly District. The 2/218th established its headquarters in the University Center on the campus of the University of New Orleans Lakefront. Soldiers conducted primary searches, which required them to knock on the door of every house in the area to determine if anyone required assistance. As the waters receded, they shifted to secondary searches, which were more intensive because they involved entering homes with open doors or other egress points.²⁰⁰

The battalion established a boat team to maintain the engines of their boats. Based at the St. Vincent DePaul Church in the Bywater District, the boat team expertly maintained the various boats and their engines. In their spare time, team members cleaned up the church and grounds, which the storm damaged extensively. They removed debris from the grounds, cleaned flood-marred structures, mended fences, and reset toppled trees.²⁰¹

The 1/162d Infantry Battalion set up operations in the Frederick A. Douglass High School in the Bywater District of New Orleans. Like the other 41st Brigade sectors, this area suffered heavy flood damage. As the troops carried out the search operation, a routine soon developed. Persons rescued were given food and water and examined by the battalion's medics. The medics treated any conditions requiring immediate medical care. The rescue team then transported the evacuees from their homes to the Convention Center for further processing, medical treatment, and

evacuation. During this mission, the battalion rescued many people, including a man trapped in his house and an elderly woman who refused to leave her home.²⁰²

A search team rescued the man trapped in his house on Sunday, 4 September. He told his rescuers that he slept through the storm. When he woke up the next morning, the rapidly rising flood waters prevented him from escaping by car. Consequently, he decided to cut a hole in his ceiling and relocate to his attic. He took raw carrots, green beans, and water with him. When the flood waters inundated his home, both the refrigerator and freezer floated free and settled in front of the back door, blocking that exit. With the deadbolt on his front door rusted shut and security bars on each window, the man was effectively trapped inside his own home. On top of that, he feared calling out for help because of the noises he heard outside his home. He remained inside until he heard soldiers approach his house and call out “Oregon National Guard.” Happy for the assistance, he eagerly accepted evacuation when told he would get food and medical care.²⁰³

Medics from the 1/162d Infantry saved an elderly woman who almost died of dehydration and starvation. The woman’s next door neighbors noticed that she was still in her home weeks after the storm. Concerned about her well-being, they reported her location to a traffic control point team. The medics approached her house, knocked on the door a number of times, and announced their presence as National Guardsmen. On the third attempt, she reluctantly opened the door and, after several minutes of discussion, let the medics enter. The woman was terribly dehydrated and disoriented. After talking with her, she indicated that she rode out the storm in her home, which suffered significant flood damage. At one point, she said, she floated around her living room on a mattress. The soldiers saw little evidence of cans, boxes, prepackaged food, or water bottles in the home, which concerned them. After further questioning, they learned that she survived for 3 weeks by sipping on wine and liquor. After examining her, the medics estimated that she had lost 10 to 20 percent of her bodyweight over the 3-week period and was close to starvation. When she refused to evacuate, the soldiers left her food, water, a cooler of ice, and a promise to check on her daily.²⁰⁴

By 20 September, the frequency of such incidents tapered off as the battalion completed both primary and secondary searches in its area. When Mayor Nagin authorized the return of citizens to the city, the battalion shifted its focus from search-and-rescue to security missions. Since the Bywater District still lacked electricity, water, and sewage services, it was

not opened to returning citizens. Consequently, the battalion set up traffic control points (TCPs) throughout the operating area to ensure that no unauthorized persons, including residents, returned to the district.²⁰⁵

The 141st Sustainment Battalion was also based in the Bywater District. When battalion personnel carried out their mission of supplying the various units of the 41st Brigade, they also served as scouts, surveying conditions in the city. As they moved from one operating area to another, they recorded water levels, scouted alternate routes as the water receded, and evaluated potential helicopter landing zones.²⁰⁶

In addition to their logistics duties, soldiers from the 141st Sustainment Battalion restored the Bywater Hospital to operational condition. The hospital sustained flood damage on the first floor, and garbage and other waste littered the rest of the hospital, which served as a refuge for people driven from their homes after the levees broke.²⁰⁷ Working in near darkness, the Oregon soldiers began cleaning up the hospital on 10 September. When the battalion's 30-kilowatt generator arrived several days later, lights were restored, and the pace of the cleanup operation quickened. Using bleach, germicide, and hard labor, the soldiers removed flood damage, cleared rubbish, and disinfected the third and fourth floors.²⁰⁸ The hospital was operational on the 15th, ready for the battalion's medical staff to use its facilities to treat soldiers and civilians.²⁰⁹

Looking back on the actions of the 41st Brigade Combat Team, clearly the brigade performed a number of humanitarian relief missions that went well beyond the expectations of normal domestic relief operations. The soldiers did more than just distribute commodities and patrol streets. They cleaned up a number of public buildings, such as the University Center at the University of New Orleans Lakefront, the Frederick A. Douglass High School, and the Delgado Community College building. They also cleaned up a church and rehabilitated a hospital. Although these actions exceeded the bounds of typical humanitarian assistance, they exemplify the actions of tens of thousands of National Guard as well as Active component troops during the Hurricane Katrina relief operation.

Texas also provided a large contingent of ground troops to the relief effort in Louisiana. By Saturday, 3 September, more than 1,300 Guardsmen were in Louisiana helping that state's citizens recover from the storm.²¹⁰ Four days later, that number swelled to 2,100. The first task force from Texas left on Wednesday, 31 August, and arrived in New Orleans the next day. That task force brought with it a broad range of capabilities, including some 300 military police; a medical unit with 5 doctors, 10 nurses, 30 physician's assistants; and 30 medics, 120 engineers, a water purification

detachment, fuel tankers, and more than 50 high-water vehicles.²¹¹ Initially, they went to the Louis Armstrong International Airport where they helped with the evacuation process by providing security, medical attention, and other support to those passing through the airport. Some of the Texas military police helped with crowd control and the evacuation of both the Superdome and Convention Center. The medical team proceeded to the Convention Center as well, where medics provided on-the-spot medical evaluations and treatment for citizens stranded there for days after flood waters swamped the city.²¹² Following the main evacuation effort, the medical team remained at the Convention Center where it continued to provide medical support to citizens who trickled in. Other Texas soldiers provided humanitarian support throughout the city and assisted with cleanup operations at city schools, hospitals, and other locations.²¹³ On 19 September, when it appeared that Hurricane Rita posed a significant threat to his state, Governor Rick Perry recalled all Texas personnel from Louisiana to prepare his state for that hurricane.²¹⁴

Seventy-five Special Forces soldiers from the 20th Special Forces Group, equipped with 20 inflatable boats, arrived in New Orleans on Friday, 2 September, after completing search-and-rescue missions in their home state.²¹⁵ The Alabama soldiers quickly identified a neighborhood in need of assistance, contacted the local police captain and established a joint operating agreement, and then began searching for people stranded by the flood waters. On their first day of operations, they rescued 300 people by boat. Waterborne rescues peaked at 800 on 4 September and tapered off to 100 by Tuesday, 6 September. They also coordinated their efforts with a UH-60 helicopter battalion from Georgia, and together, the two units rescued another 1,350 people. All totaled, the 20th Special Forces Group saved more than 3,100 people during 5 days of operations in the city.²¹⁶

The experiences of the 1/148th Infantry, Ohio Army National Guard, are representative of the ad hoc way that many missions developed. The battalion arrived by ground convoy on 4 September. Assigned to a sector in the Gentilly District of New Orleans, a New Orleans police lieutenant approached the battalion commander soon after it arrived in the neighborhood. He asked if the Ohio soldiers could assist his police officers with patrols in the area. The colonel agreed, and the Ohio National Guard began joint patrols with the New Orleans police on Sunday, 11 September. The 1/148th Infantry assigned four-person teams to each police patrol. According to the New Orleans police, this team effort had an immediate and visible impact in the area because looting and arson declined dramatically.²¹⁷ In addition to providing support to the local police, the 1/148th Infantry conducted a number of search-and-rescue missions in the

neighborhood. The soldiers conducted waterborne searches at first using flat-bottomed boats, but as the flood waters receded, they spread out on foot and performed more detailed searches of the area.²¹⁸

A number of states sent their civil support teams (CSTs) to Louisiana. National Guard CSTs provide assistance to state and local responders in the event of a chemical, biological, radiological, nuclear, or high-yield explosives (CBRNE) incident. The 22-person teams have significant onsite testing capabilities and are trained to provide expert advice in case of an emergency. But their robust communications capabilities made them very useful after Hurricane Katrina devastated the communications infrastructure along the Gulf coast.²¹⁹ Several teams, including the 42d CST from North Carolina and the 54th CST from Wisconsin, deployed to Louisiana where they provided communications support to Task Force Orleans.²²⁰

Other CSTs helped with the decontamination process by examining the contents of thousands of potentially hazardous containers.²²¹ Working with the New Orleans Hazardous Materials Team, they conducted a thorough search of the city. The teams searched flooded areas first because the surge from the flooding moved hazardous materials from work sites to other areas. They checked every 5-gallon or larger container they found. They also looked for chemicals or other hazardous waste that might have been washed up by the storm. When they found a container with hazardous materials, they marked it to indicate its contents, the amount of material it contained, the date it was found, and the unit that found it. Then, they reported its location to the Environmental Protection Agency (EPA), which dispatched its personnel to dispose of the container.²²² Among the teams involved in this operation were the 62d CST from Louisiana, the 64th CST from New Mexico, the 72d CST from Nebraska, the 92d CST from Nevada, and the 103d CST from Alaska.

Units from many other states deployed to Orleans Parish to help with the relief operation. Puerto Rico sent the 1165th Area Support Medical Company. The Puerto Rican doctors and medical technicians provided support, including minor surgery, to both soldiers and civilians.²²³ Rhode Island dispatched the 1207th Transportation and the 119th MP Companies to New Orleans. The MP company helped secure the Convention Center on 2 September. During the search-and-rescue phase of the operation, it saved 15 people and evacuated hundreds more. It also rescued four stray dogs during their searches.²²⁴ South Carolina deployed two water purification detachments, engineers, helicopters, logistics support troops, military police, infantry, as well as a significant number of high-water vehicles to assist with search operations in the flooded city.²²⁵ Montana supplied

a follow-on force on 29 September. Some 250 Army National Guard soldiers flew to New Orleans where they manned security checkpoints, performed roving patrols, and enforced curfew.²²⁶ Soldiers from the 1618th Transportation Company mobilized in Nebraska on 19 September. They assisted the New Orleans Police Department by patrolling a 20-block area around the Superdome and providing a quick response force to augment police operations.²²⁷

On Saturday, 3 September, 24 soldiers from the 440th Signal Company deployed to New Orleans. Like many other units that went to Louisiana during the week after Hurricane Katrina struck the Gulf coast, they had no idea where they were going or what their mission would be when they arrived. Although they were a communications unit, they did not take their communications gear because they expected to provide security, conduct search-and-rescue missions, or distribute humanitarian aid.²²⁸ They ended up providing security missions at the New Orleans International Airport for 2 weeks. The Nevada National Guard soldiers helped Federal air marshals screen evacuees for weapons and other contraband as they arrived at the airport for further transfer to other locations. They also helped FEMA coordinate the movement of evacuees from New Orleans to other cities.²²⁹

When Hurricane Katrina struck, the 1121st Transportation Company was in the process of converting from an engineer company to a transportation company. The Missouri soldiers deployed to Louisiana on Thursday, 8 September, and brought along their engineer equipment. Based at Belle Chasse Naval Air Station, over the next month, they cleaned up 19 schools, 2 hospitals, and 4 public facilities and removed 3,000 cubic yards of debris from Orleans Parish. The company also transported food, water, and a wide range of military cargo.²³⁰

Task Force Jefferson

Jefferson Parish suffered plenty of wind damage but not much flooding. Still, people in the parish needed help. Task Force *Pelican* allocated a number of units to the parish, where they distributed humanitarian aid, assisted the local police with law enforcement, and helped clean up the debris left by the storm.

Arkansas sent more than 400 soldiers from the 3/153d Infantry and 1/142d Field Artillery to Louisiana. Soldiers from the 3/153d Infantry arrived early enough to help evacuate the Superdome and Convention Center. With that mission completed, the 3/153d Infantry moved to Kenner, Louisiana, where it joined the rest of the Arkansas task force. The Arkansas task force conducted search-and-rescue operations and distributed aid to

the stricken residents of Jefferson Parish. A four-person CST provided communications support.²³¹

Some 500 New Hampshire Army National Guard soldiers from the 2/197th Field Artillery deployed to Louisiana over the Labor Day weekend. This task force helped the Jefferson Parish police conduct security patrols and man checkpoints to ensure the safety and security of those remaining in the area. The New Hampshire soldiers went to great lengths to help individual citizens in their sector. They escorted residents back to their homes, helped people salvage whatever they could from their water-damaged houses, distributed Red Cross supplies to those in need, and served as a source of information about the relief services available through FEMA and other organizations.²³² These types of activities, which were typical of the support provided by both National Guard and Active component troops throughout the relief operation, were critical to restoring the faith of local citizens in their Government.

The checkpoint security mission became even more important on Monday, 5 September, when parish authorities allowed residents to return to their homes. With a population of more than 450,000 people, there was concern that the influx of people back into the parish would overwhelm the local police. Once again, the National Guard was there to help. Soldiers checked identification and patrolled neighborhoods, ensuring that nonresidents did not enter the devastated area to loot unoccupied homes or conduct other illegal activities.²³³

Several Missouri Army National Guard units deployed to Jefferson Parish as well. The 1/129th Field Artillery learned they were going to Louisiana on 31 August. The battalion's soldiers mustered at their armories the next day and left on Friday, 2 September. Understanding the gravity of the situation in Louisiana, they took enough supplies and equipment to be self-sufficient for 7 days. The battalion arrived at Belle Chasse Naval Air Station on 4 September and assumed responsibility for four towns along the west bank of the Mississippi River in Jefferson Parish: Gretna, Harvey, Marrero, and Westwego. Each battery set up a command post in a local school. After making contact with the local police and sheriff's departments, soldiers established static checkpoints and began conducting presence patrols in their assigned areas. They provided security at a number of locations, including Red Cross distribution centers and the parish Emergency Operations Center.²³⁴

The 1138th Military Police Company, another Missouri Army National Guard unit, operated in Kenner, near the Louis Armstrong International Airport. Working closely with the local police, it performed building

security checks, manned traffic checkpoints, conducted well-being checks of citizens who had not evacuated the city, and provided medical assistance when needed.²³⁵

Later in September, Virginia sent a second task force to Louisiana, which included 320 troops from the 1/246th Field Artillery Battalion, a medical company from the 429th Forward Support Battalion, and two transportation companies, that arrived in late September and stayed through the end of October.²³⁶ During October, this task force helped hundreds of families in Jefferson Parish recover from the destruction wrought by Hurricane Katrina. It worked through the parish, surveying the damage and identifying people, usually the elderly, disabled, or otherwise disadvantaged, who needed help cleaning up their property. The soldiers carted off debris, cut down uprooted trees, and removed damaged appliances and furniture from homes.²³⁷

Task Force St. Bernard

On Sunday, 4 September, the search-and-rescue effort shifted from New Orleans to St. Bernard Parish, where many people were still trapped in their homes. Because of the scope of the crisis in Orleans Parish, Louisiana, emergency officials were unable to organize a rescue operation in this parish for almost a week. In the meantime, they provided the stricken citizens with food, water, and other supplies while they waited to be pulled out of the flooded parish.²³⁸

As more and more National Guard soldiers arrived, resources became available, and officials expanded the search-and-rescue missions beyond the city of New Orleans. When some 700 National Guard soldiers arrived from Colorado, they were sent to St. Bernard Parish. Soldiers from the 169th Field Artillery Brigade and the 220th MP Company conducted search-and-rescue missions and distributed humanitarian aid in the parish. During the deliberate search operation, soldiers from the 220th MP Company rescued a disabled man who had been stranded in his house for 2 weeks.²³⁹

Another example of the challenges soldiers faced is illustrated by the actions of the Colorado Guardsmen as the plight of stray animals caught the Nation's attention. Neither Task Force *Pelican* nor Task Force *Santa Fe* issued guidance on the handling of stray animals, so their treatment varied from unit to unit. Some units, such as the Colorado MP company, picked up stray animals and took them back to their camp. Through 12 September, they rescued 17 dogs, 2 cats, and 1 ferret. The soldiers worked with the American Society for Prevention of Cruelty to Animals to transfer the animals to temporary shelters. The ASPCA agreed to return whenever the unit collected 10 or more animals. Conversely, another Colorado

National Guard unit, the 169th Field Artillery Brigade, was ordered not to pick up stray animals. The artillerymen fed the animals whenever they encountered them, but they were not allowed to rescue the abandoned animals.²⁴⁰

A number of other units provided support to St. Bernard Parish. The 178th and 190th MP Companies from Georgia operated out of Jackson Barracks, but they manned checkpoints and conducted search missions in St. Bernard Parish once the flood waters receded.²⁴¹ Two Michigan Army National Guard units, the 210th MP Battalion and the 46th MP Company, performed security missions in the parish after they arrived on 1 September.²⁴²

The storm damaged a number of industrial plants in the parish, causing concern about the possible release of toxins into the air. The 7th Civil Support Team deployed to Louisiana on 6 September. On arrival, this team worked with the EPA to test the air quality in the devastated parish. Through its efforts, parish officials were able to determine that the air was indeed safe enough for citizens to return to their homes.²⁴³

Other Parish Task Forces

Thousands of other National Guard soldiers provided security; distributed humanitarian aid; cleared debris from streets and homes; and helped hundreds of citizens in the smaller, less-populated parishes. In St. Tammany Parish, the local police deputized Missouri National Guard soldiers. They patrolled the parish in vehicles and boats, acting with the authority of a parish sheriff.²⁴⁴ In Washington Parish, soldiers from the 72d MP Company, Nevada National Guard, assumed responsibility for security at the local shelter so that the small police force could resume its normal duties.²⁴⁵

Summary

The hurricane response mission in Louisiana was a qualified success despite the many hardships and errors that the response teams had to overcome. The hardships were numerous. Hurricane Katrina almost completely destroyed the communications, power, transportation, and water systems in the state. Most emergency response personnel and local leaders were themselves victims of the hurricane, making it difficult for them to respond effectively to the crisis. With almost 80 percent of the city flooded, rescue-and-relief operations in New Orleans and the surrounding parishes were slow and difficult to execute.

There were also many errors in planning and judgment. Some of the planning errors include failing to evacuate the people most in need of

help, stationing personnel and equipment in low elevation locations like Jackson Barracks, and not moving buses to higher ground. It is difficult to forgive the engineers at the Convention Center for not intervening once they realized that no one was helping the folks congregating there. Nor can Major General Landreneau and Brigadier General Jones escape censure for failing to come to those citizens' aid once they found out about the situation on Wednesday.

The cumulative effect of those hardships and errors was that much of the manpower and many of the resources that were initially available to emergency response leaders in Louisiana had to be allocated to search-and-rescue missions during the first few days after the storm struck. Siphoning off those assets negatively affected the overall relief effort. Despite that, in most instances, the National Guard was on station where needed as soon as the storm passed. Certainly, conditions at the Superdome were bad, but National Guard soldiers provided food, water, and security for those taking refuge there. They also conducted airborne and waterborne search-and-rescue missions in the immediate aftermath of the storm and assisted with levee repairs and road clearance so that other responders could get to those in need.

Although it took several days to build up forces in the state, within a week, there were tens of thousands of troops in Louisiana. Soon, anyone who wanted to be rescued was picked up and moved to an evacuation shelter, and order was restored in the city of New Orleans. By the end of September, major roads and many public buildings were cleared of debris, and the conditions were set to return the state to working conditions. Many of those tasks were accomplished by National Guardsmen pulled in from all over the Nation. They responded quickly to the call for help and worked unceasingly to bring relief to the beleaguered citizens of the state. The mission to provide relief to the state of Louisiana was truly a national effort.

An examination of National Guard operations in Louisiana reveals a number of techniques and procedures that worked well during the relief operation. Points of distribution were an effective means of distributing aid. Although there was no guidance on how to operate these sites, soldiers took the initiative and ran their sites according to the needs of the local citizenry. Task forces also proved an effective way to organize the relief forces. Forces ebbed and flowed, but the task forces remained in place until the mission was complete. Task force commanders sought out civilian leaders and established close personal working relationships. Search techniques evolved over time as operations shifted from airborne to

waterborne to ground search missions. Each phase required different assets and skills, and the National Guard was able to adapt to each change.

That is not to say that all aspects of the relief mission went smoothly. Task Force *Pelican* sometimes failed to provide sufficient resources to its subordinate task forces in a timely manner because of the decision to retain close control of air assets and engineer units. This inhibited the speed and effectiveness of the relief operation in many locations. One of the inherent problems with using out-of-state National Guard units is that the units remain under the control of their governors. This led to units sometimes acting independently or departing without proper notification or relief. Despite those and other problems, National Guard relief operations in the state of Louisiana saved tens of thousands of citizens.

Notes

1. Major General Bennett C. Landreneau, "Hurricane Katrina: The Defense Department's Role in the Response," *National Guard Timeline of Significant Events Hurricane Katrina*, Senate Homeland Security and Governmental Affairs Committee, 109th Cong., 2d sess., 9 February 2006, 11, <http://www.columbia.edu/itc/journalism/cases/katrina/Federal%20Government/Congress/U.S.%20Senate/Senate%20Hearings/Senate%20Hearing%202006-02-09/Landreneau%20Timeline%202006-02-09.pdf> (accessed 3 December 2007).
2. US Congress, House, *A Failure of Initiative: Final Report of the Select Bipartisan Committee to Investigate the Preparation for and Response to Hurricane Katrina*, 109th Cong., 2d sess., 15 February 2006, 67, <http://www.c-span.org/pdf/katrinareport.pdf> (accessed 17 December 2007).
3. Major General Richard J. Rowe Jr., "NORTHCOM Title 10 Timeline for Hurricane Katrina," United States Northern Command, 291702Z September 2005.
4. Landreneau, *National Guard Timeline of Significant Events*, 3.
5. US Congress, Senate, *Hurricane Katrina: A Nation Still Unprepared*, Senate Report 109-322, 109th Cong., 2d sess., 2006, 151, http://hsgac.senate.gov/_files/Katrina/FullReport.pdf (accessed 8 January 2008).
6. Colonel Barry Keeling, interview by First Lieutenant David Steuver, 102d Military History Detachment, 8 October 2005, in Lieutenant Colonel Alan R. Koenig, ed. *National Guard Relief Efforts in Louisiana* (Fort Gillem: GA: Joint Task Force Katrina History Group, January 2008), 126.
7. Landreneau, *National Guard Timeline of Significant Events*, 2–4.
8. Ibid., 3.
9. Keeling interview, 126.
10. Landreneau, *National Guard Timeline of Significant Events*, 3.
11. Colonel Jeff Smith, Retired, "Hurricane Katrina: Preparedness and Response by the State of Louisiana," Testimony Before the House Select Bipartisan Committee to Investigate the Preparation for and Response to Hurricane Katrina, 109th Cong., 1st sess., 14 December 2005, <http://www.columbia.edu/itc/journalism/cases/katrina/Federal%20Government/Congress/U.S.%20House/House%20Hearings/Select%20Bipartisan%20Committee/House%20Hearing%202005-12-14/Smith%202005-12-14.doc> (accessed 7 February 2008); Senate, *A Nation Still Unprepared*, 5.
12. United States Executive Office of the President, *The Federal Response to Hurricane Katrina* (Washington, DC: Government Printing Office, 2006), 26, <http://www.whitehouse.gov/reports/katrina-lessons-learned.pdf> (accessed 19 December 2007).
13. Ibid., 30.
14. Landreneau, *National Guard Timeline of Significant Events*, 4.
15. Ibid.
16. Executive Office, *The Federal Response to Hurricane Katrina*, 31.
17. First Lieutenant Stewart Adams, interview by Sergeant Douglas

Plummer, 102d Military History Detachment, 5 October 2005, in Lieutenant Colonel Alan R. Koenig, ed. *National Guard Relief Efforts in Louisiana* (Fort Gillem, GA: Joint Task Force Katrina History Group, January 2008), 41.

18. Landreneau, *National Guard Timeline of Significant Events*, 4.

19. Exact numbers are hard to come by. Lynn E. Davis et al., *Hurricane Katrina: Lessons for Army Planning and Operations* (Santa Monica, CA: Rand Arroyo Center, 2007), 20, http://www.rand.org/pubs/monographs/2007/RAND_MG603.pdf (accessed 9 January 2008), says that 6,400 Louisiana Guardsmen were available and that 4,700 of them were on state active duty when Hurricane Katrina hit. They indicate that 5,700 of them were eventually activated. Steve Bowman, Lawrence Kapp, and Amy Belasco, CRS RL33095, *Hurricane Katrina: DOD Disaster Response* (Washington, DC: Congressional Research Service, 19 September 2005), 11, <http://www.fas.org/sgp/crs/natsec/RL33095.pdf> (accessed 3 December 2007) claim that 5,804 Louisiana National Guardsmen were on duty the day after Hurricane Katrina struck, 30 August. They report that Louisiana eventually activated 6,779 personnel. In his Louisiana National Guard timeline, Major General Bennett Landreneau, the Louisiana Adjutant General, reports that 3,396 National Guardsmen were on duty the evening of 28 August. According to Landreneau, that number increased to 4,459 on 29 August (see Landreneau, *National Guard Timeline of Significant Events*, 4–5). There are similar problems with the numbers for Mississippi.

20. The Louisiana National Guard activated some 2,500 troops in response to Hurricane Andrew in 1992. See Senate, *A Nation Still Unprepared*, 151.

21. Federal Emergency Management Agency (FEMA), “FEMA Region VI Video Teleconference Transcript, 29 August 2005,” 17–18, <http://images.chron.com/content/news/photos/06/03/02/katrinatranscript0829.pdf> (accessed 15 January 2008).

22. *Ibid.*, 21.

23. CBS News/Associated Press, “At Least 55 Dead in Mississippi,” 29 August 2005, http://www.cbsnews.com/stories/2005/08/30/national/main802478.shtml?source=search_story (accessed 10 March 2008).

24. *Ibid.*

25. Senate, *A Nation Still Unprepared*, 303.

26. Executive Office, *The Federal Response to Hurricane Katrina*, 36.

27. FEMA, “FEMA Region VI Video Teleconference Transcript, 30 August 2005,” 7, <http://images.chron.com/content/news/photos/06/03/02/katrinatranscript0830.pdf> (accessed 15 January 2008).

28. *Ibid.*, 8.

29. Senate, *A Nation Still Unprepared*, 333.

30. Keeling interview, 126.

31. Senate, *A Nation Still Unprepared*, 343.

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Chapter 5

Mississippi

In many ways, the damage Hurricane Katrina inflicted on Mississippi was much worse than what it did to Louisiana. The storm devastated Mississippi's three coastal counties. Hurricane Katrina's storm surge, wind, and rain destroyed more than 65,000 homes in the three coastal counties, killed more than 200 people and injured thousands more, wiped out entire communities, washed away roads, knocked out the power and communications grids, and rendered most local emergency management centers inoperable. Almost one million people were left without power in the aftermath of the storm. It also left behind some 44 million cubic yards of debris.¹ Despite that, Mississippi bounced back much more quickly than Louisiana.



Specialist Joshua M. Risner, 40th Public Affairs Detachment

Figure 14. A survivor sits among the rubble in his Gulfport, Mississippi, neighborhood.

One reason why Mississippi recovered faster than Louisiana was that the damage to the state differed from that incurred in Louisiana. In Louisiana, the failure of the levee system, which resulted in extensive flooding in New Orleans and the surrounding parishes, caused much more damage than Hurricane Katrina's storm surge, winds, or rain. The flooding was a disaster within a disaster. When the levees failed, much of New Orleans flooded to a depth of 8 to 12 feet since most of the city is situated below sea level. The flooding precipitated the largest search-and-

rescue operation in our Nation's history. For almost a week, emergency management officials in Louisiana focused on search-and-rescue and evacuation operations to the detriment of other relief missions. Conversely, even though Mississippi bore the brunt of the hurricane's fury, once the storm surge subsided, rescue workers only had to deal with washed-out or debris-strewn roads, not flooding. As more and more National Guard and FEMA assets flowed into the state, they were able to clear the roads and restore power and water in fairly short order. Moreover, since the population of the Mississippi coast is less dense than urban New Orleans and fewer people were stranded by flooding in Mississippi, search-and-rescue operations ended much sooner in Mississippi than in Louisiana, thus making aviation assets available for other missions.

Another reason why Mississippi recovered more quickly was good planning and organization. The Mississippi National Guard had a hurricane response plan in place before Hurricane Katrina struck and executed it as conditions allowed. Troops were on the ground providing security, conducting search and rescues, and distributing aid within hours of Hurricane Katrina passing through the state. Although Mississippi needed massive amounts of Federal aid, state leaders did not request Title 10 military support. They were, for the most part, able to facilitate recovery in the affected counties with the support provided by other states through the Emergency Management Assistance Compact (EMAC) process. The Mississippi National Guard effectively managed both its own forces and those from outside states. As forces flowed into the state, they were attached to county-based task forces (TFs). State forces operated side by side with out-of-state troops in each TF. The TFs operated independently within their areas of operation using the commander's intentions as their guidance. Each TF established close ties with local officials, making it easier for them to respond quickly and efficiently to the needs of local communities. Within a few weeks, Mississippi was able to transition from relief to the recovery phase of operations.

