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THE WHITE HOUSE
PRESIDENT GEORGE W. BUSH

APPENDIX E – ENDNOTES

Foreword

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¹ President George W. Bush, Jackson Square, New Orleans, September 15, 2005.

² President George W. Bush, Jackson Square, New Orleans, September 15, 2005.

³ The White House, *Homeland Security Presidential Directive-5: Management of Domestic Incidents* (Washington, D.C., February 28, 2003); see also, U.S. Department of Homeland Security, *National Response Plan* (Washington, D.C., December 2004), Preface.

Chapter One: Katrina in Perspective

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¹ The White House, "Proclamation by the President: National Day of Prayer and Remembrance for the Victims of Hurricane Katrina," news release, September 8, 2005, [/news/releases/2005/09/print/20050908-12.html](http://news/releases/2005/09/print/20050908-12.html).

² As measured by damage to property. Measuring destructiveness in terms of damage to property rather than loss of life is a useful way to compare disasters. Loss of life reflects both the magnitude of the disaster, as well as the quality of the response, while property destruction correlates more directly to the magnitude of the disaster alone.

³ In 1871, Chicago was the fifth largest city in the United States, with a population of almost 300,000. The fire killed 300 people, made one-third of the city homeless, and destroyed a third of the city's property. For Chicago Fire deaths and population displacement, see Lawrence J. Vale and Thomas J. Campanella, eds., *The Resilient City: How Modern Cities Recover from Disaster* ["Resilient City"] (New York: Oxford University Press, 2005), 28; U.S. Census Bureau, "Table 10. Population of the 100 Largest Urban Places: 1870," June 15, 1998, <http://www.census.gov/population/documentation/twps0027/tab10.txt>. For all other Chicago Fire statistics, see Chicago Historical Society, "The Great Chicago Fire," <http://www.chicagohs.org/fire/intro/gcf-index.html>; *The Chicago Fire and the Fire Insurance Companies* (New York: J.H. and C.M. Goodsell, 1871); and *Insurance Year Book* (1874). (Note that statistics for disasters can vary significantly depending on the source consulted, both due to variances in how terms are defined and the lack of consistent historical records.)

For statistics on the San Francisco Earthquake/Fire and Hurricane Andrew, see Figure 1.1 and accompanying notes.

⁴ Rebecca Watson, Assistant Secretary for Land and Minerals Management, U.S. Department of the Interior, written statement for a hearing on Global Oil Demand/Gasoline Prices, on September 6, 2005, submitted to the Senate Committee on Energy and Natural Resources, 109th Congress, 1st session.

⁵ U.S. Department of Energy, Office of Electricity Delivery and Energy Reliability, "Hurricane Katrina Situation Report #6," August 28, 2005.

⁶ Evidence suggests that Hurricane Katrina reached Category 3 intensity as it made second landfall, but that only winds to the east of the eye sustained Category 3 speeds. New Orleans probably experienced Category 2 wind speeds at most. See Richard D. Knabb, Jamie R. Rhome, and Daniel P. Brown, *Tropical Cyclone Report: Hurricane Katrina, August 23-30, 2005* ["Katrina Tropical Cyclone Report"], prepared for the National Hurricane Center (Miami, Florida, December 20, 2005), 8. Under the Saffir-Simpson scale, Category 3 hurricanes are characterized by winds of 111–130 miles per hour. For an explanation of the Saffir-Simpson scale, see U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Hurricane Center, "The Saffir-Simpson Hurricane Scale," ["NHC Saffir-Simpson Scale"] <http://www.nhc.noaa.gov/aboutsshs.shtml>. During the same period (1851–2005), eighteen Category 4 and three Category 5 hurricanes hit the United States. For hurricane statistics through 2004, see Eric S. Blake et al., *The Deadliest, Costliest, and Most Intense United States Tropical Cyclones from 1851 to 2004 (And Other Frequently Requested Hurricane Facts)* ["United States Tropical Cyclones"], NOAA Technical Memorandum NWS TPC-4 (Miami, Florida, August 2005), 12, http://www.nhc.noaa.gov/Deadliest_Costliest.shtml.

For 2005 hurricane data, see U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Hurricane Center, “2005 Atlantic Hurricane Season Tropical Cyclone Reports,” <http://www.nhc.noaa.gov/2005atlan.shtml>; U.S. Department of Commerce, National Climatic Data Center and National Oceanic and Atmospheric Administration Satellite Information Service, “Climate of 2005 Atlantic Hurricane Season,” <http://www.ncdc.noaa.gov/oa/climate/research/2005/hurricanes05.html>.

⁷ Hurricane Camille is a useful point of comparison—until the 2005 hurricane season, it was the second most intense hurricane of record ever to strike the United States. U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Hurricane Center, “Hurricane History—Hurricane Camille, 1969,” [*Hurricane History—Hurricane Camille*], <http://www.nhc.noaa.gov/HAW2/english/history.shtml#camille>. Under the Saffir-Simpson scale, Category 5 hurricanes are characterized by winds greater than 155 miles per hour. See *NHC Saffir-Simpson Scale*.