Prelandfall Preparations

The state of Mississippi began taking action on Friday, 26 August 2005, 3 days before Hurricane Katrina struck. Governor Haley Barbour declared a state of emergency and authorized the adjutant general to call up Mississippi National Guardsmen onto state active duty.² The next day, the Mississippi Emergency Management Agency (MEMA) stood up its Emergency Operations Center (EOC) and activated the State Emergency Response Team (SERT). The SERT deployed to Camp Shelby on Sunday, 28 August, and was operational by 1500.³

Just before the 2005 hurricane season, the Mississippi National Guard revised and updated its hurricane response plan. Guard planners completed the plan in June and successfully implemented it the next month when Hurricane Dennis struck Florida on 10 July.⁴ The plan allocated five primary missions to the Mississippi National Guard: search and rescue, security, commodity distribution, casualty evacuation, and debris removal.⁵ Units had specific missions and deployed to preidentified locations to carry out those tasks.

With more than 4,200 Mississippi National Guard soldiers and airmen deployed to Iraq, including 3,300 troops assigned to the 155th Brigade Combat Team, Mississippi Guard leaders planned to mobilize all available troops to cope with the threat Hurricane Katrina posed. On Saturday, 28 August, they activated 10 percent of the personnel from every unit in the state. In accordance with the hurricane response plan, hurricane strike teams deployed to the EOCs of the three coastal counties—Jackson, Harrison, and Hancock—on 27 August. Each strike team had 10 military police (MP), 15 engineers, and 5 trucks.⁶ All totaled, 175 soldiers deployed into the three counties. Their mission included search and rescue, humanitarian aid distribution, and security operations. The plan required them to wait out the storm in shelters and then to move out and execute their missions as soon as the storm passed.

The Adjutant General of Mississippi, Major General Harold A. Cross, also activated the 223d Engineer Battalion, 890th Engineer Battalion, and the 112th MP Battalion.⁷ He commented during a conference call with First Army that engineers and military police were important skill sets during disaster relief operations, and he wanted to have plenty of them on hand to help. He moved those units to Camp Shelby, Mississippi, where they were close enough to respond quickly yet out of harm's way.⁸

The Mississippi and Alabama adjutant generals had a close personal relationship, and in the days leading up to the storm, they worked together to formulate a plan for Alabama to provide additional support to Mississippi. Since it appeared that Hurricane Katrina would not strike Alabama directly, the Alabama adjutant general was primarily concerned about the impact of the storm's surge and subsequent flooding. Consequently, he stationed his forces back from the coast where they could wait out the storm in safety and then move forward to help. Since Major General Cross wanted as many engineers as he could get, the Alabama adjutant general agreed to station the 877th Engineer Battalion just inside the Alabama-Mississippi border so it would be able to respond quickly if Mississippi needed help.⁹

As he listened to the warnings issued by the National Hurricane Center and watched the storm move across the Gulf of Mexico, Cross concluded that he did not have enough troops available to deal with the effects of the storm. He took three additional actions to rectify that situation:

- He ordered additional units to state active duty. Among the units activated were the 114th Area Support Group, 298th Maintenance Battalion, 367th Maintenance Company, 1387th Quartermaster Company, and 1687th Transportation Company.¹⁰ On Sunday, more than 1,800 soldiers and airmen were on state active duty in Mississippi.¹¹ By the time Hurricane Katrina struck on Monday, more than 3,800 National Guardsmen were on state active duty, and the rest of the state's available forces were on alert.¹²
- With almost 40 percent of the state's troops unavailable when Hurricane Katrina struck, Cross turned to other states for help.¹³ He initiated a number of requests for forces via EMAC, which is a national "interstate mutual aid compact that facilitates the sharing of resources, personnel, and equipment across state lines during times of disaster and emergency."¹⁴ Cross's initial requests for assistance included an MP battalion, two engineer battalions, and three CH-47 helicopters.¹⁵



Technical Sergeant Mike Buyras, USAF

Figure 15. Damage to the Ocean Springs Bridge.

- He stood up Joint Task Force *Magnolia*, which served as his operational headquarters during the crisis. Later, when the 38th Infantry Division's headquarters unit arrived, he turned over command and control for all National Guard forces operating in the state to the division, but JTF *Magnolia* remained in overall command of the operation.

When Hurricane Katrina struck Mississippi, state leaders felt themselves well prepared. State emergency officials had, they thought, a sufficient amount of relief commodities on hand. Almost all the state's available National Guard troops were either on state active duty or had been alerted to the possibility of activation. In accordance with the state's hurricane response plan, several hundred soldiers were in place along the coast, ready to provide immediate support to county emergency officials. The rest of the National Guardsmen deployed to locations that were out of harm's way but close enough to the coast so they could get there quickly after the storm passed. Finally, they had a backup plan—the adjutant general coordinated support with the state of Alabama and submitted a request for forces to other states via EMAC before the storm hit.

Immediate Response Operations

During the early morning hours of 29 August, Hurricane Katrina changed track slightly and passed New Orleans to the east. Although that was good news for New Orleans, it was bad for Mississippi since the storm's track put the Mississippi coastline squarely in the northeast quadrant of the hurricane, where the winds and storm surge would be the worst.¹⁶ Max Mayfield of the National Hurricane Center warned Mississippi officials that the storm surge would be “very, very devastating” throughout the Biloxi basin.¹⁷

Mayfield was correct in his estimation. When Hurricane Katrina made its second landfall near the Mississippi-Louisiana border at 1000, it was a very strong storm, with winds estimated at 121 miles per hour.¹⁸ A 27-foot storm surge and winds gusting up to 130 mph decimated the Mississippi coast.¹⁹ About 95 percent of the homes and buildings in Waveland, situated on the coast near where Hurricane Katrina's eye touched down, were destroyed. Although the town's emergency vehicles were staged 10 miles north of the town, all of them were destroyed by the storm. Hurricane Katrina ravaged Biloxi and left downtown Gulfport with 10 feet of standing water. The storm surge roared up the region's rivers and bays for almost 12 miles, destroying many inland towns.²⁰

Even though Hurricane Katrina weakened throughout the day as it moved northward through the state, it was still classified as a hurricane

when it passed over Laurel, Mississippi, some 100 miles inland.²¹ Because of its size and strength, as in Louisiana, Hurricane Katrina neutralized most of the state's well-thought-out plans to get emergency response assets into the affected areas quickly. The storm decimated Mississippi's communications infrastructure, leaving local responders isolated and unable to request help and state officials blind to the situation on the ground.

Mississippi emergency officials assumed that the damage was bad along the coast, but they did not know how severe it was at first. One Mississippi official commented, "It certainly looks like it is a catastrophic event that we all expected. . . ."²² He went on to report that they thought that "the Hancock County emergency operations center collapsed. . . . We know that Jackson County EOC is flooded. They evacuated to the secondary on the EOC side. Harrison County, we have sporadic communication with them."²³ They knew people were in trouble, but because of the weather, they were unable to get to them. Rescue operations would have to wait until the storm passed, but Mississippi officials were hopeful that "the resources are in place everywhere to get in as quick as possible."²⁴

The road system in the Gulf coast counties was as badly damaged as the communications infrastructure. US Highway 90, which is Mississippi's coastal highway, was completely impassable, and only one lane of Interstate 10, which runs east-west several miles inland, was open to emergency response vehicles.²⁵ Hancock County was almost completely cut off, except for a road running from the Stennis Space Center. Emergency officials were not even sure, however, if they could get to the Stennis Space Center from the north using I-59. Although Jackson County was accessible as far west as Pascagoula, officials did not know if they could reach Biloxi from the east. The only road into Harrison County was US-49, which was congested but passable.²⁶ Therefore, even if first responders had a way to communicate their needs, there was almost no way to quickly get to survivors.

The situation remained confused on Tuesday, 30 August, the day after the hurricane struck the state. A FEMA official reported that communications with the EOCs in the affected counties were limited because only one FEMA satellite radio survived Hurricane Katrina's wrath. FEMA dispatched a mobile operations center to Gulfport, but until it arrived and became operational, officials were "blind to exactly what the current situation is down there."²⁷ Later, during the same video teleconference, Mississippi officials were surprised to learn that Florida had pushed a 245-person urban search-and-rescue team into Mississippi

earlier that morning. The Florida team made it to Biloxi before obstructed roads prevented further westward travel. The destruction in Biloxi was so extensive, Florida officials reported, that the team had difficulty finding a clear spot on which to set up equipment. The situation on the ground made flying in additional equipment or supplies even more problematic. But more aid was needed, Florida officials said, because the survivors in the area desperately needed food and water.²⁸

Major General Harold Cross conducted an aerial reconnaissance Tuesday morning to survey the damage Hurricane Katrina inflicted on his state. Although there were 2,736 Army National Guard soldiers and 1,003 Air National Guard airmen on state active duty at that moment, he realized that, with a brigade overseas, he did not have enough troops available to deal with the damage.²⁹ When he returned to his headquarters in Jackson, he asked the governor to mobilize all remaining Mississippi Guardsmen and requested additional forces through EMAC.

Requests for additional forces through EMAC are coordinated through the National Guard Bureau, which serves as an adviser to the Departments of the Army and Air Force on National Guard issues and as a liaison between the governors and adjutant generals of each state and the Department of Defense.³⁰ Both Louisiana and Mississippi asked for EMAC assistance before Hurricane Katrina made landfall. As mentioned earlier, Louisiana asked for two CH-47 Chinook and four UH-60 Blackhawk helicopters. Mississippi asked for an MP battalion, two engineer battalions, and three CH-47 Chinook helicopters.³¹ Alabama responded immediately. The Alabama adjutant general dispatched 483 soldiers to Mississippi on 30 August and 359 more soldiers the next day. The Alabama force consisted of engineers, military police, security personnel, and communications units.³² Arkansas also acted quickly, sending a 310-person MP company to Mississippi.³³

As the damage reports grew grimmer, the requests for assistance from the affected states increased. Although surrounding states responded generously, Mississippi and Louisiana needed more help. On Wednesday, 31 August, Lieutenant General H. Steven Blum, Director of the National Guard Bureau, held a video teleconference with National Guard leaders from 54 states and territories and asked the state commanders to provide Mississippi and Louisiana with as much support as they could possibly give.³⁴ The response by the other states was tremendous. Although the number of Mississippi Guardsmen involved in the relief operation never exceeded 4,500 soldiers and airmen, thousands of Guardsmen from other states joined with them to help survivors in the coastal counties of the

state.³⁵ On the day Blum implored the other states to provide help, a few more than 1,100 out-of-state Guardsmen were in Mississippi. Two days later, that number swelled to more than 3,700. On Sunday, 4 September, about 9,400 out-of-state Guardsmen were in Mississippi. Some 1,600 more arrived the next day, bringing the number of out-of-state soldiers and airmen on duty in Mississippi to almost 11,000. In 6 days, the number of out-of-state troops deployed to Mississippi increased tenfold. Out-of-state personnel finally peaked on 8 September, with more than 11,500 National Guardsmen supporting relief operations in the state.³⁶

Although greatly appreciated, the influx of soldiers, aircraft, and other assets into both Mississippi and Louisiana brought about corresponding command and control challenges. With both states' brigade combat teams deployed to Iraq, both Mississippi and Louisiana lacked substantial higher level command and control capabilities. Once again, the National Guard Bureau stepped in and helped by activating the headquarters of two National Guard divisions. The 35th Infantry Division from Kansas deployed to Louisiana, and the 38th Infantry Division from Indiana provided assistance in Mississippi. Both divisions served tours in the Balkans, and according to Lieutenant General Blum, the staffs knew how to execute "Ph.D. level command and control."³⁷ They helped the respective state adjutant generals by providing command and control over the thousands of National Guard soldiers flowing into both states. Blum later commented that, once the divisional headquarters arrived, command and control improved 100 percent.³⁸

The National Guard Bureau made another important contribution that greatly enhanced the ability of other states to respond to the disaster. Acting at the request of many states, the National Guard Bureau submitted a request to Secretary of Defense Donald Rumsfeld on Monday, 5 September, asking him to approve the conversion of all of the National Guard forces responding to the disaster from state active duty to Title 32 status. The National Guard Bureau maintained that state funding was not sustainable and that Federal funding was a more appropriate way to maintain a force approaching 50,000 personnel. Two days later, Secretary Rumsfeld approved the request, making it retroactive to 29 August.³⁹

In addition to mobilizing additional forces, Major General Cross made another significant decision after his reconnaissance flight on 30 August. He concluded that the preplanned distribution system in Mississippi was unworkable because flood water or debris covered many of the distribution sites. Even those distribution sites that escaped damaged were, Cross realized, most likely inaccessible because few survivors had functioning



Figure 16. Alabama National Guard aircrew delivers supplies in Columbia, Mississippi.

vehicles that they could use to drive to the sites or flooding and debris blocked the approaches to the sites. After assessing the situation, he decided to use all available air assets to deliver food, water, and ice to those in need. If a helicopter could not land safely in the vicinity of survivors, it dropped supplies down to them. The Alabama Defense Coordinating Officer, Colonel Lavern Young Jr., who eventually moved forward into Mississippi, later declared that Cross's decision "saved the day and reduced the suffering of the beleaguered citizens of the Gulf Coast."⁴⁰ Cross also directed that every vehicle carry a load of food and water whenever it left a base camp so that those commodities could be distributed to people in need wherever and whenever they were encountered.

Because of the widespread destruction wrought by Hurricane Katrina, the primary mission of first response units in Mississippi was search and rescue. The state's first response team included several hundred National Guard engineering and security troops who were pre-positioned in the at-risk counties before the storm struck. Unfortunately, the devastation Hurricane Katrina inflicted on the coastal communities made that a difficult mission to carry out. Even though forward-deployed forces sped up the National Guard's response to the disaster, they still had to clear roads of downed trees, telephone poles, electrical lines, and other debris to get to the places most affected by the storm. Then, once they got there, they faced piles of debris that were, in places, "two or three stories high and as

many as four blocks wide.”⁴¹ These debris fields were also dangerous. In addition to broken glass, jagged metal, and other such hazards, there were also chemical spills and gas leaks that had to be stopped and cleaned up. In Gulfport, rescue workers faced an even more unappealing biological hazard: the hurricane’s high winds had ripped apart numerous containers stacked up at the port, including several that held chicken carcasses and pork bellies. So, first responders in Gulfport had to overcome rotting chickens and pork guts as well as flood waters and other debris to accomplish their relief mission.⁴²

The shattered road system made it necessary to deliver supplies to the many isolated communities by air. As helicopter crews flew missions, they visually searched for distress signals. When they spotted someone in need, they landed and distributed whatever they had on board. If they could not land or were out of supplies, they reported the location to their flight controller, who directed another helicopter to the scene. In a scenario repeated throughout the state on many occasions, a woman in White Cypress Lake, Mississippi, wrote “HELP” on her roof. A National Guard helicopter spotted her message and delivered food and water to the stricken residents of the town. She informed the crew of their other needs, and in the following days, National Guard helicopters returned, bringing more food and water as well as ice and baby products.⁴³ By Thursday, 8 September, 62 Army National Guard helicopters performed similar missions in Mississippi. The fleet of helicopters averaged about 300 missions per day. Depending on the distance to the drop zone, crews flew as many as 15 missions per day.⁴⁴

According to the state hurricane response plan, forward-deployed detachments tried to coordinate their efforts with local EOCs. But when Hurricane Katrina turned most of the first responders into victims, the plan changed. Lieutenant Colonel Larry Harrington, Commander of the 168th Engineer Group and Task Force *Engineer*, recalled that many local officials were in shock. He said, “The EOCs were in no position to make decisions. . . . In Hancock County, five of the seven council members had lost everything. The EOCs couldn’t get organized, couldn’t get into a decision-making cycle.”⁴⁵ Major General Cross told his commanders, “I need you to be bold and vigorous. Do what you can immediately,”⁴⁶ and the Mississippi engineers took that directive to heart. Over the next few weeks, the engineers along with other Guard units conducted search-and-rescue missions; distributed food, water, ice, and other commodities to citizens in need; cleared roads, canals, and drainage ditches; repaired roads and bridges that had been washed away by the storm; provided generators to EOCs and shelters; and built the infrastructure for temporary

housing sites and relief centers.⁴⁷ Cross later remarked that the Mississippi engineers did an outstanding job coordinating their efforts with the local utility companies. Their work to clear roads, restore electrical power, and reestablish the communications grid contributed greatly to the early restoration of power to those affected by the storm.⁴⁸

As soon as Hurricane Katrina's winds subsided somewhat, the Mississippi National Guard troops at Camp Shelby began to move forward to the affected areas. One soldier of the 114th MP Company recalled that Hurricane Katrina struck Camp Shelby about 1500. Two hours later, with the tail of the storm still raging about them, they left the camp and headed for the coast. The trip to Gulfport, which usually takes about an hour to complete, took 5 hours that day because the soldiers had to clear the roads as they traveled south. Although it was dark and much of the city of Gulfport was covered with water when the 114th arrived, they reconnoitered the area, determined where they would be best positioned, and began conducting security patrols. Within hours of Hurricane Katrina passing through the state, many Mississippi National Guard units were in position, providing relief and support to victims of the storm.⁴⁹

Significant numbers of ground forces started to arrive by the end of the first week. They performed a wide range of missions, including search and rescue, distribution of commodities, security, debris removal, and medical support. By Monday, 4 September, conditions in Mississippi were much better. The commodity crisis dissipated as the flow of food, water, and fuel into the state improved.⁵⁰ More and more roads were reopened as National Guard engineers cleared debris throughout the affected area. The MEMA began the shift from relief to recovery operations in Jackson and Harrison Counties as the situation in those counties improved.⁵¹ An agency official acknowledged there were still pockets of need, but the number of citizens still requiring relief had greatly diminished—hundreds rather than thousands. As the road system improved, relief parties were able to reach the more isolated areas by ground transportation, thus reducing the need for air evacuations.⁵² As more and more National Guard forces arrived in the state, emergency officials expanded relief operations northward into the three adjoining counties that were also affected by the storm.⁵³

Providing security was one of the most important National Guard missions, especially in the first few days after the storm. Military police were a particularly important asset because of widespread concern about looting. Governor Haley Barbour felt compelled to warn that looters would be treated ruthlessly. He said, "Looting will not be tolerated, period, and rules of engagement will be as aggressive as the law allows. . . . Security goes hand-in-hand with search and rescue."⁵⁴ Those concerns were,



Sergeant Chris A. Durn, USA

Figure 17. Soldiers from the 216th MP Company, Arkansas Army National Guard, provide security in Gulfport, Mississippi.

however, overblown. In most instances, when National Guard soldiers arrived at the scene, they found nothing had occurred. There were several reports of truck hijackings, but once again, when military police responded to the situation, they found the report without basis. Typically, they found truck drivers, frightened by the destruction and afraid of getting hijacked, refusing to go any farther without a National Guard escort.⁵⁵ The security missions were, however, important because they demonstrated to the survivors that their Government was looking out for their interests.

Military police from the 168th MP Battalion in Tennessee arrived in Mississippi on Friday, 2 September. One company, the 268th, went to Gulfport where it helped police restore order and security.⁵⁶ Another company, the 267th, deployed to Long Branch. It also assisted the local police by manning checkpoints to control vehicular traffic and discourage sightseers and looters. One of the soldiers' greatest contributions was their mere presence; that alone served to restore order in the area. Not only were checkpoints manned around the clock, at some spots along US Highway 90, guards were posted on almost every corner. In addition to their security mission, the military police also handed out food and water to the survivors.⁵⁷

Acting in accordance with Army doctrine, which designates the National Guard as the military's first response organization during natural

disasters, the Mississippi National Guard responded quickly to provide relief and support to victims of the storm. In the first few days after the storm hit, National Guard units throughout the state followed a similar pattern: they struggled through debris-strewn or flooded roads to reach their assigned locations. Once they got into position, they went to work providing relief and support to the stricken citizens of the region. Since communications with higher headquarters were almost nonexistent, local commanders acted with initiative, carrying out prelandfall assignments and solving problems as they encountered them. Their soldier skills served them well as they reacted to the situation on the ground by clearing roads and debris, providing security, distributing needed supplies, and repairing the damaged infrastructure.⁵⁸

Recovery Operations

The days immediately following Hurricane Katrina's landfall were grim. Many casualties and countless numbers of people needed food, water, and medical treatment. Unfortunately, many of those items were in short supply in those first few days. Before the storm struck, Mississippi officials estimated that they had enough commodities on hand to cover the first 24 to 36 hours, but their stocks were expended much more quickly than they anticipated.⁵⁹ Even if more supplies had been readily available, the storm so thoroughly disrupted the road system that it was almost impossible to get supplies to those in need by vehicles. The day after Hurricane Katrina struck, officials concluded that goods would have to be delivered by air because the roads in the affected counties were virtually impassable.⁶⁰ Ground transportation was also problematic because of a storm-induced fuel crisis in the state. Mississippi officials grumbled that, even when they could get relief workers into an area, the lack of fuel quickly brought all operations to a halt.⁶¹ Identifying who needed help was also an issue since many local officials and first responders were victims of the storm as well. Even if they were capable of responding, the almost total collapse of the communications infrastructure made it next to impossible for local authorities to communicate their needs to state emergency officials. Yet the citizens of southern Mississippi needed food, water, medical support, fuel, and people to distribute those goods. Within days, the National Guard responded with the personnel, aircraft, and vehicles needed to carry out that mission.

More than 3,800 National Guardsmen were on state active duty when the storm struck Mississippi on 29 August. By Thursday, 1 September, as surrounding states responded to Mississippi's requests for assistance, the number of Guardsmen in the state more than doubled to 7,500. Three days

later, it doubled again to more than 15,000. Total National Guard forces in Mississippi peaked at 15,500 on 7 September.⁶²

With only eight staff officers assigned to run the forward operations center in Gulfport, it quickly became apparent that the Mississippi National Guard did not have the resources needed to effectively control such a large force.⁶³ Consequently, the National Guard Bureau activated the headquarters of the 38th Infantry Division from Indiana to assist the Mississippi adjutant general with command and control of those incoming forces. An advance party, led by Major General Gregory Vadnais, the Commanding General, departed Indiana on Wednesday, 31 August.⁶⁴ Over the next few weeks, the 38th Infantry Division, which was designated Task Force *Cyclone*, provided support to the state by serving as the land component commander. The rest of the division headquarters activated early on the morning of Thursday, 1 September. After organizing equipment and vehicles, some 300 soldiers departed Indiana on Saturday, 3 September, and arrived at Camp Shelby, Mississippi at 2300 on Sunday.⁶⁵

One of the first Indiana National Guard general officers to arrive in Mississippi was Brigadier General Lonnie Culver, the Assistant Division Commander (Maneuver). He arrived at Camp Shelby on Friday, 2 September, and met with Major General Vadnais to discuss how to best integrate the incoming National Guard forces into the operations currently underway in Mississippi. After meeting with Vadnais, Culver moved forward to Gulfport, where he met with the Mississippi Adjutant General, Major General Harold Cross. Cross explained the three missions he envisioned for TF *Cyclone*. He wanted those forces to focus on providing security, clearing roads to improve mobility, and providing humanitarian assistance to those in need.⁶⁶ These three missions became the overriding goals for TF *Cyclone* and its subordinate task forces. Figure 18 shows the task organization as of 4 September 2005.

Since the Mississippi National Guard was already heavily engaged in the relief process, Vadnais wanted to avoid disrupting any of the processes already in place. He assigned Culver as his liaison to the Mississippi National Guard forward headquarters in Gulfport and tasked him with figuring out how to best integrate the growing forces under TF *Cyclone* into the existing operations.⁶⁷ After assessing the situation in Gulfport, Culver realized that the Mississippi National Guard staff needed immediate help. By the time Culver arrived on Friday, 2 September, the staff had been working nonstop for almost a week. Since communications connectivity was intermittent and travel by vehicle slow because roads were blocked or damaged, controlling the relief operation from Camp Shelby was

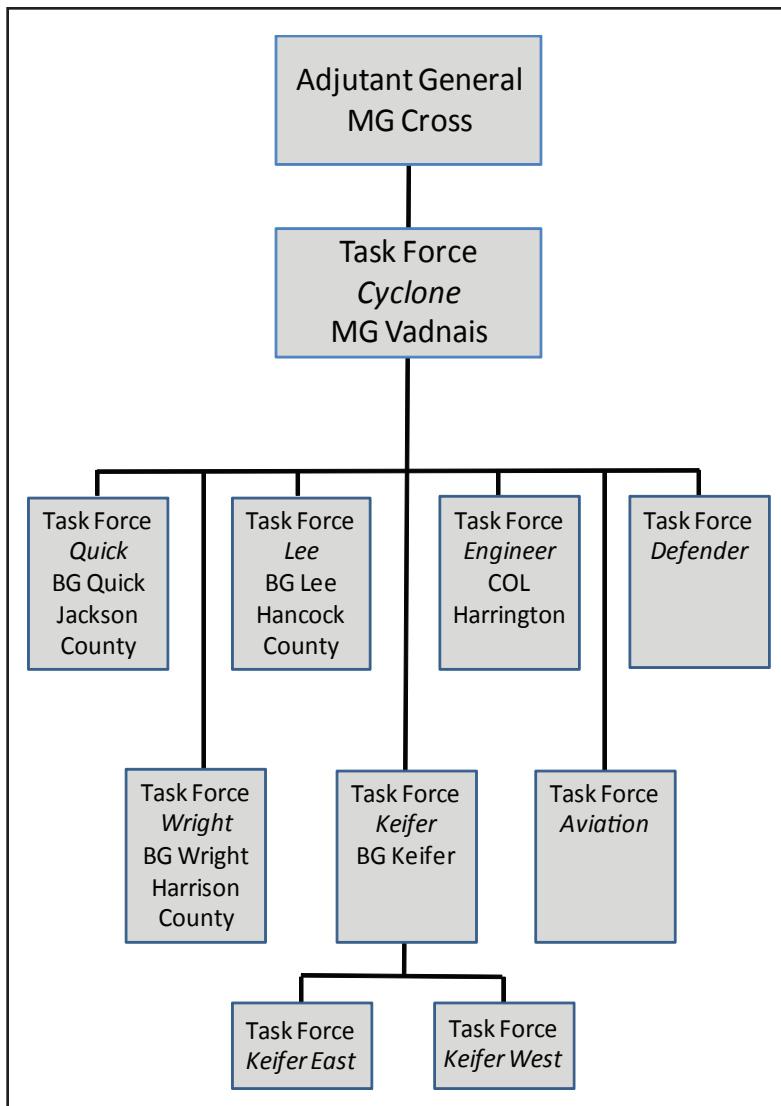


Figure 18. Mississippi National Guard task organization as of 4 September 2005.

impractical. Therefore, Vadnais decided to move the division headquarters forward from Camp Shelby to Gulfport.

Brigadier General Culver established the division headquarters in an auditorium at the Gulfport Combat Readiness Training Center, which was large enough to accommodate the entire staff. The headquarters was operational, including voice and Internet connectivity, the morning after the main body arrived. He was soon joined by Brigadier General Tod Carmony,

and together they ran Task Force *Cyclone*. Since he knew many of the Mississippi National Guard officers, Culver continued to serve as a liaison between TF *Cyclone* and the Mississippi National Guard. As the task force liaison to the state, one of Culver's most important jobs was resolving emergency missions. He recalled getting as many as 60 emergency requests the first few days after he arrived. TF *Cyclone* eventually set up a quick reaction force, which was stationed in Gulfport, to respond to such requests. Over time, as the situation stabilized, emergency requests dwindled, but in the early days, TF *Cyclone*'s quick response to such missions was an important reminder to citizens in need that their Government was concerned with their plight. Meanwhile, Brigadier General Carmony focused on the day-to-day operations of the headquarters.⁶⁸

Even though the headquarters had a broad range of communications capabilities, communicating with the disparate units under TF *Cyclone* remained difficult. Many National Guard units arrived with only a few radios either because most of their communications equipment was in Iraq with forward-deployed forces or they left them at home because they did not realize that communications equipment would be needed.⁶⁹ With most of the civilian communications systems out of service and limited military communications capabilities, subordinate task forces executed their missions based on the commander's intent rather than direct orders from higher headquarters.⁷⁰

The primary focus of the relief effort in Mississippi centered on the three coastal counties—Jackson, Harrison, and Hancock—and the three counties immediately inland—Pearl River, Stone, and George (figure 19). TF *Cyclone* established four primary task forces to carry out the relief-and-recovery missions: TF *Lee*, TF *Wright*, TF *Quick*, and TF *Kiefer*. TF *Lee* provided support to Hancock and Pearl River Counties, which included Waveland, a town almost completely destroyed by Hurricane Katrina. The central counties, Harrison and Stone, received assistance from TF *Wright*. TF *Quick* helped the easternmost counties of Jackson and George. TF *Kiefer* provided logistics support to the three primary task forces; managed reception, staging, onward movement, and integration (RSOI) of inbound and outbound troops; and conducted relief operations in the northern portion of the state. This task force had two subunits: TF *Kiefer East*, which covered 15 counties east of US Highway 49, and TF *Kiefer West*, which covered 15 counties west of US Highway 49.⁷¹ Three other task forces, TF *Engineer*, TF *Military Police*, and TF *Aviation*, were already operational before TF *Cyclone* arrived in Mississippi. Unlike Louisiana, Major General Cross placed these task forces under the command of Major General Vadnais and TF *Cyclone* as well. Vadnais decided to leave

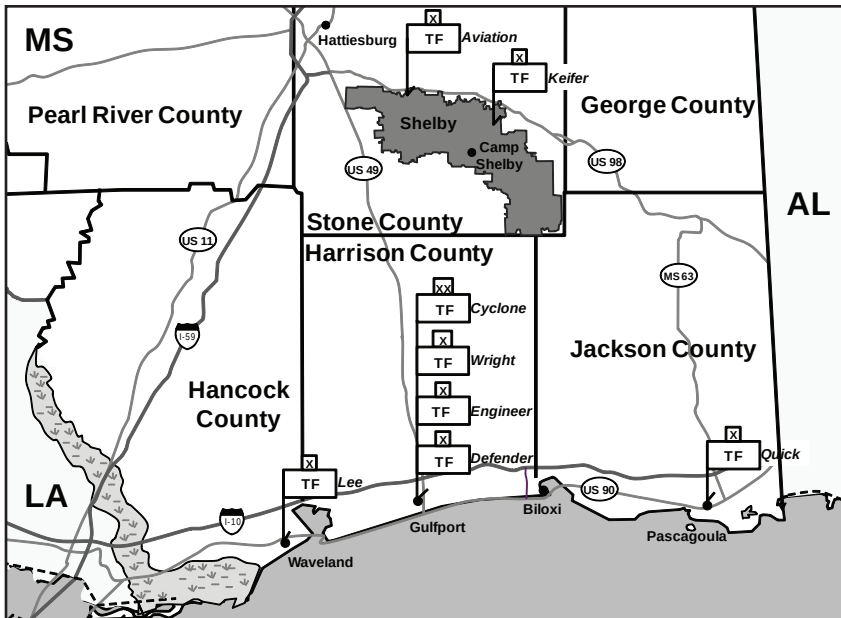


Figure 19. Mississippi task forces.

those task forces intact since they provided mission-specific support throughout the entire operating area in accordance with the adjutant general's three objectives. Another difference between the Mississippi and Louisiana operations was that TF *Cyclone* assumed command of all Mississippi National Guard forces as well as out-of-state troops.⁷² Thus, the operational commander in Mississippi controlled all National Guard forces in the state.

The Mississippi adjutant general also assigned a Mississippi National Guard general officer to each sector to serve as a liaison between the local governments and the task forces. Brigadier General Roger L. Shields served as one of those liaison officers. He explained that he worked with mayors and other local officials to develop mission assignments and with TF *Cyclone* to ensure that those missions were carried out. Since he was a Mississippi National Guard officer, he was there for the long haul and could provide continuity throughout the mission. Shields explained the mission to local authorities in simple terms: the National Guard was there to deliver food, water, ice, and other needed supplies and to act in such a way so that the survivors understood that the military was there to help them. The key to his mission, Shields said, was communication and coordination. He worked closely with city and county leaders as well as local law enforcement officials so that they understood the capabilities of the units assigned to their county and what those units could do for

them. It was difficult at first because there were so many agencies working in the county, but over time, coordination and communication improved and the National Guard troops executed their missions effectively. Communicating the exit strategy was an important part of his mission as well. Each task force developed measures of effectiveness, such as restoring power and reopening gas stations, hospitals, and restaurants, which were communicated to the local authorities so that they understood when they might expect the military to move on to another mission.⁷³ Such communication made it easier to transition from military to civilian assistance as the situation on the ground improved.

Developing and executing missions was a fairly straightforward process. Task Force *Cyclone* assigned a liaison officer to each county EOC. The liaison officer evaluated and discussed each request with local officials before it was submitted to the task force headquarters. Once the mission request was received at the task force headquarters, mission planners evaluated the importance of the mission and, based on the aforementioned priorities, determined the composition of the force necessary to complete the mission. The task force operations cell then assigned troops to the mission.⁷⁴

Although Mississippi used a task force structure similar to Louisiana's, the task forces operated in a much different manner. As noted earlier, TF *Cyclone* allowed the six task forces to operate autonomously. Each task force focused on the adjutant general's three primary missions within its area of operations: security, mobility, and humanitarian assistance. Unlike in Louisiana, these task forces had better access to a wide range of assets, including military police, aircraft, and engineers, which greatly enhanced their ability to respond to emerging situations.

Task Force Quick

Brigadier General Gary A. Quick of the Alabama Army National Guard commanded Task Force *Quick*, the eastern task force that provided relief and assistance to Jackson County. Alabama was one of the first states to send forces to both Mississippi and Louisiana. By Saturday, 3 September, the Alabama contingent in both states exceeded 3,000 Army National Guard soldiers. The 131st Aviation Brigade, which arrived on 30 August, contributed four helicopters. Two UH-60 Blackhawks flew general support missions out of Mobile, and two CH-57 Chinooks were staged in Gulfport where they assisted with aerial supply distribution. Two Alabama battalions, the 877th Engineer and 231st MP, also operated out of Gulfport. The 500-person engineer battalion assisted with cleanup

operations along the coast, while the 300-person MP unit performed traffic control and law enforcement duties in the Gulfport-Biloxi area.⁷⁵

When the 877th Engineer Battalion reached the Mississippi coast, the soldiers were struck by the damage wrought by the storm. To many of them, the area looked like a war zone. Initially, they concentrated on saving lives and distributing food, water, and ice. Their large trucks made that mission easier in the midst of so much destruction. The battalion brought 400 vehicles as well as 120 pieces of heavy equipment to facilitate its work. As soldiers made their rounds, rescuing people and delivering commodities, they mapped out the routes they needed to clear. By Monday, 5 September, a week after Hurricane Katrina struck, improving conditions in the battalion's sector allowed it to shift gears and begin clearing roads, public buildings, and schools.⁷⁶

The rest of the Alabama force, including medical, signal, engineer, maintenance, and communications units, deployed to Ocean Springs on Wednesday, 31 August.⁷⁷ The communications teams worked to restore first responder communications in the area. Other soldiers helped with fuel distribution, which was a critical issue in the first few days after Hurricane Katrina devastated the region.⁷⁸ Soldiers from the 161st Area Support Medical Battalion set up operations throughout southern Mississippi to help survivors get medical assistance. The battalion dispersed a number of small medical assessment teams to various locations in the county where they connected people needing medical care to those who could provide it. For example, they located oxygen tanks for one person, issued walkers and wheelchairs to those who lost theirs in the storm, and advised victims of an optometrist providing free glasses to those who lost theirs during the storm. After only 5 days in operation, a team in Gautier arranged medical assistance for 75 people in the town.⁷⁹ Other Alabama units operated three points of distribution (PODs), where they distributed food, water, ice, and other goods donated by the American public.⁸⁰ Alabama Guardsmen also escorted fuel tankers and provided security at crowded gas stations. Their presence led to an almost immediate improvement in security in the area. Local police reported that security incidents dropped from seven or eight per day to less than one per day.⁸¹

Task Force Wright

Brigadier General Timothy Wright, Indiana Army National Guard, Commander of Task Force *Wright*, arrived in Mississippi on Friday, 2 September. When he left for Mississippi, Brigadier General Wright thought he would command the division's rear operations, which involved

sustaining the troops working in the lower six counties of Mississippi. His mission changed soon after he arrived in the state. Instead, Major General Vadnais directed him to take charge of operations in Harrison County. The core of his task force included troops from Virginia, Georgia, and Mississippi. Soldiers from Virginia and Georgia manned the task force operations center, which he established in the Harrison County Central High School in Gulfport.

Georgia supplied more than 1,500 soldiers to Mississippi, including engineers, communications specialists, medical personnel, and logistics distribution personnel.⁸² One of the most important, and useful, Georgia units attached to TF *Wright* was the 265th Engineer Group. The 265th provided command and control over 850 Georgia National Guardsmen, including the 201st Supply and Service Battalion.⁸³ The 265th took a circuitous path to Harrison County. It first reported in at Fort Gillem, Georgia. From there, the unit transited to Camp Shelby, where it in-processed on Friday, 2 September. The engineers eventually assumed responsibility for engineering operations in Harrison County. Operating out of Lyman, they provided assistance to more than 125,000 civilians, a number equivalent to the entire population of the county.⁸⁴

Other Georgia Army National Guard units deployed to Harrison County as well. The 165th Quartermaster Company provided logistics support to the Georgia engineers and Company B, 161st Area Support Medical Battalion, provided medical services to soldiers and civilians needing medical attention. One CH-47 and two UH-1 helicopters flew to Mississippi on Wednesday, 31 August, where they assisted with search-and-rescue operations.⁸⁵

Virginia also sent task forces to both states. The Mississippi task force, dubbed Task Force *Stonewall*, mobilized late Sunday afternoon and departed for Mississippi on Tuesday, 6 September. The main body of TF *Stonewall* was the 2/116th Infantry Battalion.⁸⁶ It also included soldiers from the 1/116th Battalion, mechanics from the 3647th Maintenance Company, fuel handlers, a two-person ministry team, and staff augmentation from the state's Joint Forces Headquarters.⁸⁷

After processing through Camp Shelby, soldiers from the task force moved forward to Gulfport on Thursday, 8 September, where they relieved the 168th MP Battalion from Tennessee.⁸⁸ Before it left Camp Shelby, the task force was further augmented by an infantry company and an MP platoon from Indiana, bringing TF *Stonewall* up to 410 personnel.⁸⁹ Its operating area stretched from Pass Christian to Biloxi, a distance of 22 miles, and was 10 miles deep. This area suffered some of the heaviest

damage in the region. Roads were washed out, bridges were damaged, most buildings were destroyed, and streets were covered with rubble and other debris.⁹⁰

TF *Stonewall* carried out three main missions: security, humanitarian assistance, and recovery support.⁹¹ When the task force arrived in its area of operations, it conducted a relief in place with the Tennesseans, taking over their checkpoints and PODs. It also established a quick reaction force, which was available to respond to no-notice missions in support of the local police.⁹² The task force controlled 54 checkpoints, which it manned around the clock, and it operated random foot and vehicular patrols. By the time the task force arrived, most of the looting and other civil disorder had diminished, but National Guard soldiers continued the checkpoints and patrols because they created a sense of security for the surviving residents. In addition to the security mission, the task force contributed to the relief operations in other ways. First, soldiers provided security at civilian-run distribution sites. Second, task force personnel distributed supplies at several PODs. Third, it performed “search-and-assist” missions. During these missions, two-person patrols spread out in the operating area looking for citizens needing help. By this time, since there was little need for rescue operations, the search process focused on providing humanitarian assistance to those unable to get to the PODs. Finally, the task force helped with recovery by providing security for utility crews, clearing debris, and identifying human and animal remains for proper disposal.⁹³

Those missions were complicated by communications challenges. Since the task force was geographically dispersed, it established an ad hoc communications network to keep all of the disparate elements in touch. They quickly learned that it was critically important that patrols and checkpoint sentinels have up-to-date information because many citizens went to them directly for information about assistance and the status of recovery. But that meant that all task force personnel needed to know what the local, county, state, and Federal government agencies and the charity organizations were doing. This was a difficult task made even more challenging by the transitory nature of the charity organizations operating in the region. Some had significant resources and established operations for the long term. Others were in and out in a few days as soon as they exhausted their resources. Initially, the task force resorted to liaison officers and face-to-face meetings to obtain the necessary situational awareness. As the communications network recovered, the task force supplemented face-to-face contact with cell phones and e-mail. By the end of the operation, the task force’s communications network included

more than 25 nonmilitary organizations. Through its effort to link all of the various organizations in the area, TF *Stonewall* greatly improved the conditions of those citizens remaining in the area, since it provided them with information as well as food, water, and security.⁹⁴

Since communications were such a problem, a number of communications units deployed to Mississippi to help alleviate the communications shortfall. A Colorado communications unit provided communications support for the TF *Cyclone* operations staff at the Combat Readiness Training Center in Gulfport. The eight-person team established a wireless Internet network that encompassed an area 1½ miles wide. This team also facilitated voice communications with aircraft in the area and set up video teleconference connectivity.⁹⁵ A West Virginia communications unit, the 35th Civil Support Team, deployed to Pass Christian, Mississippi, where it served as the communications link for units operating in that area.⁹⁶

Another example of the security missions conducted in Mississippi occurred along a 17-mile stretch of the coast between Pass Christian and Biloxi. This coastal area was one of the most heavily populated and developed parts of the Mississippi Gulf coast at the time. Hurricane Katrina devastated the homes and businesses in this area, and local officials, worried that looters would finish what the storm began, asked TF *Cyclone* for help. Although the security area was quite large, TF *Cyclone* effectively executed the mission by working closely with mayors and law enforcement officials in the area to establish entrance and egress points. That arrangement allowed residents easy access to their property while also providing them with the level of security desired by local leaders and citizens alike.⁹⁷

Task Force *Lee*

Task Force *Lee* provided relief and assistance to the citizens of Hancock and Pearl River Counties. Brigadier General Jack E. Lee, Commander of the Ohio National Guard troops deployed to Mississippi, commanded this task force. The Ohio task force, Task Force *Buckeye*, included the Ohio Joint Forces Headquarters, 73d Troop Command, 371st Corps Support Group, 1/134th Field Artillery, as well as military police, transportation, maintenance, personnel, public affairs, and medical units. TF *Lee* incorporated units from Ohio, Arkansas, Florida, Kentucky, Georgia, Indiana, as well as Mississippi.⁹⁸

Ohio responded quickly to the call for assistance. More than 360 Ohio National Guardsmen were on the ground within 36 hours, and 1,000 more soldiers departed the state within 48 hours of notification. Soldiers from

the 73d Troop Command Headquarters, 1/148th Infantry Regiment, and the 371st Corps Support Group flew to the Gulf region on Thursday, 1 September. The next day, some 600 soldiers from the 1/148th Infantry and 437th MP Battalion left by ground convoy. Five UH-60 helicopters flew to Mississippi on Saturday, 3 September. The ground convoy arrived on Sunday, 4 September. That same day, 300 more soldiers from the 1/134th Field Artillery Regiment and a CH-47 Chinook arrived by air.⁹⁹

As the out-of-state forces moved into their areas of responsibility, one of the main objectives was to seamlessly integrate the arriving units into the existing relief operations. When soldiers from the 73d Troop Command arrived in Picayune on Monday, 5 September, they found a small contingent of soldiers from the 1/204th Air Defense Artillery Battalion working there. The Mississippi Army National Guard soldiers had already coordinated with local government leaders, police, and business people to determine where best to set up the POD. The Ohio soldiers met with the Mississippi soldiers, determined what they could do to help, and assumed responsibility for the distribution mission.¹⁰⁰

The 1/134th Field Artillery, Ohio Army National Guard, arrived in Poplarville soon after Hurricane Katrina struck the Gulf coast. Almost immediately, the battalion worked diligently to provide aid to the stricken citizens of Pearl River County. B Battery set up PODs in three towns:



Sergeant Kimberly Snow, 196th Mobile Public Affairs Detachment

Figure 20. Soldiers from B Battery, 134th Field Artillery Battalion, Ohio Army National Guard, hand out diapers and personal hygiene supplies at a point of distribution in Poplarville, Mississippi.

Poplarville, Lumberton, and McNeill. During the first week of operations in Poplarville, B Battery distributed food, water, and ice to more than 3,000 vehicles each day. By the end of the month, as conditions improved throughout the region, the volume in Poplarville slowed to less than 1,000 vehicles per day.¹⁰¹ In addition to manning distribution points, the battalion also provided security at local banks, pharmacies, and gas stations. As the food and water crisis abated, the battalion redirected some of its effort toward other missions. One of those missions was checking on every family and examining every structure in the county to ensure that everyone was accounted for in Pearl River County.¹⁰²

Arkansas also reacted quickly to Mississippi's request for assistance. Two UH-60 medical evacuation helicopters flew to Mississippi the day after Hurricane Katrina struck to help with search-and-rescue operations. Task Force *Razorback*, a 350-person force made up of engineers; military police; and medical, support, and transportation personnel, left for Camp Shelby, Mississippi, on Tuesday, 30 August.¹⁰³ TF *Razorback* operated in Waveland, a town heavily damaged by Hurricane Katrina.¹⁰⁴ Engineers from the 875th Engineer Company worked nonstop to clear the debris in Waveland that was piled more than 6 feet high in some places.¹⁰⁵

Florida provided significant support to Mississippi as well. As late as Wednesday, 21 September, even after Hurricane Rita struck Florida, 472 Florida National Guardsmen remained in Mississippi providing a range of support, including engineering, logistics, security, and humanitarian aid support. Florida units provided humanitarian aid and security in Bay St. Louis and throughout Hancock County. A logistics task force provided support to more than 8,000 military and civilian personnel in the area.¹⁰⁶ Engineers worked to restore schools by demolishing buildings too damaged to use and cleaning up those that were usable. In Bay St. Louis, the 269th Engineer Company removed damaged school buildings and erected 60 portable classrooms on school properties. It also operated sewage lift stations, repaired and maintained air conditioning systems in public buildings, and cleared debris throughout the city.¹⁰⁷

Soldiers in every task force performed a wide range of support missions. In Waveland, soldiers protected a mobile hospital from flooding. The North Carolina State Medical Assistance Team erected its hospital in an area that was prone to flooding. Rather than relocate the hospital and thus shutting down medical service in the devastated town for several days, the North Carolina doctors asked TF *Lee* for assistance. Soldiers from Ohio, Florida, and Georgia filled and stacked more than 1,000 sandbags to protect the hospital.¹⁰⁸

Task Force *Kiefer*

Brigadier General Michael Kiefer, Indiana Army National Guard, commanded Task Force *Kiefer*. Based at Camp Shelby, his task force provided logistics support to all of the other task forces and humanitarian relief to the inland counties of Mississippi. The task force also managed the RSOI mission for all troops reporting into the state. Given the mission of this task force, most of the units assigned to the task force were logistics units.

Michigan, Iowa, Kentucky, and Maryland contributed forces to TF *Kiefer*. Michigan deployed MP units and a water purification detachment to Mississippi. Military police from the 144th, 1775th, and 1776th MP Companies arrived in Mississippi on Wednesday, 31 August. The 1434th Quartermaster Water Purification Detachment departed for Mississippi the next day.¹⁰⁹ The Iowa National Guard sent 140 soldiers and airmen to Mississippi on Thursday, 8 September. They were to provide medical, logistics, and water purification support.¹¹⁰

Kentucky also dispatched troops to Mississippi. Forces from the 149th Armor Brigade, including a 110-person logistics distribution unit and a 154-person security team, arrived on Saturday, 3 September. Other forces from Kentucky included 151 soldiers from the 2123d Composite Truck Company, the 217th Quartermaster Detachment, which brought its water purification capabilities, a communications team from the Kentucky Joint Forces Headquarters, and a 33-person fuel distribution detachment from the 138th Field Artillery Brigade.¹¹¹ The 2123d Composite Truck Company arrived on Saturday, 3 September, and was assigned to TF *Kiefer* as well. It helped distribute supplies throughout the operations area.

Maryland deployed both ground troops and aviation assets to Mississippi. On 31 August, 100 soldiers from the 115th MP Battalion departed the state.¹¹² A week later, Maryland sent the 1/158th Cavalry with its UH-1 helicopters and 100 soldiers from the 1229th Transportation Company. The transportation and MP units operated out of Camp Shelby where they provided logistics support and conducted security missions.¹¹³

TF *Kiefer* was also responsible for RSOI. This difficult task was somewhat easier in Mississippi than in Louisiana. In Louisiana, there were two RSOI sites, while in Mississippi, virtually all incoming troops in-processed through Camp Shelby, which simplified the mission for TF *Kiefer*. That is not to say, however, that problems did not occur. As in Louisiana, units sometimes arrived or left with little or no notice. TF *Cyclone* tried to manage the problem by directing all subordinate units to

report their anticipated departure dates to the task force. Still, problems occurred. One notable incident involved a 200-person MP unit from Michigan. It was slated for duty in TF *Wright*, but when the unit ended up in TF *Lee*'s area of operations, Brigadier General Lee quickly assumed control over the unit. If it had been almost any other unit, Lee's actions might have passed unnoticed. Unfortunately for him, since Major General Vadenais is from Michigan, he began to ask questions about the unit when it failed to show up in the order of battle. TF *Cyclone* finally tracked the unit down after the task force received a spot report from the Michigan soldiers. The MPs were extricated from TF *Lee* and sent to Brigadier General Wright in Harrison County.¹¹⁴

Other Task Forces

The other three task forces, *Aviation*, *Military Police*, and *Engineer*, also operated independently throughout the state. Since all three task forces were already operational when TF *Cyclone* arrived, Major General Vadenais chose to let them continue executing their missions in accordance with the state hurricane response plan. Brigadier General Culver recalled telling one task force commander to continue what he was doing and only contact him if his help was needed.¹¹⁵ Task Force *Engineer*'s mission was to clear one lane of traffic on every road in the affected areas. TF *Aviation* coordinated airborne search-and-rescue operations in the immediate aftermath of the storm but quickly shifted to logistics transportation and humanitarian aid distribution once search-and-rescue operations ceased. The MP task force provided security at various locations around the state.

Summary

Conditions in Mississippi varied greatly from those in Louisiana, and correspondingly, the response to the crisis was different. On the one hand, the storm inflicted more damage along the Mississippi coastline than it did in Louisiana, where the subsequent flooding caused most of the damage. The high storm surge destroyed several towns, wiped out the road system, and left mounds of debris, which isolated victims and prevented them from traveling to relief distribution points. Missions in Mississippi focused on delivering food, water, and other supplies to survivors; clearing debris from roads so that rescue workers could reach the victims; and restoring power and other utilities. On the other hand, since the Mississippi coastal counties were more sparsely populated when compared to the urban areas of Louisiana that Hurricane Katrina struck, there was less need for search-and-rescue operations. Consequently, Mississippi National Guard forces shifted from rescue to relief operations relatively quickly. That shift freed up helicopters to deliver needed supplies to isolated rural communities.

Although the Mississippi National Guard used county-based task forces, they were organized and managed differently from those in Louisiana. All forces in Mississippi came under the control of Task Force *Cyclone*, which in turn reported directly to the state adjutant general. Each task force was assigned a mix of forces, including engineers, medical personnel, and helicopters, which made the task forces more flexible and better able to meet the frequently changing needs of each county.

The relief operation in Mississippi depended primarily on National Guard forces rather than on Title 10 forces. Mississippi never asked for Title 10 support, and very few Active-Duty Army forces deployed to the state to help with relief operations.

The Mississippi National Guard also assigned a Mississippi National Guard general officer to each county, which facilitated cooperation and understanding in each county. The general officer was there for the long haul—he remained in the post, even when the out-of-state forces redeployed. By working closely with leaders in the county, the general ensured that county and local authorities understood what the National Guard could provide and what end state they were working toward.

By 16 September, the situation in Mississippi improved to the point where supporting states began to draw down their forces in Mississippi. Roads were cleared, electricity was restored to most of the state, water systems were operational, and gas stations had sufficient amounts of fuel. In a few short weeks, the National Guard helped set the condition for restoring civil life in Mississippi.

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Chapter 6

Title 10 Operations

As Federal, state, and local emergency managers prepared for the storm, military leaders and planners also began to consider what they could do if that military support was required. Since a series of hurricanes ravaged Florida the previous year, Army commanders, such as Lieutenant General Russel Honoré at First Army, and their staffs were well versed in the emergency response process. Major Army commands inventoried assets; activated operations centers; and pre-positioned troops, equipment, and supplies as the storm approached the Gulf coast. After Hurricane Katrina struck, some Title 10 units began providing support under the immediate response authority. As the scope of the damage in the two states became clearer, the United States Northern Command (NORTHCOM) was given a “blank check” to do whatever was necessary to improve the situation in Mississippi and Louisiana. Soon thereafter, the President announced that he was sending ground troops to Louisiana. With the support floodgates open, thousands of Active component soldiers flowed into the region. Although the number of Title 10 soldiers was less than half that of the National Guard forces, the Active-Duty soldiers brought with them experiences forged in war in Iraq and Afghanistan. They used their expertise to clear bottlenecks and restore order where chaos reigned. In a few short weeks, the situation in Louisiana, in particular, improved to the point where Active component troops could leave. But the contribution Title 10 troops made to the relief effort in Louisiana and, to a lesser extent, in Mississippi was immeasurable.

Prelandfall Preparations

Although, as Assistant Secretary of Defense for Homeland Defense Paul McHale noted during testimony before Congress, the Department of Defense’s “responsibility under Title 10 and the National Response Plan is to provide assistance only when requested by FEMA or directed by the President,” the department took a number of actions before Katrina made landfall and even deployed some forces before a formal FEMA request had been made.¹ Many of those actions were made possible by a decision taken by Secretary of Defense Donald Rumsfeld. In light of the previous year’s hurricanes, he decided to delegate to NORTHCOM the authority to take some actions before a request for support. NORTHCOM is the unified command responsible for conducting military operations, including military support to civilian authorities, within North America, Cuba, and some of the Caribbean islands.² On Friday, 19 August 2005, the Chairman

of the Joint Chiefs of Staff issued a Severe Weather Execute Order, which authorized NORTHCOM to “provide support to FEMA for planning and conducting disaster response operations in affected areas.”³ Among the actions this Execute Order allowed was the early deployment of the defense coordinating officer (DCO) and Defense Coordinating Element and the designation of military installations as FEMA staging areas before landfall. This was, according to one member of the Joint Staff, an “unprecedented” decision that allowed the Department of Defense to respond more quickly to Hurricane Katrina than would have been the case if this authority had not been delegated.⁴ On Tuesday, 23 August, the Department of Defense inventoried assets such as meals ready-to-eat (MREs), deployable medical capabilities, and potential staging bases in anticipation of requests for assistance from civil authorities. The day before Hurricane Katrina hit, the Joint Directorate of Military Support (JDOMS) set up a crisis action team to process FEMA requests for assistance and began tracking Hurricane Katrina more closely.⁵

President Bush declared a state of emergency for Louisiana on Saturday, 27 August, in response to Governor Kathleen Blanco’s request. He followed that up the next day by declaring states of emergency for Mississippi and Alabama and declaring Florida a major disaster area.⁶ Those declarations allowed the Department of Defense to take other even more proactive actions. Soon after the President signed the disaster declaration, FEMA requested the use of Meridian Naval Air Station, Mississippi, as a Federal operational staging area (FOSA). NORTHCOM quickly approved the request. Anticipating future needs, NORTHCOM tasked the services with identifying forces and installations available for disaster support on Sunday, 28 August. FEMA made another request for facility support later on Sunday, asking for the use of Barksdale Air Force Base as an FOSA. Once again, NORTHCOM quickly approved the request.⁷

NORTHCOM took other proactive steps in the days leading up to Hurricane Katrina striking the Gulf coast. The NORTHCOM Joint Operations Center began tracking the storm on Tuesday, 23 August. NORTHCOM began participating in daily teleconferences with FEMA, JDOMS, the Joint Forces Command, the United States Transportation Command (TRANSCOM), the National Guard Bureau, and NORTHCOM components the next day. The discussions focused on base evacuations, protection of military assets, and deployment of the DCOs.⁸ At the same time, NORTHCOM issued warning orders to the DCOs and their respective Defense Coordinating Elements assigned to the endangered states and activated the Louisiana emergency preparedness liaison officer.⁹ On Friday, 26 August, 3 days before Hurricane Katrina struck,

NORTHCOM issued its Hurricane Katrina Execute Order, and the DCOs for Mississippi, Louisiana, Alabama, and Georgia were directed to deploy. Other NORTHCOM liaison officers were dispatched to FEMA and the US Army Corps of Engineers headquarters.¹⁰

The DCOs for Florida, Alabama, and Mississippi fell under the command of the US First Army, which commanded all troops east of the Mississippi River. The DCO for Florida was the first DCO to be activated. He set up shop at the Joint Field Office in Orlando around noon on Thursday, 25 August, more than 6 hours before Hurricane Katrina made landfall around 1830. Colonel Damon C. Penn, the DCO for Mississippi, arrived in Jackson, Mississippi, and began attending meetings with FEMA and the Mississippi Emergency Management Agency (MEMA) on Sunday, 28 August, the day before Hurricane Katrina struck. The Alabama DCO, Colonel Laverne Young, reported to the state Emergency Operations Center (EOC) in Clanton, Alabama, on Sunday as well.¹¹

The US Fifth Army, which controlled all troops west of the Mississippi River, activated the Louisiana DCO and Defense Coordinating Element on Friday, 26 August. The DCO for Louisiana was Colonel Anthony F. Daskevich, and one planner, Mr. Scott Miller, left Fort Sill the next day and arrived at the state EOC in Baton Rouge around 1830 on Saturday evening.¹² He attended his first meeting with William Lokey, the Louisiana Federal coordinating official (FCO) at 2000 that night.¹³ The discussion was limited to generalities about capabilities the military could provide and an assessment of the potential impact of Hurricane Katrina; they did not discuss any specific mission assignments.¹⁴

Members of the Louisiana Defense Coordinating Element spent Saturday, 27 August, preparing equipment. The next morning, they drove to Houston, Texas. On arrival, they began 24-hour operations, tracking the storm. They planned on moving forward to Baton Rouge after the hurricane passed through Louisiana and it was safe for them to travel. They eventually arrived at the EOC in Baton Rouge on Tuesday, 30 August, the day after the hurricane struck Louisiana.¹⁵

During a conference call on 28 August, Army liaison officers reported on the status of preparations in their states. A Florida liaison officer stated that National Guard soldiers had already been released from state active duty and were standing by to provide assistance requested through the Emergency Management Assistance Compact (EMAC). He also noted that Florida National Guard troops were experienced in disaster response. The Florida DCO indicated that his priorities were sustainment, logistics support, and repair of the power grids. Florida, he said, could surge six

30-person strike teams into affected areas if needed. The Alabama DCO advised that Alabama was primarily concerned about flooding. The state had been hit hard by storm surge in the wake of several recent hurricanes. Colonel Penn reported that the Mississippi EOC was fully operational and that responders were preparing throughout the state. By this time, more than 800 Army National Guard soldiers were on state active duty in Mississippi. Colonel Daskevich indicated that FEMA officials had arrived and were reviewing contingency plans with Louisiana officials. Their focus, he said, was on the distribution of supplies.¹⁶ So, the Army's liaison organization was fully functional, ready to provide whatever assistance was requested, well before Hurricane Katrina struck the Gulf coast on 29 August.