⁸ Axel Graumann et al., *Hurricane Katrina: A Climatological Perspective: Preliminary Report* [*Climatological Perspective*], Technical Report 2005-01, prepared for the National Climatic Data Center, (Asheville, NC, January 2006), 21, <http://www.ncdc.noaa.gov/oa/reports/tech-report-200501z.pdf>. For Hurricane Camille’s strength on landfall, see *Hurricane History—Hurricane Camille*.

⁹ *Climatological Perspective*, 21. Hurricane force winds are defined as those 64 knots (74 miles per hour) or above lasting for one minute at ten meters above ground with unobstructed exposure. For Hurricane Katrina, the radius was 103.5 miles in the northeast and southeast quadrants, and 69 miles in the northwest and southwest quadrants. Northern moving systems like Katrina typically have stronger winds to the east, as the storm’s clockwise rotation results in greater centrifugal force, and therefore force, in that direction. *Katrina Tropical Cyclone Report*, 3.

¹⁰ *Katrina Tropical Cyclone Report*, 9. The report states: “Even though Hurricane Camille (1969) was more intense than Katrina at landfall while following a similar track, Camille was far more compact and produced comparably high storm surge values along a much narrower swath.” See U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Hurricane Center, “Preliminary Report on Hurricane Camille: August 14-22, 1969,” ftp://ftp.nhc.noaa.gov/pub/storm_archives/atlantic/prelimat/at11969/camille/prelim06.gif. See U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Weather Service, “Preliminary Storm Report: Hurricane Katrina,” September 6, 2005, http://www.srh.noaa.gov/tlh/tropical/PSHTAE_Katrina.txt.

¹¹ Estimates on the total affected area vary according to the criteria selected. The estimate of 93,000 square miles was derived by adding the areas of the 138 parishes and counties first declared Major Disaster areas and made eligible for Individual Assistance or Public Assistance, Categories C – G (31 in Louisiana, 74 in Mississippi, 22 in Alabama, and 11 in Florida). The exact sum is 92,930 square miles. See also U.S. Department of Homeland Security, “United States Government Response to the Aftermath of Hurricane Katrina,” news release, September 1, 2005, <http://www.dhs.gov/dhspublic/display?content=4777>.

¹² *Katrina Tropical Cyclone Report*, 8-9.

¹³ *Katrina Tropical Cyclone Report*, 8-9.

¹⁴ Louisiana Department of Transportation and Development, “DOTD’s ‘Louisiana Team’ to Collect Data on Levee Failures,” news release, October 10, 2005, <http://www.dotd.louisiana.gov/press/pressrelease.asp?nRelease=545>. See also Dr. Ivor van Heerden, written statement for a hearing on Hurricane Katrina: Performance of the Flood Control System, on November 2, 2005, submitted to the Senate Committee on Homeland Security and Governmental Affairs, 109th Congress, 1st session.

¹⁵ See *Katrina Tropical Cyclone Report*, 9.

¹⁶ U.S. Census Bureau, “Annual Estimates of the Population for Incorporated Places over 100,000, Ranked by July 1, 2004 Population: April 1, 2000 to July 1, 2004,” *Cities & Towns: Places over 1,000: 2000 to 2004*, <http://www.census.gov/popest/cities/SUB-EST2004.html>. The estimate of the population of New Orleans on July 1, 2004 was 462,269.

¹⁷ The Galveston Hurricane was a tremendous human tragedy. At least 8,000 people lost their lives in this storm. See *United States Tropical Cyclones*, 12, http://www.nhc.noaa.gov/Deadliest_Costliest.shtml (estimating 8,000—12,000 deaths); U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Hurricane Center, “Hurricane History—Galveston Hurricane, 1900,” <http://www.nhc.noaa.gov/HAW2/english/history.shtml#galveston> (estimating 6,000—12,000 deaths); Erik Larson, *Isaac’s Storm: A Man, a Time, and the Deadliest Hurricane in History* (New York: Random House, 1999), 264-265 (estimating 6,000—10,000 deaths); and Galveston Historical Foundation, “Galveston History,” <http://www.galvestonhistory.org/history.htm> (estimating over 6,000 deaths and stating that Galveston was the fourth largest city in Texas at the time).

¹⁸ Haley Barbour, Governor of Mississippi, testimony before a hearing on Hurricane Katrina: Recovering from Hurricane Katrina, on September 7, 2005, House Committee on Energy and Commerce, 109th Congress, 1st session; Haley Barbour as quoted on the Public Broadcasting Service, “Storm-Ravaged Mississippi,” *NewsHour with Jim Lehrer*, September 7, 2005, http://www.pbs.org/newshour/bb/weather/july-dec05/miss_9-7.html.

¹⁹ See Dr. Robert C. Sheets, former Director of the National Hurricane Center, testimony before a hearing on Rebuilding FEMA: Preparing for the Next Disaster, on May 18, 1993, Senate Committee on Governmental Affairs, 103rd Congress, 1st session.