Lieutenant General Russel L. Honoré commanded the US First Army. Honoré was an experienced general officer who had held a number of senior posts before taking command of First Army in July 2004. As the commanding general of the 2d Infantry Division in Korea, he had experienced flood disasters, and he was well versed in domestic disaster response procedures after a tour as commander of the Standing Joint Forces Headquarters, Homeland Security at NORTHCOM. Moreover, as the commanding general of First Army, he had firsthand experience with hurricane relief operations after four hurricanes hit Florida over a 3-month period in 2004.¹⁷ So, when First Army began tracking the weather formation that eventually became Hurricane Katrina, he started thinking about how he would respond to the developing situation. Because of his extensive disaster-related experience, he knew that saving lives would be the critical focus after the storm made landfall and that boats, helicopters, and communications gear would be in great demand to support the life-saving mission.¹⁸

Although First Army began contingency planning well before Hurricane Katrina struck the Gulf coast, preparations accelerated after President Bush declared states of emergency for all of the Gulf States on Saturday, 27 August. During a teleconference on Sunday, 28 August, Lieutenant General Honoré directed his staff to submit a capabilities request to NORTHCOM.¹⁹ He wanted to know what assets were available to him if his command was called on to help. Unfortunately, the Joint Staff had not yet received any requests for assistance from FEMA when it received Lieutenant General Honoré capability request. Consequently, acting in accordance with doctrine, the Joint Staff did not act on the request.²⁰ Although it acted properly, the Pentagon's failure to act proactively in the face of the impending crisis was a mistake.

During that same teleconference, Lieutenant General Honoré asked NORTHCOM to establish a joint operating area (JOA) for the potential relief effort. He believed a JOA was necessary because it appeared that Hurricane Katrina would strike the Gulf coast near the border of Mississippi and Louisiana. Since the expected landfall point was also the boundary between First and Fifth Armies and FEMA Regions IV and VI, he was concerned that command and control would quickly become an issue if a JOA was not established.²¹ NORTHCOM recognized the potential problem as well and included Louisiana in Joint Task Force (JTF) *Katrina*'s area of operations when the joint task force was established the day after Hurricane Katrina struck.

Among the assets readily available to Lieutenant General Honoré were the National Guard troops stationed at Camp Shelby, Mississippi. Thousands of soldiers were at Camp Shelby training for overseas deployment. Since they were on Title 10 duty, they came under Honoré's direct command. Among them were more than 1,000 Wisconsin Army National Guard soldiers. They had been activated and sent to Camp Shelby on 13 August for training in preparation for overseas deployment. The soldiers weathered the storm without incident, but they were not used for hurricane relief missions because they needed to maintain their training schedule so they could deploy on time.²² During a conversation with Colonel Earnie Shows, Commander of the Mobilization Center at Camp Shelby, Honoré directed him to be prepared to render assistance as needed. He told Colonel Shows to assemble his trucks, fill anything he could with water, and stand by for further orders. Although he realized that he might have to send those troops into dangerous situations, Honoré also told Shows that his troops were only allowed to carry pistols. As with the soldiers operating in New Orleans a week later, Honoré did not want heavily armed American soldiers marching through American cities. Title 10 status did, however, bring up other concerns. Shows was also reminded that these soldiers were subject to the Posse Comitatus Act, something National Guard troops were not normally concerned with.²³

Later in the day, during a battle update brief by his staff, Lieutenant General Honoré expressed concern about the risk Hurricane Katrina posed to the troops stationed in the region. He reminded everyone that keeping the troops safe was his first priority. He wanted all of his soldiers inside, protected from the storm, as it passed through the region. Honoré did not want people out in the teeth of the storm attempting rescue missions. Saving lives and protecting property, he said, would have to wait until after the storm had passed.²⁴



Specialist Tanya Van Buskirk, USARCENT Public Affairs

Figure 21. Lieutenant General Russel Honoré meets with congressional leaders on board the USS *Iwo Jima*.

Lieutenant General Honoré made another important decision on Sunday. Under the guise of conducting a training exercise, he decided to go to Camp Shelby, Mississippi, as soon as the hurricane passed through the region. Honoré believed that command and control was a function not a place. He wanted to go to Mississippi so that he could personally evaluate the situation and ensure that the state got the help it needed. Throughout the crisis, he followed this dictum. He was always forward, in contact with Federal, state, and local leaders, so that he personally understood what they needed from him.²⁵

The move forward to Camp Shelby was challenging. Honoré tried to drive to Mississippi Monday night, but Interstate 20 was closed. Then, he tried to get the Air Force to fly him, but the pilots did not want to fly because the hurricane was heading toward Georgia. So, he had to drive to Camp Shelby Tuesday morning. Most communications were down, so he listened to the news on an XM radio given to him by his daughter and used the International Maritime Satellite System (INMARSAT) in his command vehicle to talk to others.²⁶ As he headed toward Camp Shelby, a small support staff, First Army (Forward), moved forward as well. Honoré wanted the staff in place by noon on Tuesday, 30 August.²⁷

The US Army Corps of Engineers was also concerned with making preparations for Hurricane Katrina's arrival since it is the lead agency for

Emergency Support Function (ESF) #3, Public Works and Engineering. The Corps of Engineers established a number of procedures to meet that responsibility, among which were preawarding contracts for services and commodities required under ESF #3 and pre-positioning equipment and supplies along the Atlantic and Gulf coasts. Among the responsibilities assigned to the Corps of Engineers by ESF #3 are damage assessments; structural stabilization and emergency repairs of public facilities; emergency contracting of life-sustaining services such as water, ice, and emergency power; restoration of critical navigation, flood control, and water infrastructure; and debris removal.

The Mississippi Valley Division of the Corps of Engineers was responsible for Corps operations in Mississippi and Louisiana. The division's disaster plan shifted the disaster response mission to a district unaffected by the event. That enabled the affected district, in turn, to concentrate on recovery instead of having to respond to the incident.²⁸ In this case, the Memphis District supported Louisiana while the Vicksburg District covered Mississippi. As Hurricane Katrina advanced toward the Gulf coast, commanders activated the EOCs in both districts and began tracking the storm.

In accordance with the division plan, most of the staff in New Orleans evacuated up river to Vicksburg, Mississippi, on Saturday, 27 August. By Sunday, 28 August, only Colonel Richard Wagenaar, the newly arrived commander of the New Orleans District, and eight other employees remained in the city.²⁹ This was the first time that the Corps had ever kept personnel in a storm impact area. Composed of experts in boat operations, emergency management, facilities, and information management, they took shelter in a bunker designed to withstand Category 5 winds. They stayed behind so they would be able to conduct immediate damage assessments and get the relief-and-repair mission going quickly.³⁰

By 29 August, the day Hurricane Katrina made landfall, Active-Duty forces were much more prepared to meet the situation than during past emergencies. Forward staging areas were allocated to FEMA, DCOs and their staffs were in place, assets were inventoried, and operations centers were manned and ready to respond. In First Army's area of operations, Lieutenant General Honoré went even further by making plans to move a portion of his staff forward to Camp Shelby, Mississippi, where it could better assist the state. The US Army Corps of Engineers also went beyond the norm by leaving personnel in New Orleans so they could conduct damage assessments and coordinate Corps relief-and-repair missions.

Immediate Response

NORTHCOM activated its battle staff on Monday, 29 August, after Hurricane Katrina made landfall.³¹ The next day, as the scope of the damage inflicted by the storm became more apparent, NORTHCOM established a joint task force to control all Active component forces sent to the region. Lieutenant General Honoré was selected as the Commander of Joint Task Force *Katrina*, and US Fifth Army was designated as a supporting command. The order establishing JTF *Katrina* also delineated a JOA that encompassed both Mississippi and Louisiana. Clearly delineating the inter-Army command relationship was important since Louisiana was within the Fifth Army area of control.

JTF *Katrina* was responsible for a wide range of Active component assets, including Army, Navy, Marine, and Air Force units. Acting under the immediate response authority, Active-Duty forces joined the search-and-rescue effort on Tuesday, 30 August. The amphibious warfare helicopter carrier USS *Bataan*, which was in port in Ingleside, Texas, when Hurricane Katrina entered the Gulf of Mexico, was the first to arrive. *Bataan*, with three MH-60 Seahawk and two MH-53E Sea Dragon helicopters on board, got underway and closed on the coast of Louisiana late Tuesday afternoon. Her helicopters quickly joined the relief effort.³² The first Air Force helicopters, five HH-60 helicopters from Patrick and Moody Air Force Bases, arrived on Wednesday.³³ Army helicopters began arriving on Tuesday, the day after Hurricane Katrina struck. Two UH-60 Blackhawk helicopters arrived on Tuesday; 14 helicopters reported in the next day; and 16 more helicopters arrived on Friday.³⁴ Large numbers of helicopters and fixed-wing aircraft continued to flow into the JOA over the next 10 days, peaking at 143 on 8 September.³⁵

Although JTF *Katrina* was officially established on 30 August, Lieutenant General Honoré started planning his response well before Hurricane Katrina struck. First Army focused initially on Mississippi and Alabama since those states were in First Army's area of responsibility. Throughout the day on Monday, 29 August, the First Army staff tracked the damage wrought by the storm and evaluated the Army capabilities that might be needed to bring relief to the victims. Honoré repeatedly stressed the need to communicate and coordinate with both the National Guard Bureau and the states so that First Army had a clear understanding of the situation and that the states understood what support First Army could provide.³⁶

The First Army command element reached Camp Shelby, Mississippi, around noon on Tuesday, 30 August. As it closed on Camp Shelby, it got word that NORTHCOM stood up JTF *Katrina* with First Army in

152

command. On arrival at Camp Shelby, the staff immediately began setting up the forward command post, which became JTF *Katrina* (Forward). Honoré established the initial work priorities for the staff, which were:

- Account for people.
- Set up communications.
- Develop situational awareness.
- Develop a contact roster.
- Identify future requirements.
- Build a situation map.
- Prepare to take control of all Title 10 forces in the JOA.³⁷

Soon thereafter, the 67th Signal Battalion arrived from Fort Gordon, Georgia, and began setting up communications for the forward command post. With commercial communications in the region almost completely destroyed, reliable military communications were critical for effective command and control of the units deployed to the region. The battalion received a warning order from First Army before Hurricane Katrina made landfall early Monday morning. The battalion used the day to prepare and was ready to depart early Tuesday morning. Once it arrived at Camp Shelby, it surveyed the site and set up equipment. The battalion's communications suite, including voice communications, e-mail, and video teleconference capabilities, was fully operational Wednesday morning.³⁸

Meanwhile, as JTF *Katrina* (Forward) was getting set up at Camp Shelby, Lieutenant General Honoré drove to Gulfport where he met with Governor Haley Barbour and Major General Harold Cross.³⁹ This was a pattern that the general followed time and time again as he moved forward to meet with key leaders. Although some staff members complained that he was hard to keep track of, he insisted that it was his job to go forward so that he knew what, exactly, was going on. The situation in Mississippi was dire. When he arrived around 1300 on Tuesday, engineers were still working to clear the airport's runway.⁴⁰ Honoré learned that there were as many as 100,000 survivors in the coastal counties, all of whom needed food, water, and ice. Getting those commodities to them was difficult because of the damage Hurricane Katrina had inflicted on the roads. Fuel shortages further complicated the situation. Electricity was out throughout the southern part of the state, and state officials told Honoré that it would take 10 to 15 days to restore power in the affected area. In the meantime, a few generators were available to provide power to essential services, but the fuel shortages made that assistance problematic as well.⁴¹

Lieutenant General Honoré decided to travel to Louisiana once he received the order to establish JTF *Katrina* Tuesday evening. There, he met with Governor Blanco, Major General Bennett C. Landreneau, and others

at the Superdome. Once again, Honoré gained a better understanding of the crisis in Louisiana by meeting with and talking to the key leaders in the state. He maintained close contact with those leaders throughout the crisis.

One of the primary topics of discussion at the meeting was the evacuation of the Superdome. Later, when Admiral Timothy J. Keating, Commander of NORTHCOM, asked Honoré if the situation at the Superdome was a crisis or if the people there were merely tired of being there, he responded “all of the above.” Honoré went on to explain that it was like being on “a crowded island, as people’s attitudes ranged from very irritated to hostile.” They needed to get the people out as soon as possible or they could anticipate some “significant issues.”⁴² When Governor Blanco asked Lieutenant General Honoré to take over the evacuation mission during another meeting Wednesday afternoon, he readily agreed. He, in turn, directed Brigadier General Mark Graham to carry out the mission. The JTF *Katrina* staff worked with FEMA, the Louisiana National Guard, and other organizations to develop the evacuation plan.⁴³

Meanwhile, since he and his staff had focused only on his area of responsibility in the days leading up to Hurricane Katrina striking the United States, Honoré directed his staff to conduct a “bottom-up” assessment so he could better understand the situation in Louisiana. With all the various agencies involved in the relief operation struggling to work with one another, Honoré instructed his staff to look into ways interagency coordination could be enhanced. Improving communications was an obvious answer, so he directed the staff to determine what FEMA needed to boost its communications capabilities and then pushed to get those resources into the city immediately. He also wanted to know what resources the state needed to sustain the relief effort and tasked the staff with finding ways to increase the flow of needed commodities into the state.⁴⁴

With communications in New Orleans highly uncertain, a second communications battalion soon deployed to the city. The 56th Signal Battalion from Fort Gordon, Georgia, provided communications support to the Fifth Army command and control cell, as well as the 13th Corps Support Command and the 14th Combat Support Hospital in New Orleans.⁴⁵ They set up both secure and nonsecure voice and data communications systems as well as video teleconference capabilities. The soldiers also contributed to the relief mission by connecting the civilian communications network with the military network so that soldiers could talk to the police, fire departments, and other local emergency response officials.⁴⁶

Key elements in the Department of Defense response to Hurricane Katrina were the DCOs and their supporting Defense Coordinating Elements. They were deployed to Alabama, Mississippi, and Louisiana. Initially, there was conflict between the Louisiana Defense Coordinating Element and the JTF *Katrina* staff over who the DCO reported to.⁴⁷ By doctrine, the DCO reports to the joint task force if established unless higher headquarters decides differently.⁴⁸ NORTHCOM quickly resolved the chain of command issue by directing the DCOs to report to NORTHCOM rather than the joint task force.⁴⁹ While Lieutenant General Honoré worked with state leaders, FEMA officials, and his subordinate Active component commanders to identify and solve problems, the DCOs and their staffs worked with NORTHCOM to validate and fulfill the resultant mission assignments.

The DCO for Alabama was Colonel Lavern Young Jr. He reported to the state EOC in Clanton, Alabama, on Sunday, 28 August. After Hurricane Katrina struck Alabama, he performed an aerial damage assessment. The two westernmost coastal counties, Mobile and Baldwin, suffered the most damage. Over the next 24 hours, Colonel Young coordinated the dispatch of 94 truckloads of supplies to points of distribution (PODs) operated by the Alabama National Guard. The situation in Alabama stabilized quickly, so JTF *Katrina* issued a warning order to Colonel Young on 30 August, notifying him of Lieutenant General Honoré's intention to send him and his staff to Gulfport, Mississippi, as an advance element for JTF *Katrina*.⁵⁰

The DCO in Louisiana, Colonel Anthony F. Daskevich, and his staff also performed yeoman's work. Daskevich was Commander of the 4th Brigade, 75th Division (Training Support), at Fort Sill, Oklahoma, at the time. Like the DCOs for Alabama and Mississippi, Fifth Army dispatched Colonel Daskevich and a civilian planner to Louisiana well before the storm hit. They arrived at the state EOC on Saturday evening, 27 August.⁵¹

The rest of his team went to Houston to wait out the storm. The Defense Coordinating Element arrived in Houston late Sunday night and set up its command post and was fully operational by 0015 Monday morning, hours before the storm hit.⁵² Initially, the pace of operations was light. Command post personnel spent much of the day on Monday trying to maintain situational awareness.⁵³ They tracked the reported damage to New Orleans and the surrounding parishes as well as Louisiana's EMAC requests. Louisiana officials submitted several requests for assistance through EMAC on Monday. They asked for five CH-47 helicopters, two from Georgia, two from Texas, and one from Florida; three UH-60 helicopters, two from Florida and one from Oklahoma; and three heavy expanded

mobility tactical truck (HEMTT) fuel tankers.⁵⁴ The team worked one mission assignment that day—a request for Active component helicopters to conduct damage assessments after the storm passed. It coordinated the deployment of two UH-60 helicopters from the 1st Cavalry Division at Fort Hood to fulfill the mission request. The mission was finally approved around 0300 Tuesday morning, and the aircraft arrived in Louisiana later that day.⁵⁵ The team remained in Houston until Tuesday morning. Once it was safe to travel, the team drove to Baton Rouge and linked up with Colonel Daskevich.⁵⁶

The Louisiana team is representative of a typical Defense Coordinating Element. The team, which was drawn from Colonel Daskevich's brigade, included the brigade's S2 and intelligence noncommissioned officer (NCO), S6, assistant S3, training chief, current operations officer, training officer, training NCO, current operations NCO, a finance NCO, and a civilian defense support of civil authorities (DSCA) planner. The assistant S3, Lieutenant Colonel David Napier, served as the team chief. The training chief and current operations officer served as the day and night operations officers, and the training NCO and current operations NCO served as the day and night operations NCOs. The training officer was later sent to JTF *Katrina* as a liaison officer.⁵⁷

Once they arrived in Baton Rouge, the pace of operations for the Defense Coordinating Element picked up considerably. Napier established two shifts to support 24-hour operations. His team tracked the status of requests, reviewed parish reports to identify their top needs, and coordinated with the National Guard forces to maintain situational awareness of their missions and force deployments. The team also established close liaison with JTF *Katrina* to ensure that it was aware of all missions emanating from Lieutenant General Honoré and the joint task force.⁵⁸

Conditions at the state EOC were difficult during the first few days after the storm hit. The influx of hundreds of relief personnel meant that space was extremely limited. The Defense Coordinating Element operated out of a single cubicle. Although element personnel discussed moving into their tents, they decided to remain in the EOC, close to their civilian and National Guard counterparts and thus better able to coordinate support missions.⁵⁹

In addition to space constraints, the Defense Coordinating Element had to overcome other operational challenges. The Louisiana EOC was, in the words of one team member, a “scene of mass chaos.”⁶⁰ As additional forces surged into the operating area, it was difficult for the team to

maintain situational awareness, which led to some duplication of effort.⁶¹ FEMA appeared disorganized and no one seemed to know what to do. Lieutenant Colonel Napier recalled that one of his biggest contributions may have been using his Army skills and training to gently introduce structure into one of the FEMA meetings he attended. He coached them by suggesting such basics as publishing an agenda and establishing a seating chart so everyone knew who was talking to whom during meetings. After the meetings, he submitted feedback so that the FEMA operations staff understood what he thought had happened during the meeting. FEMA later hired a contractor to provide similar assistance.⁶²

During their deployment, the Louisiana Defense Coordinating Element processed more than 115 requests for assistance and 98 military support requests, which had a total value of more than \$840 million. The types of missions supported by the team included helping evacuate the city of New Orleans and the surrounding parishes; delivering more than one million MREs, coordinating aviation support for search and rescue, aerial damage assessment, medical evacuation, and the delivery of commodities; and removing debris throughout the state.⁶³ The Defense Coordinating Element screened all the military support requests before sending them up the chain of command to NORTHCOM. This was a crucial step, for it was important to know what type of support the requester wanted. For example, the US Customs and Border Patrol requested a C-130 aircraft to deliver three sport utility vehicles (SUVs). Since a C-130 can only carry two such vehicles, this request was not supportable as written. Instead of denying the request, the team contacted the requester and determined that Border Patrol officials did not care what type of aircraft was used to transport the SUVs, they just wanted to get them to New Orleans as soon as possible. The Defense Coordinating Element revised the mission request to more accurately convey the needed assistance and submitted it to NORTHCOM.⁶⁶

One of drawbacks of Lieutenant General Honoré's aggressive, forward-leaning attitude was that he sometimes agreed to support missions that the DCO could not approve. For example, Honoré offered to provide several Navy LCACs (landing craft air-cushion) to rescue cattle stranded in rural areas. Once his staff completed the cost analysis, the DCO determined that it was more cost-effective to pay farmers for the loss of their cattle than to send in landing craft to rescue them.⁶⁵ On another occasion, after Hurricane Rita hit Louisiana, Honoré promised officials in Lake Charles a 250-person tent by nightfall to provide shelter for those in need. When Defense Coordinating Element personnel received the mission request,

they investigated and discovered that the city only needed shelter for 12 people, so they went back to JTF *Katrina* and convinced them to retract the request.⁶⁶

The Defense Coordinating Elements experienced other challenges while trying to validate Title 10 missions. Initially, since damage to the communications infrastructure inhibited the flow of information among the various organizations involved in the relief operation, the Defense Coordinating Element staff was not fully aware of ongoing National Guard operations.⁶⁷ Consequently, there was duplication of effort in the immediate aftermath of the storm, especially during search-and-rescue operations. Moreover, Lieutenant Colonel Napier recalled that most civilians had difficulty differentiating between Title 10 and state active duty/Title 32 forces. To them, everyone in uniform was in the Army, so the Defense Coordinating Element fielded many phone calls meant for the National Guard. Rather than shunt the caller aside, Defense Coordinating Element personnel constructed a comprehensive contact list so they could refer those callers to the right person. Later, as National Guard soldiers flooded the state and liaison officers became more plentiful, they transferred callers directly to the appropriate National Guard liaison officer.⁶⁸

Despite those challenges, the Department of Defense carried out its obligations as delineated in the National Response Plan. Ed Buikema, the Acting Director of Response for FEMA, testified that the Department of Defense fulfilled every mission assignment it took on.⁶⁹ The Deputy Federal Coordinator for Louisiana, Scott Wells, reinforced that assertion when he commented that the Department of Defense completed every mission assignment in a timely manner.⁷⁰

The first Active component helicopters arrived the day after Hurricane Katrina struck. Before landfall, FEMA asked the Defense Coordinating Element for two helicopters. FEMA wanted to use them to transport the rapid needs assessment (RNA) team around the state to survey and assess the damage. The Defense Coordinating Element arranged for two UH-60 Blackhawks from the 1st Cavalry Division at Fort Hood, Texas, and coordinated their arrival on 30 August.⁷¹

The next day, six Active Army UH-60 helicopters and their support crews from the 498th Medical Company (Air Ambulance) at Fort Benning, Georgia, arrived. They left for Louisiana within 5 hours of receiving the execute order and landed in Baton Rouge late in the afternoon on 31 August. After a quick briefing by a Louisiana Army National Guard pilot, they took off for the city and began search-and-rescue operations. During the first 7 days of their deployment, they conducted around-the-clock



Figure 22. A US Army UH-60 helicopter from the 4th Infantry Division maneuvers for a rescue.

operations. Aircraft were launched at first light and continued flying until they reached their maximum allowed flight hours or duty day (8 hours of flight time or 12-hour duty day respectively). When helicopters returned to base, the day crews were replaced by crews equipped with night-vision goggles so they could continue searching throughout the night.⁷²

The flight crews performed many dramatic rescues. In one case, while operating at night, a crew member spotted a faint light shining from a hole in the roof of a house. The helicopter hovered over the house and dropped a medic down by hoist. He cut through the roof of the house with an axe and pull out several survivors. During a similar mission, a medic chopped through the sky light of a submerged building to rescue several trapped people. And, during yet another rescue, the pilot expertly maneuvered the helicopter so that the crew could rescue civilians trapped on the balcony of a submerged building. Since the victims had no means of reaching the roof, the pilot had to approach the balcony from the side to rescue those stranded there. Through 16 September, the 498th Medical Company conducted more than 200 rescue missions and performed 65 resupply missions. During those missions, it rescued 917 people, including 93 people who required transportation by litter.⁷³

In the week after Hurricane Katrina struck, more and more Active component helicopters flowed into Louisiana. Four UH-60 and four CH-47 helicopters from the 1st Cavalry Division arrived on Wednesday, 31 August. Two more UH-60 and two UH-1 medical evacuation (MEDEVAC)

helicopters arrived that same day from Fort Polk, Louisiana. The next day, Colonel Dan Shanahan, Commander of the 1st Cavalry Brigade, and his brigade headquarters arrived to provide command and control over the expanding Title 10 Army helicopter fleet. Sixteen helicopters, including 12 UH-60 Blackhawks, 3 CH-47 Chinooks, and 1 MEDEVAC helicopter, reported in from the 4th Infantry Division. By 2 September, 42 Active component helicopters operated in and around New Orleans.⁷⁴ The 5/159th Aviation Regiment, an Army Reserve unit, sent five CH-47 helicopters on 5 September. The Title 10 helicopters participated in the search-and-rescue operation and assisted the humanitarian relief mission by airlifting survivors to evacuation points; transporting food, water, and other supplies to the Superdome and other locations; and moving soldiers throughout the area.⁷⁵

One other area of the US Army, the Army Corps of Engineers, provided immediate response assistance from the beginning of the crisis. With respect to natural disasters, the Corps of Engineers has three important mission areas:

- It is responsible to FEMA under the National Response Plan. The National Response Plan assigns the Corps of Engineers responsibility for ESF #3, Public Works and Engineering. This responsibility encompasses delivering ice and water, providing temporary roofing, removing debris, repairing or temporarily replacing public facilities, and providing flood abatement.⁷⁶
- The Corps of Engineers has its own responsibilities for the repair of civil works and maintenance of navigation on the Nation's waterways.
- The Corps of Engineers is responsible for providing engineer support to the US Army.

During the response to Hurricane Katrina, the Corps of Engineers supported all three mission areas.

During the immediate response phase, the Corps of Engineers provided support to FEMA by delivering water and ice to the affected states. From landfall through 2 September, the Corps of Engineers delivered 1.9 million MREs, 6.7 million liters of water, and 1.7 million pounds of ice to Mississippi and Louisiana. Although those numbers are impressive, the Corps encountered many obstacles during the early stages of this mission. Requests for water and ice were so large that they overwhelmed the capacity of some of the precontracted suppliers, leading to temporary shortages. Since FEMA lacked the ability to track shipments, the commodities ended up at the wrong locations on several occasions, which was a considerable

problem during the early stages of the relief operation. There were also instances of the wrong Federal or state agency appropriating items intended for other agencies.⁷⁷ But Corps personnel quickly overcame those problems, and they delivered considerable quantities of water and ice to both Mississippi and Louisiana.

The most dramatic mission was, of course, the closing and repair of the breaches in the levees surrounding the city of New Orleans. This mission fell under the Corps of Engineers' civil works responsibilities. Normally, all Corps of Engineer personnel evacuate when threatened by a hurricane. Most of the New Orleans District staff did so, going to Vicksburg, Mississippi, as Hurricane Katrina approached the Gulf coast. But in a break with precedent, a small contingent, led by Colonel Richard Wagenaar, the District Commander, remained behind in New Orleans to conduct damage assessments and respond to emergent situations. Wagenaar's team received a report of the storm surge overtopping levees about 0500 Monday morning. Soon, reports arrived indicating levee breaches at several points, including the Inner Harbor Navigation Canal, the 17th Street Canal, and the London Avenue Canal. Despite its concern, the team did not venture out into the city until 1400, when the storm finally began to subside. Although flooding prevented Corps personnel from getting close enough to any of the suspected breaches to confirm their existence, the depth and extent of the flooding convinced Colonel Wagenaar that the reports were accurate. By helicopter on Tuesday morning, he confirmed the damage along the Inner Harbor Navigation Canal and the 17th Street Canal. Later that afternoon, other members of the team confirmed the damage to the London Avenue Canal.⁷⁸

As in other areas of the response effort, initially there was confusion over who was responsible for the levee repair operation. The Corps of Engineers, the local levee boards, the Orleans Sewage and Water Board, and the Louisiana Department of Transportation and Development all clashed over who was in charge and how the repairs should be effected. All parties eventually agreed that the Corps of Engineers was responsible for the repair mission under its civil works authority, but the lack of unity of command initially hampered the repair mission.⁷⁹

The Corps of Engineers' dewatering plan incorporated a three-pronged approach. First, the Corps used gravity to drain as much of the floodwaters as possible. To facilitate drainage, the Corps deliberately made a number of breaches in the levees. Second, the Corps mobilized military and contracting resources to close the existing breaches. Third, as soon as the breaches were repaired, the pumps began pumping the floodwater out of



Chuck Prichard, US Army Reserve Command

Figure 23. A CH-47 Chinook helicopter from the Army Reserve's B Company, 5th Battalion, 159th Aviation Regiment, lifts three large sandbags.

the city. To accomplish the third task, the Corps had to repair as many of the existing pumps as possible and bring in portable pumps to augment the dewatering effort.⁸⁰

The Corps of Engineers engaged all three prongs of the plan simultaneously. It attempted to close the 17th Street Canal breach first. On 30 August, helicopters dropped 300-pound sandbags, concrete road

barriers, and other such items into the breach. Unfortunately, this effort failed because the items used were either too small or too light. Finally, a contractor for the Corps of Engineers offered giant environmental disposal bags that could hold up to 12 tons of dirt. These bags worked well although the going was slow at first. On the first day, the helicopters dropped only 10 bags into the breach, but by the end of the operation, they were dropping up to 600 bags per day.⁸¹ The lack of dedicated aviation assets slowed the breach repair mission. Again, during the first few days, the Corps of Engineers could only get helicopter support on an ad hoc basis. Helicopters were assigned but then snatched away to conduct search-and-rescue operations. Finally, on Wednesday, 31 August, the Corps of Engineers received six UH-60 and two CH-47 helicopters to help with the mission.⁸² The Corps finally closed the 17th Street Canal breach on Sunday, 4 September, although it took more than 2,000 sandbags to do so.⁸³ The next day, the sandbag operation shifted to the London Avenue breach.⁸⁴

As the buildup of both National Guard and Active component forces gained momentum, President Bush and Governor Blanco engaged in a series of discussions regarding how the Federal Government could best assist the state of Louisiana. They met in Louisiana on Friday morning, 2 September, and discussed ways to achieve unity of command in the state. The President discussed several options, including federalizing the National Guard, giving Lieutenant General Honoré a commission in the Louisiana National Guard so that he could command National Guard as well as Active component forces, and invoking the Insurrection Act, as his father, President George H.W. Bush, had done during the Los Angeles riots in 1992. President Bush tried to convince Governor Blanco to accept either the federalization or the dual-hat options, but early Saturday morning, 3 September, the governor rejected both proposals, and the President decided against invoking the Insurrection Act. With political negotiations at a standstill, President Bush decided to act unilaterally and deploy Title 10 ground forces to the Gulf States. He announced later Saturday morning, 3 September, that Active component forces, including the 82d Airborne Division, would be deploying to the Gulf region to help with the relief effort.

As more and better information regarding the situation in Louisiana and Mississippi trickled back to the Pentagon, leaders in the Department of Defense soon realized that the pull system was failing American citizens along the Gulf coast. Convinced that merely waiting for requests for help was not sufficient, on Tuesday, 30 August, Acting Deputy Secretary of

Defense Gordon England told NORTHCOM that it had a “blank check” to call on any department for resources needed to provide relief for the affected citizens. The Chairman of the Joint Chiefs of Staff followed by telling the services to deploy whatever forces they thought were needed.⁸⁵ With the green light to push troops into the affected states, Title 10 aviation assets began flowing into the region. By Thursday, 2 September, 84 Active component aircraft were flying support missions.⁸⁶

Recovery Operations

When President Bush announced he was sending 7,200 ground troops into the region on Saturday, 3 September, he unleashed the full resources of the US Army’s Active component. By this time, the situation on the ground was starting to improve. The evacuation of the Superdome was almost complete. Order was restored at the Convention Center and the evacuation was about to begin. National Guard forces were flowing into the affected states: the last of three 1,400-person MP contingents had arrived in New Orleans on Saturday, two National Guard division headquarters were en route to assist with command and control, and the flow of critically needed commodities was increasing. There was, however, much work to do. The relief effort was disorganized and disjointed, confusion reigned in many places, and a lot of people still needed help.

Up to that point, the Active Army’s contribution centered on aviation and staff support through First Army and the DCOs and their staffs. Over the next few days, thousands of soldiers from the 82d Airborne Division, 1st Cavalry Division, 10th Mountain Division, and other units moved into the region. The massive injection of Active as well as National Guard forces proved decisive. Within days, the campaign to counter the destruction wrought by Hurricane Katrina turned toward the better as aid finally reached those in need.

The conditions in Louisiana and Mississippi were so extreme that the Nation’s emergency response plan, as articulated in the National Response Plan, was not adequate to meet the conditions on the ground. As Lieutenant General Honoré so succinctly put it, “We’ve got a plan, but don’t confuse the plan with execution. We’re doing something that is very different. Nobody goes around with 50 tons of water.”⁸⁷ Consequently, Active component soldiers used their skills, honed in Iraq and other places, to overcome the problems they confronted. Flexibility and compassion were two of the main attributes consistently displayed by Army leaders and soldiers alike. Honoré was fond of using a football analogy to describe the crisis. He conceded that the “home team” lost the first quarter to Hurricane

Katrina, but he was adamant that the home team would win the subsequent quarters. Under his leadership, the home team did just that.

Task Force *All American*

When President Bush decided to commit ground troops early Saturday morning, 3 September, the 82d Airborne Division was ready to respond. The division put forces on the ground at Louis Armstrong International Airport a little more than 7 hours after getting the order to deploy. Soon after Major General William B. Caldwell IV, Commanding General of the 82d Airborne Division, arrived that afternoon, he was met by Lieutenant General Honoré who told him, “Your job is to fix the airport and fix New Orleans.”⁸⁸ More specifically, Honoré gave his ground force commander four tasks: save lives, restore the airport to operational status, provide humanitarian assistance, and determine where the greatest needs were so that those problems could be resolved. Over the next several days, as Active component forces poured into Louisiana, Task Force *All American* took control of those units and effectively executed Honoré’s orders.

The 82d Airborne Division staff watched the events unfolding in the region closely in the days after Hurricane Katrina struck the Gulf coast. On Wednesday evening, 24 August, the US Army Forces Command (FORSCOM) directed the Army to be prepared to provide a brigade to conduct disaster relief operations in New Orleans.⁸⁹ The next day, Thursday, 1 September, the division staff put together a mission analysis that tried to predict what the missions would be and what resources the division would need to accomplish those missions. Because of the media reports emanating from New Orleans, one of the most important missions the planners expected to perform was crowd control and security. Although that mission later proved unnecessary, the staff correctly guessed that the division would assist with debris removal; search and rescue; mortuary affairs; distribution of food, water, and other items; and medical assistance.⁹⁰ The next day, Major General Caldwell decided to conduct a training and readiness exercise in anticipation of possible deployment to the area. He alerted the entire division, moved the ready brigade to Pope Air Force Base, and tasked his staff with updating the division’s emergency deployment plan to take into account the conditions in Louisiana and Mississippi. When the order to deploy did not arrive that evening, Caldwell stood down the division for the night.⁹¹ Fortunately, all of the equipment remained on the tarmac at Polk Air Force Base.

Major General Caldwell received a call at home the next morning, telling him that the President just announced that he was sending the 82d

Airborne Division to New Orleans. He heard the President's announcement before he got official notification, which arrived later that morning.⁹² Regardless of the method of notification, the division was ready to go and deployed almost immediately. The 3d Brigade, including the 2/505th Parachute Infantry Regiment, 3/505th Parachute Infantry Regiment, 307th Engineer Battalion, 82d Forward Support Battalion, and the 3d MP Company, flew to New Orleans and began conducting search-and-rescue operations soon after arriving.⁹³ Most of the 319th Airborne Field Artillery Regiment remained at the New Orleans international airport where the soldiers helped organize evacuation operations. A second contingent conducted search-and-rescue operations in Metairie.⁹⁴

The division established its command post at the airport and began pushing liaison officers forward to all identifiable command centers involved in the relief operation. These included JTF *Katrina* (Foward), FEMA, the Louisiana EOC, city hall, and the police headquarters.⁹⁵ Division personnel quickly realized that, while many agencies were doing good work, most of them were overwhelmed by the scope of the disaster or they were less effective than they could have been because of a lack of situational awareness. Personnel from the 82d Airborne Division sought to improve communications and information sharing by gathering information, processing what they collected, and disseminating that information to all the command centers. As one officer later noted, "As information flow improved, the scope of the crisis became clearer to leaders at all levels. Assets were applied against confirmed problems rather than rumors."⁹⁶

One of the first places where the 82d Airborne made a difference was at the Louis Armstrong International Airport. In the days before the 82d Airborne arrived, the airport descended into almost total anarchy. Military and civilian aircraft flew in and out of the airport every few minutes. With no running water and little electricity, conditions were awful for the more than 5,000 National Guardsmen who took up temporarily residence in the terminal while awaiting further orders.⁹⁷ Since there were no plans to use the airport for evacuations, most of the airport staff evacuated before Hurricane Katrina struck. In the aftermath of the storm, the airport manager tried to sustain operations at the airport with a staff of three and, by the time the 82d Airborne arrived, they were exhausted and overwhelmed almost to the point of paralysis.⁹⁸ Recognizing the situation, leaders of the 319th Airborne Field Artillery went to work, restoring order where only chaos existed. They augmented rather than coopted the existing departure process, bringing to it a sense of order and direction by taking responsibility for

passenger manifests and security screening. Over the next 12 hours, they expedited the evacuation of almost 9,000 people through the airport.⁹⁹

At the same time, recognizing that the conditions at the airport made it difficult for the airport's management team to oversee the entire evacuation effort, 82d Airborne soldiers helped establish a joint interagency operations center to manage airport operations. They contacted and assembled representatives from more than 25 different agencies operating at the airport to discuss what could be done to improve the process. From that beginning, a joint interagency operations cell emerged at the airport. Representatives met daily to discuss their requirements and to formulate a joint response to meet those needs. The director of flight operations at the airport later told Major General Caldwell that, without the leadership and assistance provided by the 82d Airborne, it would have been at least 2 more weeks before the airport could have accommodated commercial flights. As it was, more than 25,500 citizens evacuated through the airport during the first 10 days after the division arrived.¹⁰⁰

While the 82d Airborne Division's artillery regiment brought order to the airport, the 3d Brigade, Task Force *Panther*, began restoring order in downtown New Orleans. During his initial meeting with Lieutenant General Honoré, Major General Caldwell was told to "fix" New Orleans. Honoré wanted Caldwell to restore order and services in the city.¹⁰¹ Initially, the brigade operated as an isolated entity, much like the other search-and-rescue operations in the city. The soldiers patrolled the Convention Center, directed citizens to evacuation points, and conducted medical screenings.¹⁰² Other soldiers combed the city in high-water trucks or boats looking for survivors. Within days, they began coordinating their operations with Task Force *Orleans* (see figure 24).

Search operations in the city were difficult at first because much of the city was flooded. When the brigade arrived in New Orleans, it had only four boats. That quickly changed as, just like at the airport, the brigade's operations in the city became a joint and interagency effort. By coordinating its efforts with other agencies operating in the city, TF *All American* soon had almost 80 boats under its operational control.¹⁰³

Within 4 days of arriving, the brigade established an important connection with the FEMA urban search-and-rescue team. During a meeting in which the FEMA team described what it was doing and what sort of help it needed, the brigade officers realized that working more closely with FEMA would greatly improve operations. The FEMA urban

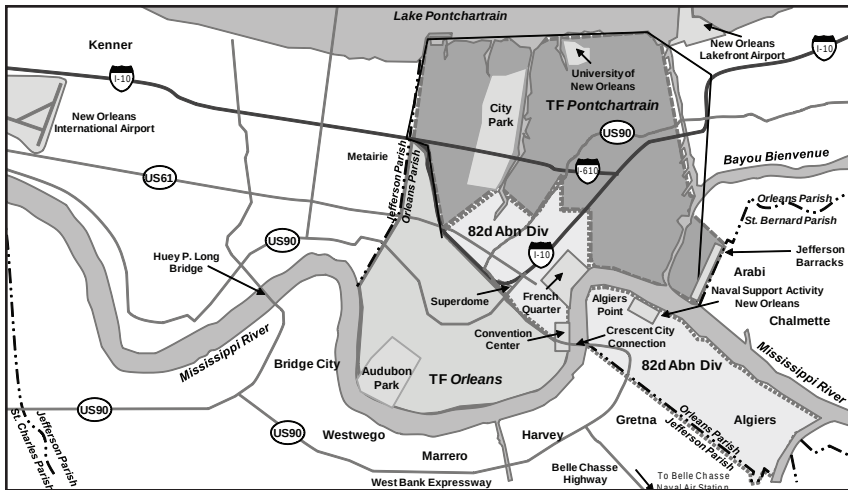


Figure 24. Orleans Parish operating areas.

search-and-rescue teams were experienced, well organized, and systematic in their approach to search-and-rescue operations, but they lacked the manpower and other resources to effectively search a large city like New Orleans. The 3d Brigade, which lacked expertise in the area of search and rescue, had sufficient manpower and resources, so it made sense for the two organizations to work together.¹⁰⁴ The effort soon grew to include a broad range of other agencies, including the Navy, Air Force, Coast Guard, National Guard, Federal Bureau of Investigation, Drug Enforcement Agency, state emergency response agencies, and local first responders. As at the airport, the leadership of the 3d Brigade quickly recognized that “there were many organizations willing to assist with a multitude of diverse capabilities, but lacked direction and a way to insert as a solution to the challenges that faced New Orleans.”¹⁰⁵

Task Force *Panther* swiftly adopted the FEMA teams’ search methodology. Paratroopers divided the city into zones and began door-to-door searches. At the same time, the brigade enhanced the exchange of search information between the various entities by converting the FEMA teams’ hand-drawn search maps into electronic versions that were updated daily. By standardizing the maps, TF *All American* generated a common operational picture, which facilitated better coordination among the diverse groups involved in the search operations and improved the situational awareness of senior leaders.¹⁰⁶

The brigade also improved and simplified reporting on improvements in the city’s infrastructure by implementing a technique used in Iraq. Lieutenant General Honoré recalled that units used the acronym SWEAT

to report the status of the infrastructure in Iraq.¹⁰⁷ Drawing on their Iraq experiences, Active-Duty leaders tracked the restoration of services in New Orleans using similar criteria, although they added some additional reporting criteria. Thus, they reported the status of SWEAT-MCS, which stood for sewer, water, energy, academics, trash, medical, cultural, and security.¹⁰⁸ These reports soon became the standard used by Active and National Guard units alike, which greatly improved the visibility of infrastructure restoration among senior leaders.

The 82d Airborne Division paratroopers also greatly assisted relief operations in the city. During the 219 search-and-rescue patrols conducted by TF *Panther*, they rescued 853 people, evacuated 4,906 others, and rounded up 350 stray animals. The brigade also conducted more than 100 missions to rehabilitate and restore key public buildings in the city. The paratroopers cleaned up and repaired a number of schools, hospitals, police stations, fire stations, and two public housing developments. Among the sites they helped refurbish were the Superdome, US Mint, Louis Armstrong Auditorium, the Aquarium of the Americas, Charity Hospital, Touro Hospital, and the St. Louis Cathedral.¹⁰⁹

Elements from the 2d Brigade Combat Team, 1st Cavalry Division, arrived from Fort Hood, Texas, on Monday, 5 September. By the next day, more than 1,600 brigade soldiers were in the city conducting

Staff Sergeant Alex Licea, 82d Abn Div Public Affairs



Figure 25. A soldier from the 307th Engineer Battalion, 82d Airborne Division, navigates his Zodiac boat through a flooded neighborhood.



Corporal Sam Kilpatrick, 55th Signal Company

Figure 26. Major General William B. Caldwell IV and Command Sergeant Major Wolf Amacker greet Archbishop Phillip Hannan, the former Archbishop of the Archdiocese of New Orleans and an 82d Airborne paratrooper during World War II.

humanitarian relief operations in the Algiers District under the control of the 82d Airborne.¹¹⁰ Residents of the Algiers District were not subject to the mandatory evacuation order because the district was not damaged by the flooding. Consequently, soldiers went door to door to check on people, provide food and water as needed, and offer assistance with evacuation if desired. During those searches, they evacuated 74 citizens. Perhaps even more important, their presence greatly improved security in the crime-plagued district. While the brigade operated in Algiers, local residents reported 18 criminal acts, only 3 of which were violent crimes.¹¹¹ The 4/133d Field Artillery Regiment, Texas Army National Guard, was embedded with the 2d Brigade to provide law enforcement capability if required.¹¹² This was an important move since Title 10 forces are, by law, prevented from conducting law enforcement activities or forcibly entering houses to search for survivors. Since the National Guard soldiers were under Title 32 status, they were not subject to the Posse Comitatus Act and, therefore, were able to act more aggressively if confronted with a potential law enforcement situation. By 12 September, having completed a 100-percent search of the area, the brigade turned over responsibility for the Algiers District to the 1/319th Airborne Field Artillery.¹¹³

Since the 319th Airborne Field Artillery Regiment did not need all of its personnel at the airport, the 2/319th Airborne Field Artillery moved into Metairie where the paratroopers assisted with search-and-rescue operations and humanitarian assistance missions. Using boats and high-water vehicles, they conducted 55 search missions in the city.¹¹⁴ Later, as the situation at the airport stabilized, the 1/319th also shifted over to search-and-rescue and humanitarian relief operations. Initially, the 1/319th conducted patrols in the center of New Orleans alongside soldiers from the 3d Brigade, but on Monday, 12 September, the 1/319th Field Artillery relieved the 2d Brigade Combat Team, 1st Cavalry Division, in the Algiers District.

Once again, the paratroopers assessed the situation and applied resources where they thought they would make the most impact. The 1/319th Field Artillery conducted patrols and provided support to civilian-run relief sites. The Reverend James N. Brown ran a relief site from the St. Mary's Place Mission. Reverend Brown did not evacuate when the storm hit, and once the storm passed, he set up a kitchen at the mission to feed survivors and to distribute aid to those in need. The battalion helped by providing two cooks to help prepare meals. During the mission, Task Force *All American* paratroopers fed more than 8,000 citizens of the district.¹¹⁵

Staff Sergeant Alex Licea, 82d Abn Div Public Affairs



Figure 27. A soldier from the 307th Engineer Battalion, 82d Airborne Division, marks a flooded home after searching the premises.

They also set up a clinic in the parking lot of the Algiers Medical Center, which was put out of service by the storm. The 319th Field Artillery Regiment's medical staff treated more than 1,200 people over a 4-day period.¹¹⁶ The staff filled more than 700 prescriptions, immunized almost 400 people, and treated a number of people with minor illnesses.¹¹⁷ On 19 September, the 1/319th Airborne Field Artillery turned over this area to California National Guard soldiers from the 185th Armor Regiment.¹¹⁸

The 82d Airborne's 21st Chemical Company performed a real-world decontamination mission while deployed to New Orleans. Both personnel and vehicles frequently made contact with the potentially toxic floodwaters while on patrol. The 21st Chemical Company cleaned vehicles with hot soapy water and provided the means for soldiers to decontaminate themselves as well.¹¹⁹ Through 17 September, the 21st Chemical Company decontaminated almost 400 personnel, 780 vehicles, and 73 boats. It also helped decontaminate both Charity and Touro Hospitals. Given the concern about the toxicity of the waters soldiers operated in, this was a crucial health and safety mission. This was also an interagency mission; the 21st performed 65 percent of its decontamination work on other agency vehicles and personnel, including Coast Guard, Border Patrol, US



Figure 28. Personnel from the 21st Chemical Company conduct decontamination operations.

marshals, New York Police Department, New Orleans Police Department, and chartered buses.¹²⁰

Aviation Support

Title 10 aviation assets worked various missions during the relief operation. Fifty Active component helicopters converged on New Orleans by 12 September. Eleven CH-47 helicopters from the 2/227th and 5/159th Aviation Regiments operated out of Belle Chasse Naval Air Station. They flew heavy-lift missions, such as dropping sandbags in the levee breaches, and transported the FEMA urban search-and-rescue teams. The six UH-60 MEDEVAC helicopters from the 498th Medical Company established their base in Baton Rouge. Two UH-1 MEDEVAC helicopters and two more UH-60 helicopters set up operations in Hammond, where they served as the standby MEDEVAC platforms. Six OH-58D Kiowa helicopters based out of the St. John's Parish airport flew reconnaissance and surveillance missions for TF *All American*. Twenty-five UH-60 helicopters provided a broad range of services, including aviation support to the FEMA assessment teams, transport for Lieutenant General Honoré and other senior officials, assistance to local firefighters when equipped with Bambi Buckets, and other humanitarian relief missions.¹²¹

Logistics Support

Although FEMA delivered more commodities to the Gulf coast in the first few days after Hurricane Katrina struck than it did during the summer of 2004 when four hurricanes hit Florida, FEMA officials soon began to question whether they had the ability to continue delivering enough supplies to the affected areas. FEMA Director Michael Brown discussed turning over the logistics mission to the Department of Defense with William Lokey, the Federal Coordinating Officer in Louisiana, early Wednesday morning. On Thursday, 1 September, the Acting Director of Operations for FEMA contacted the Office of the Assistant Secretary of Defense for Homeland Defense and asked for help. FEMA made an extraordinary request that the Department of Defense “take over logistics operations in Louisiana and Mississippi.”¹²² While the Department of Defense is a supporting agency for all emergency support functions, it only has responsibility for one, ESF #3, Public Works and Engineering, so assuming responsibility for logistics management was a significant request that went well beyond the scope of a normal emergency response situation.

On Friday, 2 September, FEMA sent a mission assignment request to the Department of Defense formally asking for assistance. The request asked that “DOD provide planning and execution for the procurement, transportation and distribution of ice, water, food, fuel, and medical supplies

in support of the Katrina [disaster] in Louisiana and Mississippi.”¹²³ FEMA authorized expenditures up to \$1 billion to accomplish the mission.¹²⁴ As it turned out, the Department of Defense never took over the entire operation, but Active component forces assisted by managing the distribution system. Both Active and National Guard troops distributed those supplies at various points of distribution.

Elements from the 13th Corps Support Command deployed from Fort Hood, Texas, to Louisiana to assist FEMA with the logistics support mission. The 49th Movement Control Battalion left Fort Hood on Saturday, 3 September, and joined the FEMA logistics staff in Baton Rouge. These soldiers helped FEMA manage the movement and distribution of relief supplies. Distribution management teams traveled to the FEMA regional support areas (RSAs) to assess their operations and provide advice on how to better manage the flow of commodities. They also tracked the distribution of goods for FEMA using the Army’s Battle Command Sustainment Supply System (BCS3) and visual tracking by battalion personnel. The distribution management teams reported tracking information back to the battalion headquarters in Baton Rouge where the information was further disseminated to FEMA and state emergency officials. Through better management and tracking, the 49th Movement Control Battalion greatly improved the efficiency of the FEMA operation. After 6 days of operations, the battalion reduced truck download time from 10 to 14 days down to 3 to 5 days, saving about \$140,000 per day and decreased the number of trucks in use from 285 to 120, saving as much as \$1 million more. During the operation, the 49th Movement Control Battalion helped distribute some 1.7 million gallons of water, 3.6 million meals, and 11.5 million pounds of ice.¹²⁵

The 13th Corps Support Command performed a number of other missions to support JTF *Katrina*. The command sent a headquarters unit to the New Orleans International Airport, which served as the joint logistics command for all Title 10 forces operating in the region. The logistics cell managed the delivery of 815,000 cases of MREs, 215,000 pounds of ice, 837,000 bottles of water, and 1.3 million gallons of fuel to the Active component forces involved in the Katrina relief operations.¹²⁶ The 13th Corps Support Command also deployed six reverse osmosis purification units to the New Orleans area, which could produce 600 gallons of potable water per hour.¹²⁷ During the deployment, the command’s water purification units produced 142,000 gallons of water for the troops involved in the relief operation.¹²⁸

Other units attached to the 13th Corps Support Command provided logistics, communications, preventive medicine, medical logistics, and

engineer support. The 565th Quartermaster Company helped the New Orleans Police Department organize truckloads of donated items that poured into the police warehouse in the days following the flooding. Although the police department received a lot of useful gear, police officers could not easily access what they had because it was piled up in a large warehouse. Soldiers from the 565th Quartermaster Company stepped in and quickly brought organization to the chaos.¹²⁹ The command's communications group worked with the 56th Signal Battalion to quickly establish 50 data lines and 30 phone lines for the joint logistics command at the New Orleans airport.¹³⁰ The 224th Medical Detachment checked the soldiers' food and water daily to prevent the spread of sickness and disease among the deployed troops.¹³¹

Medical Support

The Army provided significant medical support to Louisiana citizens as well. The 14th Combat Support Hospital, based at Fort Benning, Georgia, received notification to deploy to Louisiana on 5 September, and 2 days later, it was en route to New Orleans. It arrived on Thursday, 8 September. After an interim stop at a middle school, it set up operations at the New Orleans airport.¹³² Within days of arrival, the hospital was fully operational, with two operating rooms and a dental clinic. Unfortunately, by the time it was operational, most of the people in need of medical attention at the airport had been evacuated from the city. With few civilian patients, the 14th Combat Support Hospital focused its medical support on the 82d Airborne and other Army units. The infirmary treated about 20 soldiers per day with problems such as cuts, bruises, and ankle injuries. When Hurricane Rita threatened the city, the 14th Combat Support Hospital moved once again, this time to the Convention Center.¹³³ Hospital personnel broke down the hospital and reassembled it inside halls I and J at the Convention Center in 2 days. This time, the hospital included 84 beds, CT and X-Ray scanners, an emergency room, an operating room, several specialty clinics, and a dental clinic.¹³⁴ The move into downtown New Orleans was important because it put the hospital, which was the only functional trauma center in the city at the time, closer to that portion of the remaining civilian population who most needed assistance.¹³⁵ The medical presence was sustained by the 21st Combat Support Hospital, which relieved the 14th Combat Support Hospital on 10 October. The 21st Combat Support Hospital continued to provide medical support to both military and civilian personnel through 14 November. Then, staff from the Charity Hospital in New Orleans took over the operation so that medical support to those in need would continue to be available.¹³⁶

Veterinary Support

Some of the most dramatic images that came from the media coverage of Hurricane Katrina were of the lost and abandoned animals left in the wake of the storm. Soldiers and relief workers rescued thousands of animals during the relief operation. In Louisiana, the animals were taken to one of seven shelters located throughout the affected area. As of 28 September, the main shelter, the Lamar Dixon Expo Center, held 1,145 small animals and 232 larger ones.¹³⁷ By that date, with the Expo Center, a 4-H exposition center located in Gonzales about 60 miles northwest of New Orleans, filled to its capacity, animal relief workers decided that the animals housed there needed to be moved to more permanent facilities. A senior official with the Humane Society described the animal evacuation mission as a “logistical nightmare.” The animals had to be put in airline crates and shipped to different facilities or airports for further transfer in refrigerated trucks because of concerns about the impact the Louisiana heat could have on the animals. Animals required individual registrations so their original owners could claim them in the future.¹³⁸ With local and national veterinary resources overburdened by the scope of the disaster in Louisiana, the Army Veterinary Corps answered the call for help.

On 27 September, 20 members of the 248th Medical Detachment (Veterinary Services) deployed to Louisiana to provide veterinary support. Half the team went to Belle Chasse Naval Air Station to inspect the dining facilities and class I storage locations. During that mission, the team inspected more than 700,000 pounds of rations, 275,000 pounds of water, and almost 165,000 pounds of catered meals.¹³⁹

The other half of the team went to Gonzales where personnel coordinated the evacuation all the animals housed there to other locations. They registered and prepared more than 1,500 animals for shipment. As they did so, they examined and treated 835 dogs, 281 cats, and 4 other animals. Because of their hard work and determination, the veterinary team completed the evacuation on 10 October, 5 days earlier than expected.¹⁴⁰

The veterinary mission was another successful interagency mission. The food inspection specialists worked with the US Public Health Service, the US Department of Agriculture, the Louisiana Department of Agriculture and Forestry, and civilian contractors. The animal veterinary team worked with the Humane Society, the American Society for the Prevention of Cruelty to Animals, and other small volunteer groups who came from all over the country. The Army provided a great service to the animals and people involved in the animal rescue mission, which resulted in a “successful public relations opportunity for the military.”¹⁴¹

Lieutenant General Honoré recalled that he got hundreds of positive e-mails and telephone calls from animal rights activists who appreciated the Army's contribution to this mission.¹⁴²

Mortuary Support

A serious problem emerged in the aftermath of the storm when FEMA experienced problems trying to hire a contractor to collect and handle the remains of deceased persons. With media reports of thousands of dead littering the streets of New Orleans and operational paralysis seemingly setting in at FEMA, the Department of Defense offered its assistance. Nine mortuary affairs teams from the 54th Quartermaster Company deployed to New Orleans on 13 September. Four more teams arrived the next day.¹⁴³

Mortuary support was a serious issue. JTF *Katrina* issued strict guidance regarding the handling of the remains of deceased persons. When a deceased person was located, the soldiers marked the position and reported the information up the chain of command. Soldiers were not allowed to touch the body at that point. Once the mortuary affairs contractors prepared the deceased person for transport, soldiers could help move the body. Command Sergeant Major Wolf Amacker recalled that many of the Kenyon International personnel hired to perform remains removal were elderly or out of shape. Consequently, he and several other 82d Airborne soldiers helped move a number of bodies because the Kenyon International personnel were physically unable to do so.¹⁴⁴

Another important piece in the mortuary affairs mission was the need for chaplains. Army leaders recognized this need in such a stressful environment, so a number of religious support teams were deployed to Louisiana. One of those chaplains was Major Ira Houck. Chaplain Houck provided support to the mortuary affairs teams working at the St. Gabriel mortuary. He or one of his team members accompanied every Army mortuary team. He later reflected that their presence greatly reassured the soldiers involved in that grisly operation.¹⁴⁵

Reserve Component Support

Although US Army Reserves are not typically called up to provide support in response to natural disasters, a number of Reserve units did participate in the Hurricane Katrina relief effort. The need for truck drivers was so great that three transportation companies from Mississippi, the 647th, 287th, and 1184th, and the 206th Transportation Company from Alabama mobilized and deployed to New Orleans. Since these units are medium truck companies, their trucks were not suitable for the high waters in New Orleans. Consequently, they borrowed high-water vehicles from other Reserve units, which enabled them to conduct missions in the flooded

areas of New Orleans. They hauled food, water, and personnel around the city.¹⁴⁶

Company B, 5/159th Aviation Regiment, was the first Army Reserve unit to arrive on scene. On 5 September, 46 soldiers, including 12 pilots, deployed to New Orleans in 5 CH-47 helicopters. They began flying missions early the next morning, and during the day, they rescued 93 people. Their most dramatic rescue occurred that day when one of the crews received an urgent request for help in a neighborhood that was inundated by flood waters. The crew near that location responded and managed to avoid several obstacles and land on a highway overpass. It picked up 26 people and transported them to the New Orleans International Airport.¹⁴⁷ Over the next 2 days, Company B rescued 35 more people.

The company's CH-47 helicopters were versatile and useful air assets. During one sequence, a crew completed a rescue mission and diverted to another location to pick up sandbags, which it dropped into one of the levee breaches. Upon completion of that evolution, it recovered a FEMA urban search-and-rescue team. The CH-47 was the only helicopter large enough to accommodate the team's rubber boats, so CH-47 crews frequently worked with the FEMA teams.¹⁴⁸ During their assignment in New Orleans, Company B helicopters dropped 1.7 million pounds of sandbags into the



Chuck Prichard, US Army Reserve Command

Figure 29. Crewmembers load a FEMA urban search-and-rescue team boat onto a CH-47 Chinook helicopter flown by the Army Reserve's B Company, 5th Battalion, 159th Aviation Regiment.

levee breaches, transported more than 1,700 passengers, and delivered more than 150,000 pounds of internal cargo.¹⁴⁹

US Army Corps of Engineers

As Title 10 forces started to draw down in both states, the Army Corps of Engineers geared up its operations. Dewatering operations in New Orleans continued to make headway, and the Corps of Engineers' responsibilities under ESF #3, Public Works and Engineering, came into prominence. As operations shifted from recovery to restoration, the Corps of Engineers helped with installing temporary roofs, removing debris, and repairing public facilities. At the same time, other missions began to wind down as the need for water and ice declined and power was restored throughout the region.

Corps of Engineer officials initially estimated that it would take up 6 months to dewater New Orleans. But repairs to the levees proceeded faster than originally anticipated because the Corps was assigned more aircraft to drop sandbags than initially forecast and because the engineers were able to access the canal breaches more easily as the water level in the city declined. By 15 September, the Corps of Engineers reported that dewatering operations in New Orleans were 60 percent complete.¹⁵⁰ Less than a month later, on 11 October, the Corps of Engineers pronounced the city dry and ceased dewatering operations.¹⁵¹

The water and ice delivery mission ended even more quickly. Although there were shortages of commodities at first, the supply pipeline was in full swing a little more than a week after Hurricane Katrina struck. On 7 September, the Corps-contracted companies delivered 500 truckloads of ice and 700 truckloads of water to Louisiana. On that same day, Mississippi received 600 truckloads of ice and 300 truckloads of water. A couple of days later, Louisiana terminated the water delivery mission and Mississippi did likewise on 11 September.¹⁵² The Corps of Engineers delivered 170 million pounds of ice, 88 million liters of water, and 8.1 million MREs by the time this phase of the operation ended.¹⁵³

Even as the water and ice operations drew to a close, other missions rose to prominence as areas devastated by the storm became more accessible. One such program was Operation BLUE ROOF, which involved installing blue tarps over roofs of houses Corps of Engineer inspectors deemed still habitable. The program began on 3 September, and by 14 September, 1,372 temporary roofs were in place in Mississippi and 759 more in Louisiana. By the end of the month, those numbers increased to 12,000 in Mississippi and 17,600 in Louisiana.¹⁵⁴ Once roads were clear enough for debris removal crews to enter, the Corps of Engineers began that mission

as well. Initial estimates projected it would take up to 5 years to remove all of the debris from both Mississippi and Louisiana. The Corps of Engineers anticipated removing some 20 million cubic yards of debris in Mississippi and 45 to 55 million cubic yards of debris in Louisiana.¹⁵⁵ Contractors started removing debris on 7 September, and by the end of the month, they had removed 1.1 million cubic yards in Louisiana and 3.2 million cubic yards in Mississippi.¹⁵⁶ In addition to that, the Corps of Engineers assisted the states with many other projects. Engineers carted off more than 120 million pounds of trash,¹⁵⁷ disposed of 36 million pounds of rotting meat,¹⁵⁸ installed 307 generators in the affected area,¹⁵⁹ and repaired 310 structures in Louisiana and 726 in Mississippi.¹⁶⁰

Title 10 Support in Mississippi

JTF *Katrina* was a joint effort by the US military that differed by state. The Navy, Marine Corps, and Air Force contributed aircraft, engineers, medical support, and ground troops to the relief effort in Mississippi. The contribution of US Army Title 10 forces to Mississippi, which came in the form of staff and specialty support, was much more limited than that of the other services. National Guard forces carried out most of the primary relief-and-recovery missions, such as search and rescue, aid distribution, security, and debris removal.

The DCO in Mississippi, Colonel Damon Penn, was experienced in disaster relief operations, having served in the same position in Florida the year before when four hurricanes struck the state. He kept his staff focused on working mission requests from the state and providing reports to JTF *Katrina* so that Lieutenant General Honoré had situational awareness.¹⁶¹ In the first week after the storm struck, Colonel Penn's team dealt with issues ranging from where to put the 38th Infantry Division headquarters staff when it arrived at Camp Shelby to how to get water to the beleaguered citizens in the coastal communities.¹⁶²

Among the most significant missions Colonel Penn and his team worked were the requests for food and fuel. Both commodities were in short supply in Mississippi in the immediate aftermath of the storm because the FEMA supply distribution system almost collapsed after Hurricane Katrina made landfall. Major General Cross asked for help, and within 8 hours of the request, NORTHCOM had food on the way. NORTHCOM delivered 10,000 cases of MREs to Gulfport on Saturday, 3 September, and 40,000 more the next day.¹⁶³ The fast response by Penn's team and NORTHCOM quickly deflated a potential crisis situation in the state and alleviated concerns that people without food would perish, allowing FEMA time to get its distribution system in order.¹⁶⁴ The Defense Coordinating

Element coordinated the delivery of 7.6 million liters of water, 31 million pounds of ice, and 4.4 million MREs through 6 September.¹⁶⁵ Fuel was an equally important commodity. The JTF *Katrina* staff considered fuel to be an enabler—if citizens had fuel for their vehicles, they could go to distribution sites. Otherwise, relief organizations had to deliver food and water to people in their homes. The Mississippi Defense Coordinating Element and the JTF *Katrina* staff worked together to build up stocks of fuel in the state and coordinate security at the gas pumps.¹⁶⁶

The Alabama DCO, Colonel Young, and his Defense Coordinating Element moved from Alabama to Gulfport on Friday, 2 September. Since the storm severely damaged the state's communications infrastructure, the Mississippi DCO, Colonel Damon Penn, and his staff, found it difficult to perform their duties from the EOC in Jackson because they lacked sufficient situational awareness. Lieutenant General Honoré decided to send Colonel Young to Gulfport to serve as a forward DCO. Young coordinated Title 10 support in the affected counties and kept both Honoré and Penn apprised of the situation there.¹⁶⁷

Over the next few weeks, Colonel Young worked closely with the Mississippi National Guard soldiers to get them the resources they needed to sustain the lives of the survivors scratching out an existence in the heavily damaged Mississippi coastal counties. According to Young, communications and sharing information were keys to the success of the mission. A National Guard civil support team (CST) from Kentucky assisted Young and his team with communications. The CST provided voice communications, e-mail, and video teleconference hookups. These were important, Young noted, since they allowed better communications between those involved in the relief process so everyone understood what each service's capabilities were and what they could contribute to the relief mission. Information was shared with National Guard leaders as well as local civilian authorities. Young later recalled that his selection for the mission was fortuitous since he had gone to school with several of the senior National Guard officers and was thus able to quickly establish a strong working relationship with the Mississippi National Guard. He explained that when responders entered an area, whether they were National Guard soldiers or civilians, they assessed the situation and requested what they thought they needed to bring relief to the locality. Colonel Young's team made sure that local authorities knew what the Active component could provide and then facilitated appropriate mission requests.¹⁶⁸

Colonel Young coordinated his efforts with Colonel Penn and his staff, who remained near the state EOC in Jackson. Although most of the military presence in Mississippi came from the National Guard, some Marine units,

Navy Seabees, and several Active component helicopters operated in the state. Colonel Penn validated mission assignments for those assets and worked to fulfill other state requests.

Although relatively few Title 10 Army units deployed to Mississippi, those that did provided vital services. The Army's Expeditionary Unit Water Purifier (EUWP) deployed to Biloxi, Mississippi, on 16 September. The EUWP is the largest mobile desalinization system in the world, capable of producing 100,000 gallons of potable water per day. It deployed to Biloxi where it was used to produce water for the Biloxi Regional Medical Center and citizens in the area.¹⁶⁹ Two other water purification systems deployed to Waveland, which was almost completely destroyed by the hurricane. These systems, a Reverse Osmosis Water Purification Unit (ROWPU) and a Tactical Water Purification System (TWPS) produced 600 and 1,500 gallons of water per hour respectively for citizens in the area.¹⁷⁰

Hurricane Katrina destroyed many television and radio transmission towers, making it difficult for authorities to keep ordinary citizens informed of the situation in their towns. JTF *Katrina* implemented several plans to rectify that situation. JTF *Katrina* purchased and distributed 4,500 AM/FM radios to people in Mississippi so they would have better access to information about relief-and-recovery services.¹⁷¹ In addition to that, 120 soldiers from the 4th Psychological Operations Group deployed to Camp Shelby on 5 September. They traversed the affected counties, disseminating valuable information to citizens using man-portable and vehicle-mounted loudspeakers.¹⁷²

By 9 September, the relief mission began to shift over to recovery operations in Mississippi.¹⁷³ Power was restored to 84 percent of the electrical customers, and power company officials expected that 100 percent of their customers would have electrical power by 11 September.¹⁷⁴ All state-maintained roads in the affected area, with the exception of US Highway 90, were clear of debris.¹⁷⁵ The emergency rooms at hospitals in Ocean Springs and Singing River, Mississippi, were back in operation.¹⁷⁶ Although there was still much work to do, Active component forces began to draw down in the state.

Summary

In the days leading up to Hurricane Katrina striking the United States and for weeks afterward, the Active component of the Army provided unprecedented civil support to Louisiana and, to a lesser degree, Mississippi. Defense coordinating officers and their staffs deployed before Hurricane Katrina made landfall. First Army, under the guise of training, conducted extensive hurricane contingency planning. On Lieutenant General Russel

Honoré's order, the staff organized a headquarters detachment that moved forward into Mississippi the day after the hurricane struck. NORTHCOM also approved two mission assignments allowing FEMA to use military bases as forward staging areas before landfall. All of these actions went well beyond previous prelandfall activities.

Once the scope of the disaster was fully understood, the Department of Defense granted commanders a "blank check" to do whatever was necessary to help the people of Mississippi and Louisiana. Many Active Army units responded under the immediate response authority and sent helicopters and other assets to both states. Title 10 helicopters conducted search-and-rescue missions, delivered critical supplies to victims, and helped plug the breaches in New Orleans levees. Communications units deployed to Camp Shelby and New Orleans, where they provided communications support for civilian relief organizations as well as the Active-Duty forces.

Once President Bush authorized the use of Title 10 ground troops, thousands of other soldiers from the 82d Airborne, 1st Cavalry, and 10th Mountain Divisions deployed to Louisiana to help with the relief effort. The Active component also sent medical personnel, logistics specialists, and additional communications experts. They did more than just distribute humanitarian aid; these soldiers used their technical skills and knowledge forged during operations in Iraq, Afghanistan, and the Balkans to facilitate recovery in New Orleans and the surrounding parishes. For example, shortly after arriving at the New Orleans International Airport, soldiers from the 82d Airborne organized an interagency working group that helped restore order at the airport. Similarly, another 82d Airborne brigade began working with FEMA urban search-and-rescue teams soon after they moved into New Orleans. Their relationship led to improvements in search techniques and increased situational awareness as their reporting techniques were adopted by other units.

Often, the response of the Active component went well beyond the measures anticipated in the National Response Plan. The Army helped FEMA manage its supply distribution system. Army veterinarian personnel worked with civilian animal protection organizations to provide medical treatment for abandoned animals and prepared the animals for transport to new locations. Because units had to operate in potentially toxic floodwaters, Army decontamination units conducted extensive operations. Other soldiers manifested passengers and performed other administrative tasks at the New Orleans International Airport. But all of these support measures, and more, were necessary because of the scope of the damage inflicted by Hurricane Katrina along the Gulf coast. The destruction was so extensive that it overwhelmed first responders and

other emergency relief personnel in both states, as well as FEMA, state, and local emergency response managers in both states. With the region's response infrastructure nonfunctional, soldiers stepped in and assumed a variety of duties, ensuring that victims received the relief aid and support they so desperately needed.

Although there was not unity of command among the three military response chains of command, Lieutenant General Honoré's proactive leadership style facilitated unity of purpose. His insistence that he move forward and meet frequently with decisionmakers in the affected states paid dividends because he worked out many coordination issues at his level. He knew what the states needed and pushed his staff to provide it.

Although the Active component has been criticized for responding slowly to the crisis, many soldiers were on station in the affected states long before they were authorized to do so by the President. Once the President made the decision to deploy troops, they arrived in New Orleans within hours of receiving their orders and immediately began solving problems wherever they found them. Although soldiers are not explicitly trained in civil support operations, they used their soldier skills and the experience gleaned in Iraq and other places to effectively bring relief to victims in both states.

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Chapter 7

Conclusions

As President George Bush said several weeks after Hurricane Katrina devastated Mississippi and Louisiana, Hurricane Katrina was not a normal hurricane. Ordinarily, the National Guard forces mustered by Mississippi and Louisiana over the weekend before the storm made landfall would have been sufficient. But Hurricane Katrina was not normal, and its immense size and powerful winds overwhelmed local first responders, state emergency management personnel, and the National Guard forces mobilized in both states, sparking what became the largest domestic relief operation in our Nation's history. Consequently, the Army's Hurricane Katrina relief effort represents an extraordinary response to an extreme circumstance.

Active-Duty and National Guard soldiers executed the relief operation within the framework of the Army doctrine that existed at the time of the crisis, FM 100-19, *Domestic Support Operations*. FM 100-19 articulated four main principles for civil support operations:

- The Army will provide support if it does not interfere with national requirements.
- Army units will seek to satisfy the unmet needs of victims and governments, whether local, state, or Federal.
- Soldiers will use their core competencies to accomplish the mission.
- The aid rendered is temporary in nature.

The Army forces involved in the relief-and-recovery missions adhered to all four tenets delineated in FM 100-19:

- The Army provided support to the affected states. More than 72,000 Active-Duty and National Guard troops responded to the crisis. Even though thousands of National Guard soldiers were deployed overseas at the time, more than 50,000 National Guardsmen from all 50 states responded to the call for help from Mississippi and Louisiana.
- Since most of the first responders in the region were also victims of the storm, the needs of the local citizenry and governments were largely unmet until National Guard soldiers, and later Active-Duty soldiers, arrived to assist them. Soldiers provided a broad range of support, including command and control, communications, supply

distribution management, security, distribution of aid, search and rescue, medical assistance, veterinary services, transportation, and mortuary assistance.

- The success Army forces achieved depended almost wholly on troops using their soldier skills, often times honed overseas in Iraq, Afghanistan, or the Balkans, to successfully perform tasks that they were almost completely unfamiliar with. Their professionalism, competence, and compassion went a long way toward restoring the faith of the survivors in their Government.
- The mission was clearly temporary. Troops went to the region to help with the relief effort and, once conditions returned to some semblance of normality, they redeployed and left the final stage of restoration to the local and state governments.

While the Army's response to the crisis was outstanding, its doctrine was not. Much of FM 100-19 was out of date, reflecting a national emergency response command structure that no longer existed in 2005. In addition, the doctrine provided little planning guidance or other information for those involved in such operations. So, as many units prepared to deploy to the affected region, they had to scramble to figure out what they might have to do and what they would need to accomplish their missions. One of the most useful documents, many units later reported in their after-action reports, was the Hurricane Andrew lessons learned report, which gave planners concrete advice regarding equipment and personnel requirements.

But outdated and limited doctrine did not lead to poor results on the ground. It was just one more challenge for soldiers to overcome. When asked to assess the adequacy of the Army's doctrine at the time of the crisis, Lieutenant General Russel Honoré explained that Army doctrine teaches you to do things the right way. But "in warfare," he went on to say, "you are not just focused on doing things the right way, the way doctrine describes, but you have to do the right thing, what has to be done right now. Sometimes you have to adjust what you do to get the effect that we expect. . . ."¹ Clearly soldiers, whether Active Duty or National Guard, adjusted on the ground to accomplish their assigned tasks.

Furthermore, Army leaders recognized FM 100-19's deficiencies and took steps to rectify the situation. Within 6 months of the disaster, the Center for Army Lessons Learned (CALL) at Fort Leavenworth, Kansas, issued a lessons learned manual.² Then, a few months later, CALL published a staff officer's handbook.³ This handbook explains the current emergency response structure; delineates the Department of Defense's responsibilities during a variety of emergency response scenarios; provides

specific planning guidance; and describes some of the tactics, techniques, and procedures that those involved in civil support operations could use. Finally, the Army revised and updated the doctrine during the summer of 2008, incorporating the current national response command structure and many of the lessons learned from the Hurricane Katrina relief operation. The revised field manual focuses on the linkages and relationships between local, state, Federal, and nongovernmental agencies that the Army might interface with during future civil support operations.⁴ This revised field manual will serve as a guide to organize concluding thoughts regarding the Hurricane Katrina relief operation.

Analysis Using FM 3-28, *Civil Support Operations*

Chapter 1, Civil Support Operations Overview

The first chapter of FM 3-28 provides an overview of civil support operations. Success during a disaster response mission depends on all those involved adhering to a “unified approach,” which the manual explains is similar to the military concept of unity of effort.⁵ The National Incident Management System acknowledges that all the agencies and organizations involved in disaster response operations report to different command authorities, thus requiring a unified approach based on consensus rather than on directive. It goes on to describe the various duty statuses—state active duty, Title 32, and Title 10. Finally, this chapter articulates several principles for civil support operations:

1. Develop measurable objectives.
2. Coordinate with other organizations.
3. Plan to hand over tasks to civil organizations as soon as feasible.
4. Provide essential support to the largest possible number of people.
5. Know all legal restrictions and rules for the use of force.
6. Treat all civilians encountered as US citizens.
7. Establish funding.⁶

Unity of Effort

According to FM 3-0, *Operations*, one of the nine principles of war and operations is unity of command. Unity of command means that “a single commander directs and coordinates the actions of all forces toward a common objective.”⁷ It goes on to say that, in a joint, interagency, intergovernmental, or multinational environment, commanders must “cooperate, negotiate, and build consensus to achieve unity of effort” since their command authority may not extend over all forces involved in the

operation.⁸ The failure to achieve unity of command negatively affected the Army's response to Hurricane Katrina.

As more and more Federal and National Guard troops flowed into Louisiana, officials in both Washington and Baton Rouge worried about the chain of command and wanted to ensure that there was unity of effort. Governor Kathleen Blanco wanted massive Federal support, including Federal troops, but she did not want to give up control of the National Guard. President Bush was willing to send Federal troops if necessary, but he wanted Federal control over a situation that was seemingly slipping into anarchy. After days of negotiation, early Saturday morning, 3 September, Governor Blanco rejected President Bush's proposal that she either request federalization of the National Guard or grant Lieutenant General Honoré a commission in the Louisiana National Guard so that he could take command of both Active component and National Guard forces. At that point, President Bush decided to unilaterally send troops to Louisiana to meet the growing public demand for more decisive action by the Federal Government.

That decision led to what were essentially three separate relief operations in the Gulf area: the National Guard operation in Mississippi (Task Force *Magnolia*), the National Guard operation in Louisiana (Task Force *Pelican*), and the Federal effort (Task Force *Katrina*), which focused almost exclusively on Louisiana. Under this arrangement, there was virtually no chance of attaining unity of command, and various conflicts inhibited unity of effort. Senator Susan Collins commented during the Senate hearings that "the active duty military and the National Guard at times seemed to be, to paraphrase Churchill's famous quip about England and America, two forces separated by a common mission."⁹

There was a significant difference between the levels of unity of effort in Mississippi and in Louisiana. The situation in Mississippi was far less complicated because of the limited Active-Duty involvement in relief operations in that state. Moreover, the Mississippi adjutant general established a command structure for the National Guard forces that facilitated unity of effort since Task Force *Cyclone* commanded all National Guard units in the state whether they were Mississippi or out-of-state National Guard units.

The situation was much more complicated in Louisiana. First, a large Active-Duty contingent operated in the state independently from the National Guard effort. Second, Task Force *Santa Fe*, the National Guard division headquarters dispatched to Louisiana, lacked the same level of command authority exercised by its counterpart in Mississippi. Even now,

3 years after the event, many of those involved view their relationship in starkly contrasting ways. Brigadier General Gary L. Jones, Commander of TF *Pelican*, recalled that Lieutenant General Honoré “made several attempts to bring TF *Pelican* under his control and when those were rejected, he basically did his thing and we did ours.”¹⁰ Honoré categorically denied that he tried to usurp control of National Guard forces, saying that he was “totally unconfused by the situation because the National Guard had a mission doing the same thing that we were doing.”¹¹ Jones believes that the TF *Pelican* task organization worked very well, while Major General James R. Mason, Commander of Task Force *Santa Fe*, maintains that it hindered his ability to apply resources where needed.¹²

Although unity of command was not achieved, there are numerous examples of unity of effort between Title 10 and National Guard forces. Despite conflicts, whether real or imagined, between Lieutenant General Honoré and senior National Guard leaders in Louisiana, Honoré clearly facilitated unity of effort. By constantly operating from forward positions in the area of operations, he personally coordinated requests for support from senior political and military leaders at both the state and Federal levels. Moreover, since Honoré was the senior rater for both Major General Mason and Major General Vadnais, he had a preexisting relationship with both task force commanders that made coordination and cooperation between them and their staffs much easier.¹³ Mason believed that his task force worked well with Task Force *All American*. He recalled that he and Major General Caldwell used face-to-face meetings to allocate mission assignments that took advantage of the National Guard troops’ ability to carry out law enforcement missions. Task Force *All American*, in turn, focused on search-and-rescue and other relief operations.¹⁴ Likewise, Caldwell remembered having a good working relationship with the two brigade commanders in New Orleans, Brigadier General Deering and Brigadier General Douglas A. Pritt.¹⁵ Even though unity of effort was difficult to develop and maintain, because of the lack of unity of command, it did occur in many places. But it was personality driven, and when personalities did not mesh, unity of effort faltered.

The Army’s experience during the Hurricane Katrina relief effort demonstrates that doctrine alone will not overcome command structure deficiencies. Although doctrine emphasizes unity of effort when unity of command is unattainable, it was lacking in many areas of the relief operation. When commanders worked out smooth relationships among themselves, unity of effort was readily apparent; when they did not, the opposite was also evident. Moreover, since the military sometimes failed to achieve unity of effort, it is not surprising that a complex interagency

operation such as the Hurricane Katrina relief effort likewise often failed to achieve unity of effort.

Command and Control

Hurricane Katrina put stress on all command and control systems, whether military or civilian, from the moment it made landfall. The hurricane's unusual combination of size and strength almost completely destroyed the region's communications net. Flooding wiped out a large number of roads and left many others impassable because of standing water or debris. With limited communications and vehicular movement slowed by conditions on the ground, units in the field often operated based solely on the commander's written intentions.

Communications were particularly problematic throughout the relief operation. One of the most important lessons from Hurricane Katrina is that the local communications infrastructure cannot be counted on after a natural disaster. Unfortunately, that was also a lesson not learned after Hurricane Andrew. All of the Hurricane Andrew after-action reports emphasized the need for robust communications support in the aftermath of a hurricane, but such support was slow to arrive after Hurricane Katrina struck. With land-based and wireless communications inoperative, emergency managers often resorted to messengers, since there was no other form of communications available. Lack of communications inhibited the relief process and negatively affected the situational awareness of leaders.

Still, the United States military, especially the Army, used its resources to bridge the communications gap until commercial providers restored services. Several communications units provided valuable assistance to the relief operation. National Guard civil support teams were used extensively to provide communications support. The Active component sent communications units to both Camp Shelby and New Orleans, where they quickly set up networks that were used by both military and civilian personnel.

There were, however, numerous communications problems at the tactical level. Many National Guard units either did not bring or did not have tactical radios because of equipment shortages exacerbated by National Guard deployments overseas.¹⁶ To meet the mandate that units deploy with at least 90 percent of their required equipment, the National Guard instituted a policy of transferring needed equipment such as radios and generators from stateside units to deploying units. The consequence of that policy was, according to Lieutenant General Clyde Vaughn, the Vice Chief of the National Guard Bureau and Director of the Army

National Guard, that overall unit readiness decreased by 41 percent from July 2002 through September 2005.¹⁷ Even when they had radios, units found that their line-of-sight radios did not work well in an urban environment. In addition, Army radios were not compatible with civilian land mobile radios. Consequently, many units used personal cell phones to communicate. Using personal cell phones to conduct official operations, while novel, underscores the failure of the military to adequately prepare for the loss of communications capabilities during a significant disaster, whether manmade or natural.

With communications extremely limited, units used liaison officers to fill in the gaps. Liaison officers helped identify missions and facilitated cooperation among disparate Federal, state, and local agencies and nongovernmental organizations. Units that had the most success during the relief operation, such as the 82d Airborne and the Mississippi task forces, emphasized the use of liaison officers. But liaison officers were not a panacea. Despite the extensive use of liaison officers, Task Force *Santa Fe* was not able to eliminate friction between its staff and Task Force *Pelican*.

During the early stages of the crisis, the military, as well as all other government departments and agencies, lacked situational awareness. Because of their physical presence at the scenes of destruction, soldiers were in touch with both victims and local officials and thus able to provide the chain of command with timely and accurate information regarding the situation on the ground. Once Title 10 forces arrived in New Orleans, they initiated standardized reporting based on the SWEAT criteria they used in Iraq. The use of SWEAT-MCS (sewer, water, energy, academics, trash, medical, cultural, and security) greatly enhanced the exchange of information regarding the situation in the city. Once Army leaders understood the needs of survivors and local officials, they took action to satisfy those requirements. Sometimes, that was food and water; other times, it was providing generators to run fuel pumps, cleaning up schools, or clearing debris from streets. Thus, improved reporting increased the ability of commanders to assert effective command and control over the relief operation.

Duty Status

The wide variety of military personnel responding to the Hurricane Katrina crisis added to the complexity of the relief operation. There were Active-Duty forces (Title 10), Reserve forces on Active Duty (Title 10), National Guard in a Title 32 status (the Federal Government picks up the tab but the state governors retain operational control of their Guardsmen),

and National Guard on state active duty (the state pays for all costs and retains operational control of the National Guard). Once the negotiations between President Bush and Governor Blanco to either establish a dual-hat command structure or federalize the National Guard in Louisiana failed, there was no chance of attaining unity of command in Louisiana. Consequently, three separate military operations evolved in the region: National Guard in Mississippi, National Guard in Louisiana, and Joint Task Force *Katrina*.

The wide range of different forces also caused confusion among civilian agencies. Few civilians understood the difference between Active component and National Guard forces; to them, all soldiers in uniform were in the Army. Moreover, since those military forces were not organized under a unified command, civilians were unsure where to submit requests for assistance. Consequently, many requests for assistance were submitted to the state defense coordinating officer who, in turn, routed those requests to National Guard authorities. Therefore, confusion about which units belonged to which military command structure slowed down the response since requests for assistance often went to the wrong place.

Many people consider the decision to transition the National Guard from state active duty to Title 32 status one of the most important decisions made during the crisis.¹⁸ Since individual states pay the costs of using its forces while on state active duty, it is likely many states would have curtailed their support for the operation because of financial concerns. But once Secretary Donald Rumsfeld made the decision to place National Guard troops on Title 32 status, thus assuming the costs of the operation, more than 50,000 National Guard troops responded to the call to help the two states affected by the storm.

Seven Principles of Civil Support Operations

Examination of the operations in both states shows that the Army adhered to the seven principles of civil support operations delineated in FM 3-28. The 82d Airborne Division developed measurable objectives based on SWEAT-MCS and reported the status of those categories daily. Those criteria were soon adopted by National Guard forces operating in Orleans Parish as well. Similarly, TF *Cyclone* developed measurable criteria and used them to track accomplishments.

The 82d Airborne also effectively coordinated its efforts with other organizations and agencies. For example, the division artillery (DIVARTY) established an interagency operations cell at the Louis Armstrong International Airport that eventually involved more than 25 entities. TF *Panther* coordinated with FEMA urban search-and-rescue teams and other

entities, such as ambulances and civilian boat teams, operating in the city. These efforts greatly improved the search-and-rescue process in the city.

The Mississippi National Guard used Mississippi general officers as liaison officers in the affected counties. They served as a buffer between the National Guard task forces and county and local politicians, translating the political needs of the local politicians into executable missions for the National Guard forces. They also helped develop end states, based on accomplishment of reportable objectives, so that the out-of-state National Guard units could turn over their operations to local or nongovernmental organizations as quickly as possible.

National Guard and Active component task forces in both states worked diligently to provide essential support, such as food, water, shelter, and electricity to survivors. The primary means of supply distribution were points of distribution (PODs) that were strategically located to maximize the number of people who could access the sites. During the early days of the crisis, since many survivors were unable to travel to PODs, soldiers distributed supplies to those in need. Again, the focus of their effort was getting supplies to everyone in need quickly.

Contrary to media reports of violence and mayhem, few soldiers confronted hostile situations. Both National Guard and Title 10 leaders clearly understood the legal constraints under which they were operating. In Orleans Parish, Major General Caldwell negotiated an agreement with his National Guard counterparts to embed National Guard soldiers with his troops to shield them from the constraints placed on their actions by the Posse Comitatus Act. Caldwell also decided early on that his troops would wear their red berets instead of helmets to emphasize the nonthreatening nature of their mission. These were important symbolic gestures, especially in New Orleans where many local citizens feared the local police almost as much as criminals.

Soldiers treated their fellow citizens with compassion and care. During the mission to secure the Morial Convention Center and provide humanitarian aid to those stranded there, Lieutenant General Honoré annoyed some National Guard leaders by directing the National Guard soldiers involved in the operation to lower their weapons. There were widespread reports that the situation at the Convention Center was totally out of control, so the National Guardsmen who carried out the mission purposely put on a show of force to ensure that security was quickly established in the center.¹⁹ But Honoré believed such a show of force unnecessary because, as he later recounted, “we were in America. There was no threat. Those were primarily women, elderly ladies, and young

women with babies so it was the wrong tactic to be pointing weapons at Americans.”²⁰ Throughout the relief operation, time and time again, citizens commented positively about the treatment they received from Army troops.

The final principle, establish funding, is vitally important since that is how the Army is reimbursed for the expenses incurred during a civil support operation. The Defense Coordinating Element tracked funding, but many units, not understanding the importance of this principle, did a poor job of managing their expenditures. Consequently, more than 2 years after the hurricane hit the Gulf coast, financial personnel at NORTHCOM were still trying to sort out the costs of the operation.²¹

Chapter 2, Integrating Army Operations with National Doctrine

This chapter of FM 3-28 examines the National Incident Management System. It discusses the roles and responsibilities of both civil authorities and military commands and describes how the Army fits into that system. Civil support operations are by their very nature interagency. Therefore, Army units must also ensure that they fit into the unified command as defined by the National Incident Management System. Under this system, unified command refers to teamwork and coordination among the various organizations and agencies, which facilitates the accomplishment of common goals and objectives. Although each emergency support function has a lead agency, all other organizations supporting that emergency support function must work together to meet the emergency support objectives.²² Since the Department of Defense supports all of the emergency support functions, Army units must be prepared to provide support and work with a broad range of civilian agencies and nongovernmental organizations.

The US Army responded to Hurricane Katrina in accordance with existing laws and plans. The National Response Plan assigns first response duties to local government entities. The military is only brought in if local or state agencies are unable to cope with the situation. The National Guard, which is the military’s disaster response component, has more leeway to act in response to potential emergencies. Typically, the Active component only acts if FEMA asks for its help. There is little opportunity under existing laws for the Active component to take a more proactive role in preparing for potential emergencies. That is appropriate since Active component forces are tasked with defending the Nation, and preparing for potential natural disasters could interfere with that mission.

During the Hurricane Katrina crisis, the National Guard served as the military’s first line of response to the threat posed by Hurricane Katrina.

The Army National Guard in both Mississippi and Louisiana mobilized virtually every available soldier before the storm hit. Hundreds of National Guard soldiers were in place at critical locations by late Sunday evening. In Louisiana, they manned the Superdome, Jackson Barracks, and parish Emergency Operations Centers. Other Louisiana Guardsmen in HMMWVs (high-mobility multipurpose wheeled vehicles) were parceled out to various police precincts to provide the police with a high-water transportation capability. In Mississippi, special strike teams provided support to the Emergency Operations Centers in the three coastal counties. Once the hurricane passed, thousands of other soldiers moved forward from bases out of the hurricane's path to provide assistance to the victims of the storm. Both states activated all of their aviation assets and moved them out of the storm's path. Recognizing the potential impact of the storm, they also requested additional helicopters from surrounding states through the Emergency Management Assistance Compact (EMAC) before Hurricane Katrina struck. As soon as it was safe to fly, National Guard helicopters began search-and-rescue operations. Hundreds of people were rescued on 29 August, the day Hurricane Katrina made landfall. National Guard helicopters rescued many thousands more over the next few days. When it became clear that more forces were needed, the National Guard Bureau brokered agreements that quickly brought in tens of thousands of soldiers and nearly 200 helicopters and fixed-wing aircraft from other states. Despite criticism by both politicians and pundits, the US Army, in the form of the National Guard, was on duty in numbers and positioned where needed before the storm struck. The magnitude of the destruction wrought by Hurricane Katrina made the initial response look inadequate, but soldiers were in place before the storm struck.

Although Active component units are supposed to act only as a last resort, many major commands, such as First Army and the 82d Airborne, conducted premission planning well before they received orders directing them to provide hurricane relief support. Such planning facilitated their quick response when they were finally authorized to act. The First Army assumed command of the Active component relief effort on 30 August. The first Title 10 helicopters arrived on 30 August as well. They deployed under the immediate response clause before they were requested by FEMA. In the days that followed, more than 250 Active component helicopters and fixed-wing aircraft flew missions in both states. Once they were authorized to act by the President, Army ground forces also quickly moved into Louisiana. The 82d Airborne Division had troops on the ground a little more than 6 hours after receiving the deployment order.

The Army responded to the crisis in a timely although ultimately inadequate manner. The response was timely because National Guard

troops were in place in numbers before the storm hit. If Hurricane Katrina had been a normal storm, the response more than likely would have been sufficient. But this was not a normal storm, so the initial response fell short of what was needed, and many citizens suffered accordingly. Once Army leaders understood that both states needed more help, they inundated both states with relief personnel, aircraft, and equipment.

Chapter 3, Provide Support in Response to a Disaster

Chapter 3 of FM 3-28 examines the various emergency support functions and the ways in which Army forces could be organized to support those functions. Among the command models discussed are a parallel command structure, which was used during the Hurricane Katrina response operation, and the dual status model, which President Bush tried to initiate. The Department of Defense has primary responsibility for only one emergency support function: Emergency Support Function #3, Public Works and Engineering. But it provides support to all other emergency support functions. This chapter also includes planning considerations and damage assessment checklists.

All Title 10 forces were organized under a single task force—Joint Task Force *Katrina*. JTF *Katrina* made extensive use of liaison officers, sending them to state and local Emergency Operations Centers, National Guard headquarters, and FEMA operations centers. The Active component response to the disaster greatly benefited from having a unified command structure. The Army Corps of Engineers did not fall under JTF *Katrina*, but Active-Duty and civilian Corps personnel worked diligently to close the breaches in the levees and temporarily repair roofs damaged by the storm.

Although both Mississippi and Louisiana established task forces to control the relief operations in their states, each task force operated differently. In Mississippi, Task Force *Cyclone* commanded all National Guard forces in the state and reported on those operations directly to the state adjutant general. Since there was unity of command in Mississippi, relief operations ran fairly smoothly. In Louisiana, the adjutant general maintained control of three task forces—*Aviation*, *Engineers*, and *Military Police*. The rest of the National Guard troops operated under Task Force *Santa Fe*. Relations between the staffs of TF *Santa Fe* and TF *Pelican* were strained, and communications were somewhat limited. Consequently, there was less cooperation and more duplication of effort in Louisiana.

One reason why both states' response to the crisis was timely was their precrisis planning. The Mississippi National Guard had an up-to-date

emergency response plan, which it executed the previous month when another hurricane threatened the state. Similarly, Louisiana's response plan ensured that soldiers were in place where they were needed before the storm hit. Thus, contrary to media reports, there were sufficient numbers of National Guard troops present at the Superdome to provide order and security for those who sought refuge there. But no plan survives contact with the enemy, and the hurricane response plans were no exception to that rule. The plans of both states were quickly overwhelmed by the magnitude of the disaster. Troops were in position, but there were not enough of them to make a real difference during the first few days of the crisis. There were also mistakes. Pre-positioning boats and vehicles at Jackson Barracks, one of the lowest spots in New Orleans, was clearly a mistake. Much valuable equipment was lost when the levees broke and flooded the compound. Still, state planning was useful because the framework was in place so that, when out-of-state reinforcements arrived, they were used effectively to bring relief to the survivors.

Since Title 10 forces are not first responders, there were no plans in place. But many Active component units began planning for the relief mission early in the crisis. The First Army staff began planning days before the storm struck and was in the midst of moving a forward headquarters to Camp Shelby when the storm hit. Prior planning enabled First Army to act quickly and decisively when directed to take command of all Active component forces in the area of operations. The 82d Airborne Division staff also began planning several days before it deployed. On Friday, 2 September, the division conducted a full-scale mobilization exercise. When it did not receive orders to deploy late Friday afternoon, Major General Caldwell stood down his troops but left the equipment on the tarmac. That decision served the division well the next day when deployment orders were received. With the equipment in place, all the division had to do was get the soldiers on the planes. As a result, the division was able to put soldiers on the ground in New Orleans a little more than 6 hours after receiving the order to deploy.

Although damage assessment is the responsibility of FEMA and local emergency response organizations, this is one area in which the military could have made a positive contribution during the first few hours of the crisis. The failure to thoroughly evaluate the damage wrought by Hurricane Katrina severely hampered the initial response to the crisis. No one really understood the magnitude of destruction Hurricane Katrina inflicted on both Mississippi and Louisiana for more than a day after the hurricane made landfall. The Department of Defense could have quickly brought in

resources and assisted more fully with the damage assessment, but there was a reluctance to do more until Deputy Secretary of Defense Gordon England issued the “blank check.” Assistant Secretary of Defense for Homeland Defense Paul McHale acknowledged during testimony before the Senate that the Department of Defense should have and must do better in this area.²³

Chapter 4, Support to Law Enforcement

This chapter examines Army support to civil law enforcement operations. Although the Posse Comitatus Act greatly limits the degree of support Active component forces can provide during civil support operations, National Guard troops on state active duty or Title 32 status are able to participate in law enforcement activities. This chapter describes both the pertinent laws and the exceptions to those laws. It also provides the types of law enforcement missions soldiers might support.

Both National Guard and Active component forces provided valuable support to law enforcement officials. National Guard soldiers conducted a variety of law enforcement missions, ranging from manning security posts to patrolling the streets along with police officers. In one parish, National Guard soldiers were actually deputized, and in another parish, they took over security duties at the local shelter. No matter what the situation, the arrival of National Guard soldiers on the scene greatly helped local law enforcement officials, who were tired and overworked after days on the job. By taking over law enforcement and security missions, the National Guard enabled local police officers to resume their normal duties and work routines. Although the Posse Comitatus Act prevents Active component soldiers from conducting law enforcement missions, their mere presence helped quell disorder wherever they operated. Citizens in one district in New Orleans told soldiers that they were able to open their windows at night for the first time in years.

Active component soldiers, however, could have provided even more support if the President had decided to invoke the Insurrection Act. Under this statute, the President can unilaterally deploy forces if domestic violence impedes the execution of Federal laws. Although his father used the Insurrection Act to send in Federal troops to quell the Los Angeles riots in 1992, President Bush chose not to do so. Instead, he sent troops into the region, but they had to abide by the limitations placed on them by the Posse Comitatus Act.

Even though many people later called for the modification or repeal of the Posse Comitatus Act, the act did not hinder Active component operations. Title 10 soldiers understood the limits the act placed on their actions, and their commanders were careful not to put them in potentially compromising situations. While Posse Comitatus restrictions caused some frustration among the Active component soldiers, who wanted to search for survivors more aggressively, their leaders came up with innovative ways, such as embedding National Guard troops with Active component patrols, to get the job done and still remain in compliance with the law. As long as Active component and National Guard commanders focused on unity of effort, such arrangements worked effectively. There were, unfortunately, instances of National Guard officers refusing to allow their soldiers to work with Title 10 forces because of the implied subordination of the Guardsmen to the Active-Duty soldiers. Still, in most cases, they were able to work through the issues soldier to soldier.

Chapter 6, Legal Considerations

Chapter 6 looks at the underlying legal authorities that relate to civil support operations. Typically, Federal military forces only assist with civil support missions if directed to do so by the President. But Federal forces can act under their immediate response authority to provide support to areas affected by Hurricane Katrina. Active component helicopters began arriving a few days after the hurricane struck. Most of the aircraft deployed based on perceived need and the authorization Deputy Secretary England's blank check provided. They conducted search-and-rescue missions, dropped sandbags in the levee breaches, and transported supplies throughout the operating area. Other units deployed under this authority and provided communications, medical, and logistics support.

Intelligence Support and Information Sharing

Another important legal concern was discerning the limits of military intelligence support. Even though there are statutory restrictions on the use of military intelligence during domestic support operations, intelligence units contributed greatly to the overall success of the mission. To preclude any mistaken notions regarding the purpose of the information-gathering effort, intelligence support was renamed information support. Despite statutory limitations, intelligence personnel used their analytical skills to provide effective information support using open source materials. Better and more timely access to military intelligence sources would, however, have greatly improved situational awareness for commanders.

Chapter 7, Sustainment

Like FM 100-19, *Domestic Support Operations*, FM 3-28 asserts that sustainment is one of the most important facets of civil support operations. It is the warfighting function that provides “support and services to ensure freedom of action, extend operational reach, and prolong endurance.”²⁴ Most relief operations involve areas heavily damaged by a natural or manmade event. With the public infrastructure inoperable and private enterprises unavailable, the military is often asked to step in and provide the support necessary to sustain life in the affected area. That was certainly the case during the Hurricane Katrina relief operation. Military forces provided food, water, ice, fuel, and medical care to those in need. Later, other units arrived to provide a range of support services to units in the field, such as command and control; communications; aviation; engineer; reception, staging, onward movement, and integration (RSOI); transportation; decontamination; military police; religious support; and mortuary support. Although contracting is the preferred method for sustaining logistics support, during a severe crisis, such as Hurricane Katrina, which wiped out much of the infrastructure and many businesses in the region, military forces may need to provide direct sustainment support.

Logistics

FM 100-19 asserts that all disaster response missions are essentially logistical in nature. That was certainly the case during the response to Hurricane Katrina. Logistics operated on a number of levels. First, there was logistics support—humanitarian aid—distributed to victims of the storm. The Army also provided logistics support to FEMA, helping the agency track its commodities. Finally, there was also logistics support for the military units involved in the relief operation.

Humanitarian aid was typically distributed to those in need at points of distribution. These were driveup locations where citizens could pick up food, water, ice, tarps, and other goods. Active-Duty and National Guard personnel manned PODs throughout the operating area. At times, especially during the early stages of the relief operation, military personnel delivered relief aid to people who could not get to a nearby POD. Both of these distribution techniques proved highly effective in getting relief supplies to those in need. Of course, following the dictum of providing support to the largest number of people possible, PODs are much more effective than individual deliveries, but conditions in both states sometimes required such individual support.

At FEMA’s request, the Army provided logistics management support because the magnitude of the disaster had overwhelmed FEMA’s ability

to manage its logistics system. The Army never took over full control of FEMA's logistics operation, but it did help FEMA track supplies and manage supply distribution centers.

The almost constant ebb and flow of forces also made the task of sustaining the troops in the field challenging. Most arriving units understood that they had to bring enough food and supplies to sustain their operations for a week or more without support. The two National Guard divisional headquarters, Task Forces *Santa Fe* and *Cyclone*, worked diligently to provide their assigned forces what they needed, but they had a hard time tracking units and ascertaining their needs. Better coordination and planning for the deployment and redeployment of National Guard forces would have improved support significantly for forces operating in both states. Even so, both logistics staffs greatly improved conditions on the ground during the relief operation.

Aviation Support

Even before Hurricane Katrina struck the Gulf coast, National Guard leaders began marshaling additional aviation support. Out-of-state air support began to arrive on the day Hurricane Katrina made landfall. By Tuesday, 30 August, 64 National Guard aircraft were on station in both states.²⁵ Active component helicopters arrived on Tuesday, 30 August. As the full scope of the devastation in Mississippi and Louisiana became apparent, the number of aircraft deploying to both states increased exponentially. By 6 September, 8 days after Hurricane Katrina made landfall, more than 350 Title 10 and National Guard aircraft were operating in both Mississippi and Louisiana.²⁶ Although the number of aircraft on hand proved woefully inadequate at first, the situation changed quickly, and within days, sufficient helicopters were available to conduct a wide range of support missions, such as search and rescue, personnel and logistics transportation, levee repairs, and firefighting. The speed and responsiveness of the Army's aviation forces were a clear success. Although there were problems, such as the initial difficulties with air traffic control, there were no aviation mishaps, and Army helicopters rescued almost 3,000 people.²⁷

Engineer Support

Engineering units are always valuable assets during disaster relief operations. These assets were handled differently in Mississippi and in Louisiana. In Mississippi, Task Force *Engineer* operated under Task Force *Cyclone*, but it was allowed to operate independently to carry out its road clearance mission. Out-of-state engineer units were parceled out to task force commanders who made the decision where to deploy their forces. That was not the case in Louisiana, where Task Force *Pelican* maintained

close control over almost all engineer units. Although the engineers effectively performed their missions in both states, pushing control of the engineers down to subordinate task forces improved response time in Mississippi.

RSOI Support

The receipt and subsequent redeployment of National Guard forces proved challenging in both states. As early as Tuesday, 30 August, Louisiana officials expressed concern about the uncontrolled influx of forces into their state. Several times, National Guard units dispatched to the affected states by their governors arrived without notice and deployed to an operating area without direction from TF *Pelican*. Even more critical, units returned on orders from the governor, making it difficult for the various task forces to manage resources. Two organizational decisions complicated the RSOI process in Louisiana. First, there were two RSOI sites in Louisiana, a ground reception center near Alexandria and an air reception center at Belle Chasse, which meant that two separate RSOI structures were in operation simultaneously in Louisiana. Second, the chain of command in Louisiana was not clear to units reporting in to the state. Unit after-action reports point out the confusion. One unit deployed at the direction of TF *Santa Fe*, but once it arrived at its designated location, TF *Pelican* directed it to another site. Mississippi suffered similar problems, but TF *Cyclone* managed the problem more effectively. The clear chain of command in Mississippi and the single RSOI site in the state no doubt helped.

Other Sustainment Support Operations

Active component and National Guard forces provided a wide range of other sustainment support missions. Active-Duty, Reserve, and National Guard transportation units delivered supplies and transported personnel throughout both states. High-water vehicles were in particular demand, as they could better negotiate the flooded streets of New Orleans or debris-strewn roads in Mississippi. The 21st Chemical Company performed a real-world decontamination mission, providing assistance to both military units and civilian organizations. Military police units were also in high demand. In the days after Hurricane Katrina struck, it appeared as if New Orleans was descending into total anarchy. The National Guard responded to the crisis by deploying more than 4,000 military police to the city over a 3-day period. Military police also relieved local law enforcement agencies of many of their extra security obligations brought on by Hurricane Katrina, allowing them to resume their normal work schedule. Religious support was another important sustainment mission. Army leaders realized that working in the horrible conditions in Louisiana and Mississippi and

constantly looking at and smelling the death and destruction meted out by Hurricane Katrina might negatively affect morale. Many units ensured that their chaplains were among the first personnel deployed so that they were available to minister to the needs of the troops. Finally, the Army provided mortuary support. Although civilian organizations were initially tasked to perform this mission, as delays in starting the mission continued, Army mortuary units deployed to help. Troops from the 82d Airborne Division later assisted the civilian contractor with remains removal. Once again, chaplains played an important role in this mission because a chaplain accompanied every team to minister to the team members and to ensure that all deceased persons were handled with dignity and respect.

Summary

The adage “expect the unexpected” clearly applies to civil support operations. Many units deployed without knowing where they were going. The 82d Airborne Division did not even know which state it was deploying to until division elements were in the air. Then, once units arrived, they frequently performed missions that went well beyond the expected scope of operations. Soldiers did much more than conduct search and rescue, provide security, and distribute supplies. They cleared debris, cleaned up damaged buildings, cooked meals, acted as sources of information for survivors, provided medical care, and, perhaps most important, represented the Nation’s concern for the well being of its fellow citizens.

In the weeks and months after Hurricane Katrina devastated the Gulf coast, there was much criticism of the Federal Government’s handling of the subsequent relief effort. Politicians, pundits, and ordinary citizens focused much of that criticism on FEMA and the Department of Homeland Security, although some of it was directed toward the military as well. There were complaints that the Department of Defense’s response had been bureaucratic, slow, and inadequate. But a closer examination reveals that the United States Army, media reports to the contrary, responded to the crisis in a timely manner. Although Hurricane Katrina was a worst-case situation, the Army responded effectively, using techniques and methods honed in Iraq and during humanitarian relief operations in Central America and Southeast Asia. There were thousands of soldiers on duty when the hurricane struck. Within days, once the scope of the disaster was fully realized, both the National Guard and Active component flooded the region with troops, helicopters, equipment, and supplies. The massive response by the military was necessary, given the incredible destruction caused by the hurricane.

The Army’s success in providing assistance to the stricken citizens of the Gulf coast changed the expectations of the American people. Even

though the Army is more fully engaged throughout the world than ever before, American citizens expect that, in time of need, the Army will step in and take care of them. The efficiency and compassion of American soldiers, especially when compared to the response by FEMA and other agencies, brought forth many calls to pass the mission over the military entirely. While that is unlikely, expectations of military assistance have been raised higher than ever before. Thus, it behooves the Army to prepare for and train for such contingencies.

Notes

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Glossary

abn	airborne
AO	area of operations
ASPCA	American Society for the Prevention of Cruelty to Animals
AVIM	aviation intermediate maintenance
BCT	brigade combat team
BCS3	Battle Command Sustainment Supply System
BG	brigadier general
CALL	Center for Army Lessons Learned
CBRNE	chemical, biological, radiological, nuclear, or high-yield explosives
CDT	central daylight time
COL	colonel
COSCOM	corps support command
CST	civil support team
DCE	Defense Coordinating Element
DCO	defense coordinating officer
DHS	Department of Homeland Security
div	division
DIVARTY	division artillery
DMAT	Disaster Medical Assistance Team
DOD	Department of Defense
DRF	division ready force
DSCA	defense support of civil authorities
EMAC	Emergency Management Assistance Compact
EOC	Emergency Operations Center
EPA	Environmental Protection Agency
ESF	emergency support function
EUWP	Expeditionary Unit Water Purifier
FCO	Federal coordinating official
FEMA	Federal Emergency Management Agency
FM	field manual
FOB	forward operating base
FORSCOM	US Army Forces Command
FOSA	Federal operational staging area
HEMTT	heavy expanded mobility tactical truck
HMMWV	high-mobility multipurpose wheeled vehicle
HSPD 5	Homeland Security Presidential Directive 5
ID	infantry division
INMARSAT	International Maritime Satellite System
JDOMS	Joint Directorate of Military Support
JFCOM	Joint Forces Command
JOA	joint operating area

JOC	Joint Operations Center
JP	joint publication
JTF	joint task force
LCAC	landing craft air cushion
LMR	land mobile radio
LSU	Louisiana State University
LTC	lieutenant colonel
LTG	lieutenant general
MEDCOM	Medical Command
MEDEVAC	medical evacuation
MEMA	Mississippi Emergency Management Agency
MG	major general
MP	military police
mph	miles per hour
MRE	meal, ready to eat
NCO	noncommissioned officer
NEPLO	Navy emergency preparedness liaison officer
NG	National Guard
NHC	National Hurricane Center
NOAA	National Oceanic Atmospheric Administration
NORTHCOM	United States Northern Command
NRCC	National Response Coordination Center
NRP	National Response Plan
OMB	Office of Management and Budget
OSA	operational support airlift
POD	point of distribution
QRF	quick reaction force
RAID	reconnaissance and interdiction detachment
RNA	rapid needs assessment
ROWPU	Reverse Osmosis Water Purification Unit
RRCC	Regional Response Coordination Center
RSA	regional support area
RSOI	reception, staging, onward movement, and integration
SAR	search and rescue
SEMP	Suburban Emergency Management Project
SERT	State Emergency Response Team
SFOR	Stabilization Force
SINGARS	Single-Channel Ground and Airborne Radar System
SITREP	situation report
SRAAG	Senior Army Adviser, Army National Guard
SUV	sport utility vehicle
SWEAT	sewer, water, energy, academics, trash
SWEAT-MCS	sewer, water, energy, academics, trash, medical, cultural, and security
TCP	traffic control point

TF	task force
TOC	tactical operations center
TRANSCOM	United States Transportation Command
TTP	tactics, techniques, and procedures
TWPS	Tactical Water Purification System
USAFHRA	US Air Force Historical Research Agency
USAR	US Army Reserve
USARCENT	US Army Forces, Central Command
USC	United States Code
USCG	US Coast Guard
VA	Department of Veterans Affairs
VADM	vice admiral
VFR	visual flight rules
VIP	very important person

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Appendix A

Hurricane Katrina Chronology

Tuesday, 23 August 2005

- Tropical Depression 12 develops about 200 miles southeast of the Bahamas.

Thursday, 25 August 2005

- Tropical Storm Katrina is upgraded to Hurricane Katrina.
- Hurricane Katrina, a Category 1 hurricane, hits FL.

Friday, 26 August 2005

- Governor Blanco declares a state of emergency for LA.
- Governor Barbour declares a state of emergency for MS.
- Hurricane Katrina is upgraded to a Category 2 hurricane.

Saturday, 27 August 2005

- People in LA begin coastal evacuations at 0900. The state implements the contraflow plan at 1600.
- Governor Blanco asks President Bush to declare a Federal state of emergency in LA. Several hours later, he does so.
- Hurricane Katrina is upgraded to a Category 3 hurricane.

Sunday, 28 August 2005

- The Superdome opens as a “special needs” shelter.
- Mayor Nagin announces the mandatory evacuation of New Orleans.
- The Superdome opens as a “shelter of last resort” for the general public.
- Contraflow evacuation operations end at 1700.
- Hurricane Katrina is upgraded to a Category 4 and then Category 5 hurricane with maximum sustained winds of almost 160 mph.
- The LA DCO, COL Daskevich, arrives in Baton Rouge along with a DSCA planner.
- The LA DCE (12 members) drives to Houston at 0115.

Monday, 29 August 2005

- Hurricane Katrina makes landfall near Buras, LA, at 0610 CDT as a Category 3 hurricane.
- Hurricane Katrina makes landfall in MS about 1000.
- Three levees fail in New Orleans: Industrial Canal, 17th Street Canal, and London Avenue Canal. Other levees are overtopped but do not fail.
- NORTHCOM activates its battle staff.

- The Army National Guard positions 65 helicopters—42 UH-60s, 8 UH-1s, and 15 CH-47s—in MS, LA, FL, TX, and AL to support relief operations.
- First out-of-state forces arrive in LA (2 Blackhawks from OK) and MS (2 Blackhawks from AR).

Tuesday, 30 August 2005

- Mayor Nagin reportedly opens the Convention Center as a “refuge of last resort” for the general public.
- Neighboring states, acting on existing EMAC agreements, begin supplying troops and equipment to LA, MS, and AL.
- Acting Deputy Secretary of Defense Gordon England gives NORTHCOM blanket authority (“blank check”) to provide whatever military assistance is needed to the affected states.
- LTG Russel L. Honoré drives to Camp Shelby, MS. Later that afternoon, he drives to Gulfport and meets with the governor and adjutant general.
- NORTHCOM establishes JTF *Katrina* and assigns LTG Honoré as the commander.
- Conditions deteriorate in the Superdome when the plumbing fails.
- Secretary Michael Chertoff, Department of Homeland Security, declares Hurricane Katrina an incident of national significance.
- Secretary Chertoff designates Michael Brown, Director of FEMA, as the principal Federal official.
- MS officials report that one of their biggest commodity shortfalls is fuel.
- MS officials voice concern that they are not receiving the same level of support as Louisiana.
- Airport officials report that the Louis Armstrong International Airport in New Orleans has limited VFR only capabilities.

Wednesday, 31 August 2005

- President Bush flies over the region to survey the damage.
- FEMA sends a mission assignment requesting buses to the Department of Transportation. The first buses arrive in the evening and are used to evacuate special needs patients to Houston.
- Governor Blanco and President Bush discuss military assistance and the need for a unified command structure.
- TX officials prepare the Astrodome to accept up to 23,000 evacuees.
- The Corps of Engineers attempts to close the 17th Street Canal breach.
- The chief of the National Guard Bureau exhorts all state adjutant

generals to send as many troops and as much equipment to LA and MS as they can.

- Governor Blanco asks LTG Honoré to coordinate the evacuation of the Superdome. LTG Honoré hands the assignment to BG Mark Graham, Deputy Commander of the US Fifth Army, who had just arrived in New Orleans.
- LTG Honoré directs the AL DCO, COL Young, to move forward to Gulfport.

Thursday, 1 September 2005

- Superdome evacuation begins at 1000.
- FEMA requests that DOD take responsibility for providing “full logistics support” across the entire area affected by Hurricane Katrina. The cost estimate for this support was set at \$1 billion.
- The National Guard begins deploying MPs to New Orleans. The first of three 1,400 MP contingents arrive.
- Three CH-47s and 12 UH-60s from the 4th Infantry Division begin operations in LA.

Friday, 2 September 2005

- President Bush and Governor Blanco meet in LA and discuss command and control issues.
- MS officials warn that the commodity situation in the state is critical.
- National Guard troops restore order at the Convention Center.
- The White House faxes a dual-hat proposal to Governor Blanco.
- Air evacuations begin from the New Orleans International Airport.
- St. Bernard and 9th Ward Levee breaches are closed.
- FEMA requests DOD assistance with logistics distribution in MS.
- Another 1,400 Army National Guard MPs arrive in New Orleans.

Saturday, 3 September 2005

- Governor Blanco rejects the dual-hat proposal.
- President Bush announces the deployment of 7,200 Title 10 troops to the Gulf region.
- The 3d Brigade and 319th Field Artillery Regiment from the 82d Airborne Division deploy to New Orleans.
- The 2d Brigade/1st Cavalry Division deploys to Hammond, LA.
- Evacuation operations begin at the Convention Center and are completed by early evening.
- The Superdome evacuation is complete.
- All hospitals in New Orleans have been evacuated.
- The last of the 1,400 Army National Guard MPs arrive in New Orleans.

Sunday, 4 September 2005

- The last group of evacuees depart the Louis Armstrong International Airport at 0800.
- The Corps of Engineers closes the mouth of the 17th Street Canal using sheet pilings.
- The 82d Airborne continues to flow into New Orleans.

Monday, 5 September 2005

- The 82d Airborne assumes control of the Convention Center.
- The chief of the National Guard Bureau asks the Secretary of Defense to convert all National Guard troops to Title 32 status.
- The 4th Brigade/4th Mountain Division sends 65 trucks and drivers to New Orleans.
- DOD delivers 320 tons of MREs to Gulfport, MS.
- About 120 soldiers from the 4th Psychological Operations Group arrive at Camp Shelby to provide public information support using man-portable and vehicle-mounted loudspeakers.

Tuesday, 6 September 2005

- The general search-and-rescue mission in New Orleans is complete. Officials are now implementing a more deliberate and detailed search-and-rescue mission.
- The Corps of Engineers closes the 17th Street Canal breach.
- The Corps of Engineers makes three deliberate breaches in levees in St. Bernard Parish to facilitate natural drainage.
- Approximately 1,700 paratroopers from the 82d Airborne Division arrive in New Orleans.
- Approximately 1,700 soldiers from the 1st Cavalry Division arrive in New Orleans.
- DOD delivers 1,500 LMRs to New Orleans.

Wednesday, 7 September 2005

- Secondary searches begin.
- Mayor Nagin announces that he will forcibly evacuate residents who refuse to leave the city.
- DOD agrees to assist with commodity distribution in LA.
- The 13th COSCOM is en route to New Orleans.

Thursday, 8 September 2005

- Approximately 60 percent of New Orleans (Orleans Parish) remains under water.
- Twelve UH-60s are redeployed from the 2/4th Cavalry and 4th Infantry Division.

- The 14th Combat Support Hospital arrives.
- Mortuary affairs operations begin.

Friday, 9 September 2005

- Search-and-rescue teams begin a deliberate search in New Orleans.
- St. Charles and Jefferson (East Bank) Parishes are reported dry. Depths of flood waters remaining in New Orleans range as high as 15 feet. St. Bernard Parish has 7 feet of water throughout the developed areas of the parish.
- The MS Gulf coast is now accessible from the north and east and from eastern LA.
- The London Avenue and Inner Harbor Navigational Canal breaches are closed.
- Evacuation flights out of Louis Armstrong International Airport end. Some 26,000 people were evacuated through the airport.
- The 4th Infantry Division returns to TX to resume preparations to deploy to Iraq.

Saturday, 10 September 2005

- Mississippi Power and Light Company reports that power has been restored to 90% of the customers able to receive power.
- The Department of Homeland Security designates VADM Thad Allen, USCG, as the principal Federal official in the affected states.

Sunday, 11 September 2005

- Oil production in the Gulf of Mexico is at 41% of its pre-Hurricane Katrina level and gas production is at 62%.

Monday, 12 September 2005

- Tropical Storm Ophelia threatens the east coast.
- Primary searches are complete in New Orleans
- Search-and-rescue operations expand into outlying parishes.
- Air rescue missions end.
- The Secretary of Defense directs the deployment of nine mortuary affairs teams to LA.

Tuesday, 13 September 2005

- Ophelia is designated a Category 1 hurricane.
- The 54th Quartermaster Company (Mortuary Affairs) arrives in New Orleans.
- Louis Armstrong International Airport opens for limited commercial flights.
- DOD forces complete the “hasty search-and-rescue” mission.

Thursday, 15 September 2005

- Mayor Nagin announces that businesses and residents will be allowed to return to the city beginning Monday, 19 September.
- Primary searches are complete in Orleans, Jefferson, and St. Bernard Parishes.

Friday, 16 September 2005

- MS begins the 38th Infantry Division “force adjustment.”
- AL redeploys 1,500 personnel.
- Plans are under development to transfer all Active component missions in LA to the National Guard no later than 29 September. All aviation missions will transition between 19 and 22 September.

Saturday, 17 September 2005

- GA National Guard units, 1,065 soldiers and airmen, plan to withdraw from MS on 20 September.
- The 82d Airborne Division turns over all responsibilities for ESF #8 and ESF #13 at the Convention Center and Touro Hospital. The 82d Airborne also relinquishes responsibility for logistics to FEMA.

Sunday, 18 September 2005

- Tropical Depression 18 is redesignated as Tropical Storm Rita.
- Personnel begin secondary searches in New Orleans. The object is to reexamine all homes and buildings in areas subjected to at least 5.5 feet of flood water.
- The 2d Brigade Combat Team/1st Cavalry Division returns to Fort Hood.

Monday, 19 September 2005

- All TX National Guard and other responders are directed to return to TX to prepare for Hurricane Rita.
- An Army veterinary team deploys to LA to assist with veterinary care.

Tuesday, 20 September 2005

- Hurricane Rita makes landfall in FL. Damage is minimal.

Wednesday, 21 September 2005

- VADM Thad Allen, USCG, is designated as the Federal coordinating officer.
- The President issues a Federal emergency declaration in anticipation of the damage by Hurricane Rita.

Thursday, 22 September 2005

- DOD establishes JTF *Rita* ahead of the storm under the command of LTG Robert Clark, Commanding General of US Fifth Army.

Saturday, 24 September 2005

- The US Army Corps of Engineers installs 60-foot sheets of steel piling to block Lake Pontchartrain's tidal surge from the 17th Street and London Avenue Canals.
- With Hurricane Rita threatening New Orleans, OK National Guard troops reposition their logistics operations troops, including food, supply, and maintenance troops, to the Morial Convention Center.

Monday, 26 September 2005

- Secondary searches are about 75% complete in New Orleans. Authorities expect these searches to continue for another week.

Appendix B

Louisiana National Guard Task Organization (From National Guard Title 32 Response to Katrina, 16 0730 CDT September 2005)

Task Force *Pelican*

Location: Carville, LA

Units:

Headquarters, Camp Beauregard (LA)
Headquarters, New Orleans (LA)
Headquarters Detachment, Baton Rouge (LA)
261st Signal Brigade (DE)
Medical Command (LA)
Joint Forces Headquarters-Medical (WV)
231st Combat Communications Squadron (DC)

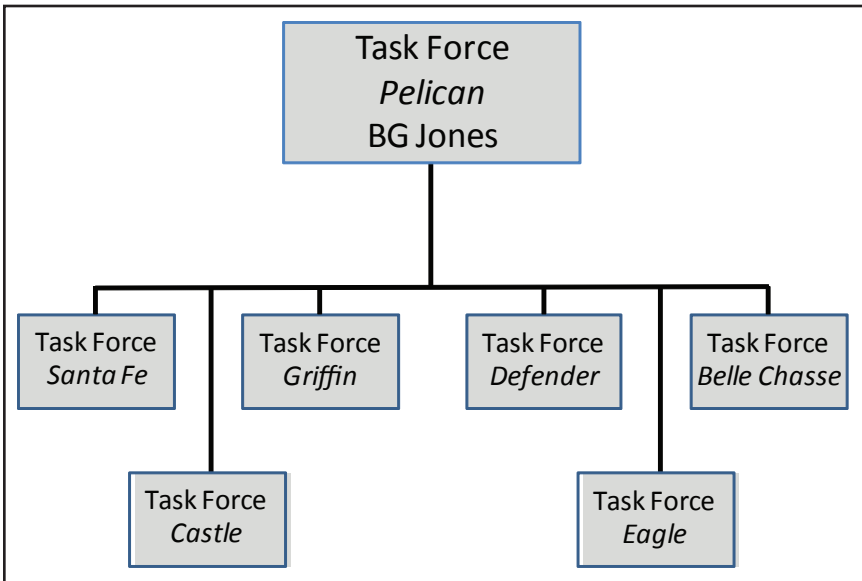


Figure 30. Louisiana Task Force *Pelican*

Task Force *Santa Fe* (35th Infantry Division)

Location: New Orleans, LA

Units:

Headquarters, 35th Infantry Division (KS)

56th Stryker Brigade Combat Team (PA)

2/75th Division (Training Support) (TX)

104th Maintenance Company (DC)

Reverse Osmosis Water Purification Unit (PA)

109th Air Wing (NY ANG)

222d Combat Communications Squadron (CA ANG)

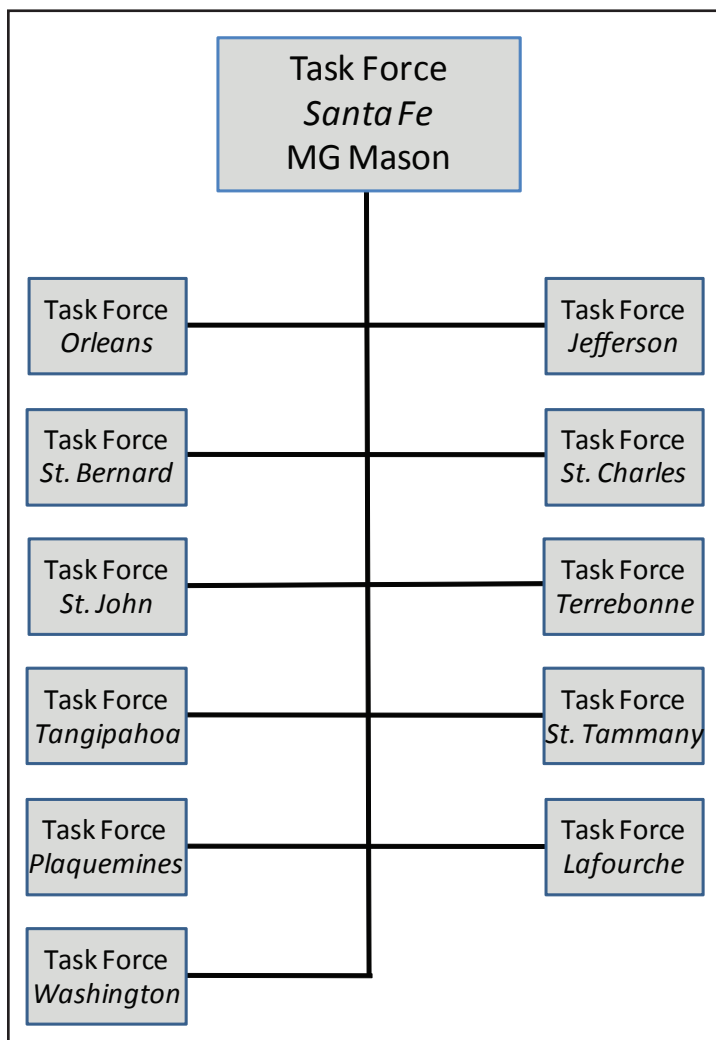


Figure 31. Task Force *Santa Fe*.

Subtask Forces: (reporting to Task Force *Santa Fe*)

Task Force *Orleans*

Location: Orleans Parish, LA

Units:

- 41st Infantry Brigade (OR)
- 45th Infantry Brigade (OK)
- Joint Force Headquarters Cell Joint Task Force 71 (TX)
- Joint Force Headquarters Cell Joint Task Force CA (CA)
- 1/148th Infantry (OH)
- 1/179th Infantry (OK)
- 1/180th Infantry (OK)
- 1/181st Infantry (MA)
- 1/186th Infantry (OR)
- 1/279th Infantry (OK)
- 1/160th Field Artillery (OK)
- 1/171st Field Artillery (OK)
- 2/185th Armor (CA)
- 240th Signal Battalion (CA)
- 345th Quartermaster Battalion (OK)
- 536th Forward Support Battalion (TX)
- 700th Support Battalion (OK)
- 119th Military Police Company (RI)
- 125th Military Police Company (PR)
- 870th Military Police Company (CA)
- 1186th Military Police Company (CO)
- 245th Engineer Company (OK)
- 1207th Transportation Company (RI)
- 219th Quartermaster Company Detachment (PR)
- Task Force *Engineer* (TX)
- 42d Civil Support Team (NC)
- 54th Civil Support Team (WI)
- Counter-Drug Detachment (CA)
- 147th Fighter Wing (TX ANG)
- 163d Air Refuel Wing (CA ANG)
- 136th Medical Group (TX ANG)
- 147th Medical Group (TX ANG)
- 149th Medical Group (TX ANG)
- 136th Security Force (TX ANG)
- 204th Security Force (TX ANG)
- 221st Combat Communications Squadron (TX ANG)

Task Force *St. Bernard*

Location: St. Bernard Parish, LA

Units:

Task Force 169 (169th Field Artillery Brigade) (CO)
Joint Force Headquarters Communications Cell (UT)
29th Military Police Company (MD)
178th Military Police Company (GA)
190th Military Police Company (GA)
165th Air Wing (GA ANG)

Task Force *St. John*

Location: St. Johns Parish, LA

Units:

108th Security Force (NJ ANG)

Task Force *Tangipahoa*

Location: Tangipahoa Parish, LA

Units:

Headquarters, 113th Field Artillery Brigade (NC)

Task Force *Plaquemines*

Location: Plaquemines Parish, LA

Units:

2/217th Infantry (NM)

Task Force *Washington*

Location: Washington Parish, LA

Units:

B Company, 1/111th Infantry (PA)
72d Military Police Company (NV)
157th Air Refueling Wing (NH ANG)
111th Security Force (PA ANG)
152d Security Force (NV ANG)
171st Security Force (PA ANG)
175th Security Force (MD ANG)
193d Security Force (PA ANG)

Task Force *Jefferson*

Location: Jefferson Parish, LA

Units:

1/129th Field Artillery (MO)
1/86th Field Artillery (VT)
1/142d Field Artillery (AR)

2/197th Field Artillery (NH)
3/153d Infantry (AR)
1776th Military Police Battalion (MI)
39th Support Battalion (AR)
1/114th Aviation (AR)
131st Air Wing (MI ANG)
ANG Composite Communications/Support/Civil Engineer (AR
ANG)
158th Security Force (VT ANG)
39th Medical Team (AR ANG)

Task Force *St. Charles*

Location: St. Charles Parish, LA

Units:

163d Support Battalion (SC)

Task Force *Terrebonne*

Location: Terrebonne Parish, LA

Units:

211th Military Police Battalion (MA)
2/197th Field Artillery (NH)

Task Force *St. Tammany*

Location: Tammany Parish, LA

Units:

711th Signal Battalion (AL)

Task Force *Lafourche*

Location: Lafourche Parish, LA

Units:

Joint Forces Headquarters Cell (TN)
TN Medical Command (TN)

Task Force *Castle*

Location: Camp Villerelle, LA

Units:

225th Engineer Group (LA)
205th Engineer Battalion (LA)
527th Engineer Battalion (LA)
769th Engineer Battalion (LA)
1140th Engineer Battalion (MO)
856th Engineer Company (PA)
2225th Panel Bridge Company (LA)

Task Force *Griffin*

Location: Belle Chasse, LA

Units:

- Joint Forces Headquarters Cell (VA)
- 56th Stryker Brigade Combat Team (PA)
- 547th Transportation Company (DC)
- 1710th Transportation Company (VA)
- 3647th Maintenance Company (VA)
- 3673d Maintenance Company (LA)
- 222d Quartermaster Company (VA)
- 152d Medical Squadron (NV ANG)
- 203d Red Horse Squadron (VA)

Task Force *Defender*

Location: Baton Rouge, LA

Units:

- 61st Troop Command (LA)
- 256th Brigade Combat Team Rear (-) (LA)
- 773d Military Police Battalion (LA)
- 273d Military Police Company (DC)
- 661st Military Police Company (VI)
- 210th Military Police Company (CO)
- 229th Military Police Company (-) (VA)
- 855th Military Police Company (AZ)
- 3673d Maintenance Company (LA)

Subtask Forces:

Task Force *Baton Rouge*

Location: Baton Rouge, LA

Units:

- 123d Military Police Company (-) (KY)
- 133d Military Police Company (-) (SC)
- 134th Military Police Company (-) (CT)
- 153d Military Police Company (-) (DE)
- 192d Military Police Company (-) (NE)
- 438th Military Police Company (-) (KY)
- 661st Military Police Company (-) (VI)
- 46th Military Police Company (-) (MI)
- Detachment 1, 146th Medical Aviation Company (WV)

Task Force *Lafayette*

- 273d Military Police Company (DC)

Task Force *Tiger* (Rear)
Task Force *Monroe Civic Center*
Task Force *Lake Charles*

Task Force *Eagle*

Location: Belle Chasse, LA

Units:

Aviation Command (DC)
204th Air Traffic Services Group (LA)
Headquarters and Headquarters Company, 66th Aviation Brigade
(DC)
244th Aviation Battalion (LA)
812th Medical Company (Air Ambulance) (LA)

Task Force *Belle Chasse*

Location: Belle Chasse, LA

Units:

Joint Forces Headquarters Cell (DC)
Joint Forces Headquarters Cell (UT)
Joint Forces Headquarters Cell (WV)
Joint Forces Headquarters Medical Detachment (WV)
1/147th Aviation (WI)
33d Area Support Group (IL)
213th Area Support Group (PA)
64th Rear Operations Center (WI)
132d Support Battalion (WI)
232d Corps Support Battalion (IL)
634th Forward Support Battalion (IL)
118th Maintenance Company (CA)
547th Transportation Company (TN)
1157th Transportation Company (WI)
1174th Transportation Company (TN)
1221st Transportation Company (MO)
832d Air Ambulance Company (WI)
1/19 Special Forces Detachment (UT)
131st Fighter Wing (MO ANG)
147th Fighter Wing (TX ANG)
129th Air Refueling Wing (CA ANG)
151st Air Refueling Wing (UT ANG)
185th Air Refueling Wing (IA ANG)
123d Medical Group (KY ANG)
188th Medical Group (AR ANG)
189th Medical Group (AR ANG)

133d Aerial Port Squadron (MI ANG)
Northeast Air Defense Sector Security Force (NY ANG)
Air National Guard Public Affairs Office Element (PA)
Detachment 3, Medical Command (DC)

Appendix C

Mississippi National Guard Task Organization (From National Guard Title 32 Response to Katrina, 16 0730 CDT September 2005)

38th Infantry Division Main

Location: Combat Readiness Training Center, Gulfport, MS

Units:

Headquarters, 38th Infantry Division (IN)

Joint Forces Headquarters Cell (IN)

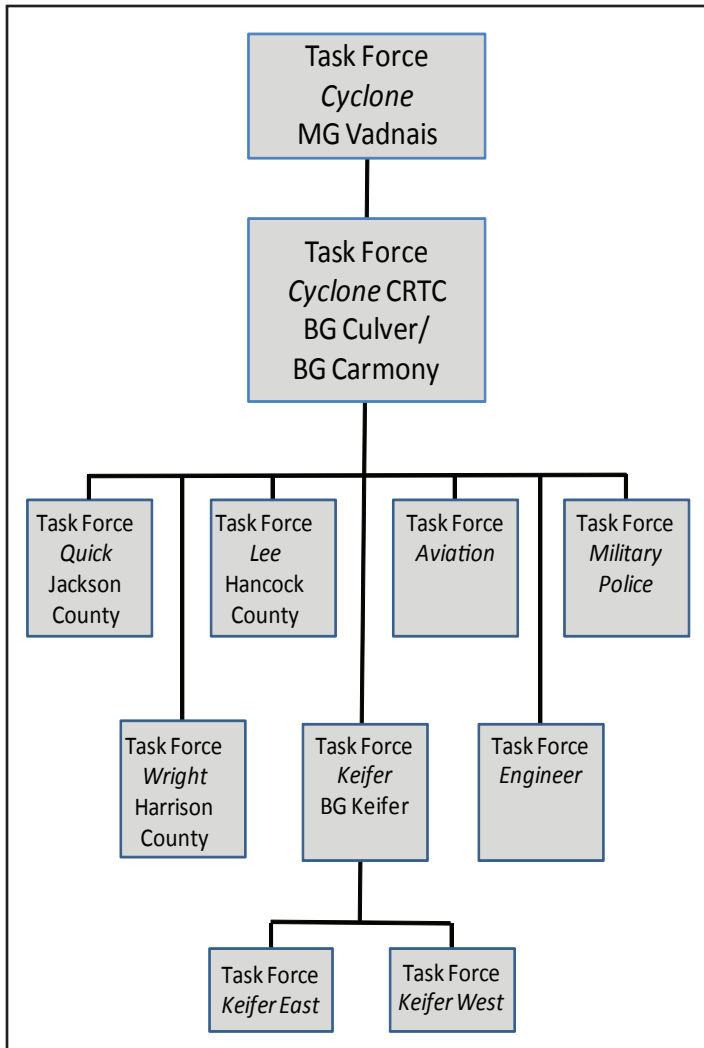


Figure 32. Task Force Cyclone (38th Infantry Division).

Subtask Forces:

Task Force *Quick*

Location: Jackson County, MS

Units:

- 621st Troop Support Command (AL)
- 167th Theater Support Command Group (AL)
- 1/131st Armor (AL)
- 1/117th Field Artillery (AL)
- 3/117th Field Artillery (AL)
- 31st Forward Support Battalion (AL)
- 1203d Engineer Battalion (AL)
- 279th Signal Battalion (AL)
- 161st Area Support Medical Battalion (AL)
- Troop E/31st Cavalry (AL)
- 1670th Transportation Company (AL)
- 158th Maintenance Company (AL)
- 226th Combat Communications Group (AL ANG)
- 280th Combat Communications Squadron (AL ANG)
- 187th Medical Group (AL ANG)

Task Force *Wright*

Location: Harrison County, MS

Units:

- Rear Detachment, 265th Engineer Group (GA)
- 1/293d Infantry (IN)
- 2/116th Infantry (VA)
- 2/158th Cavalry (MD)
- Company D, 1/239th Infantry (IN)
- 165th Quartermaster Company (Petroleum, Oils, and Lubricants) (GA)
- Company B, 161st Area Support Medical Battalion (GA)
- 175th Wing (MD ANG)

Task Force *Lee*

Location: Hancock County, MS

Units:

- 73d Troop Command Headquarters (OH)
- 66th Troop Command Headquarters (MS)
- Joint Forces Headquarters Cell (OH)
- Headquarters and Headquarters Company, 1/107th Armored Cavalry Regiment (OH)
- 631st Field Artillery Brigade (MS)

371st Corps Support Group (OH)
3/124th Infantry (FL)
1/149th Infantry (KY)
1/134th Field Artillery (OH)
1/214th Field Artillery (GA)
437th Military Police Battalion (OH)
135th Military Police Company (OH)
165th Military Police Company (GA)
324th Military Police Company (OH)
838th Military Police Company (OH)
110th Corps Support Battalion (GA)
237th Personnel Services Battalion (OH)
Company H, 1/121st Infantry (GA)
Company C, 1/148th Infantry (OH)
1230th Transportation Company (GA)
1483d Transportation Company (OH)
82d Maintenance Company (GA)
372d Maintenance Company (OH)
Company C, 118th Area Support Medical Battalion (OH)
Company B, 161st Area Support Medical Battalion (GA)
53d Civil Support Team (IN)
122d Fighter Wing (-) (IN)
122d Medical Group (OH ANG)
224th Joint Communications Support Squadron (GA ANG)

Task Force *Kiefer*

Location: Camp Shelby, MS

Units:

Joint Force Headquarters Cell (IN)
Headquarters and Headquarters Company/Materiel Management
Center 38th Division Support Command (IN)
Headquarters and Headquarters Company, 38th Infantry Division
Aviation Brigade (IN)
Task Force *Iowa* (IA)
38th Division Artillery (IN)
38th Division Support Command (IN)
2/152d Infantry (Mech) (IN)
2/150th Field Artillery (IN)
3/139th Field Artillery (IN)
1/204th Air Defense Artillery (MS)
219th Area Support Group (IN)
38th Main Support Battalion (IN)

113th Support Battalion (IN)
38th Military Police Company (IN)
190th Military Police Company (GA)
438th Chemical Company (IN)
1229th Transportation Company (MD)
1538th Transportation Company (IN)
1638th Transportation Company (IN)
2123d Transportation Company (KY)
Religious Support Team (AR)
126th Air Refueling Wing (IL)

Subunits:

Task Force *Kiefer East*

Task Force *Kiefer West*

Task Force *Aviation*

Location: Camp Shelby, MS

Units:

Headquarters and Headquarters Company, 185th Aviation Group (MS)
Headquarters and Headquarters Company, 1/185th Aviation Battalion (MS)
1/104th Cavalry (MS)
1/137th Aviation (OH)
628th Division Aviation Support Battalion (MS)
2/238th General Support Aviation Battalion (IN)
Company G, 185th Aviation Group (MS)
Company K, 185th Aviation Group (MS)
Company A, 1/185th Aviation (MS)
Company B, 1/185th Aviation (MS)
Company D, 1/185th Aviation (MS)
Company G, 2/238th General Support Aviation Battalion (IN)
2/151st Reconnaissance and Interdiction Detachment (TN)
Company C, 1/114th Reconnaissance and Interdiction Detachment (TN)
Air Traffic Control Company (TN)

Task Force *Engineer*

Location: Southern MS

Units:

168th Engineer Group (MS)
121st Engineer Battalion (MD)
223d Engineer Battalion (MS)

890th Engineer Battalion (MS)
877th Engineer Battalion (AL)
186th Engineer Company (AL)

Task Force *Military Police*

Location: Southern MS

Units:

Headquarters and Headquarters Detachment, 112th Military
Police Battalion (MS)
Headquarters and Headquarters Detachment, 168th Military
Police Battalion (TN)
231st Military Police Battalion (AL)
113th Military Police Company (MS)
114th Military Police Company (MS)
130th Military Police Company (TN)
153d Military Police Company (DE)
267th Military Police Company (TN)
268th Military Police Company (TN)
269th Military Police Company (TN)
1776th Military Police Company (MI)

Note: A number of other National Guard units were in the area of operations on 16 September but were in-processing and not yet assigned to task forces under Task Force *Cyclone*.

About the Author

Mr. James Wombwell joined the Combat Studies Institute in October 2007. A retired captain in the Naval Reserve, his last assignment was at the Naval Historical Center in Washington, DC, where he served as a Navy historian documenting current naval operations. While at the Naval Historical Center, he deployed to the Supreme Headquarters Allied Powers Europe, Mons, Belgium; US Naval Forces Central Command, Bahrain; and the Naval Special Warfare Command, San Diego, California. A Surface Warfare Officer, he served on the USS *Fiske* (DD-842) and USS *Texas* (CGN-39) and taught at the Surface Warfare Officers' School in Newport, Rhode Island, while on Active Duty. Mr. Wombwell earned a B.A. from Vanderbilt University and an M.A. from the University of Memphis. He has taught history at the University of Memphis and University of Kansas.

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