²⁰ Unless otherwise specified, all damage estimates in this chapter are in third-quarter 2005 dollars.

²¹ Figure 1.1 includes both the most deadly and the most destructive natural disaster from each decade in the period 1900 to 2005. Often, these are the same disaster. The four major Atlantic hurricanes of 2004, while neither the most deadly nor most destructive of the decade, are also included to provide context on recent hurricane activity. They are grouped because they struck overlapping areas, in rapid succession, and together constituted the most damaging U.S. hurricane season on record until Hurricane Katrina struck in August 2005. The disasters included in the chart are discrete, violent natural disasters in the United States. They do not include terrorist events, technological failures (e.g., dams breaking or ferries sinking), or protracted, non-destructive natural events such as deadly heat waves or epidemics, which are difficult to compare to discrete, violent events. Where multiple death estimates are available, the highest credible estimate is shown, capturing deaths caused both directly and indirectly by the event. Where multiple damage estimates are available, the lowest credible estimate is shown, excluding local post-disaster inflation effects and effects on the national economy.

The chart does not reflect the enormous loss of life due to the pandemic influenza—sometimes known as the “Spanish Flu”—outbreak of 1918–1919, which claimed the lives of approximately 500,000 Americans and over 20 million people worldwide. U.S. Department of Health and Human Services, National Vaccine Program Office, “Pandemics and Pandemic Scars in the 20th Century,” last revised February 12, 2004, <http://www.hhs.gov/nvpo/pandemics/flu3.htm>. See generally Alfred W. Crosby, *America’s Forgotten Pandemic: The Influenza of 1918* (New York: Cambridge University Press, 2003).

Table 1.2, below, contains the data used in Figure 1.1

Table 1.2 Worst Natural Disasters in the United States, 1900-2005
Damage in Third Quarter 2005 dollars

Top Disasters	Estimated deaths	Estimated damage
Galveston Hurricane (1900)	8,000	< \$1 billion
San Francisco Earthquake and Fire (1906)	5,000	\$6 billion
Atlantic-Gulf Hurricane (1919)	600	< \$1 billion
Mississippi Floods (1927)	246	\$2 billion
Hurricane San Felipe and the Okeechobee Flood (1928)	2,750	< \$1 billion
New England Hurricane (1938)	600	\$4 billion
Northeast Hurricane (1944)	390	< \$1 billion
Hurricane Diane (1955)	184	\$5 billion
Hurricane Audrey (1957)	390	< \$1 billion
Hurricane Betsy (1965)	75	\$7 billion
Hurricane Camille (1969)	335	\$6 billion
Hurricane Agnes (1972)	122	\$8 billion
Hurricane Hugo (1989)	86	\$11 billion

Hurricane Andrew (1992)	61	\$33 billion
East Coast Blizzard (1993)	270	\$4 billion
Major 2004 Hurricanes (Charley, Frances, Ivan, Jeanne)	167	\$46 billion
Hurricane Katrina (2005)	1,330	\$96 billion

Note that statistics for disasters can vary significantly depending on the source consulted, both due to variances in how terms are defined and the lack of consistent historical records.

For statistics on those hurricanes not listed separately below, see *United States Tropical Cyclones*; U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Hurricane Center, "Hurricane History," <http://www.nhc.noaa.gov/HAW2/english/history.shtml>; U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Weather Service, "Memorial Web Page for the 1928 Okeechobee Hurricane," <http://www.srh.noaa.gov/mfl/newpage/Okeechobee.html>; Russell L. Pfost, "Reassessing the Impact of Two Historical Florida Hurricanes" (American Meteorological Society, Boston 2003), 1367; and U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Hurricane Center, "NHC/TPC Archive of Past Hurricane Seasons," <http://www.nhc.noaa.gov/pastall.shtml>.

For the Galveston Hurricane, see note 17.

For the 1906 San Francisco Earthquake and Fire, see *Resilient City*, 28 (estimating 5,000 deaths); Harry Chase Brearley, *Fifty Years of a Civilizing Force: An Historical and Critical Study of the Work of the National Board of Fire Underwriters* (New York: Frederick A. Stokes Company, 1916), 98-100 (estimating \$6 billion in property damage); U.S. Geological Survey, "Casualties and damage after the 1906 Earthquake," <http://quake.wr.usgs.gov/info/1906/casualties.html> (estimating more than 3,000 deaths and \$7 billion in property damage). See generally Rutherford H. Platt, "The Bay Area: One Disaster After Another," in Rutherford H. Platt, ed., *Disasters and Democracy: The Politics of Extreme Natural Events* (Washington, DC: Island Press, 1999), 245-247; Virtual Museum of the City of San Francisco, "The Great 1906 Earthquake And Fire," <http://www.sfmuseum.org/1906/06.html>.

For the 1927 Mississippi floods, see Paul S. Trotter et al., "Floods on the Lower Mississippi: An Historical Economic Overview," technical attachment prepared for the National Weather Service, <http://www.srh.noaa.gov/topics/attach/html/ssd98-9.htm> (estimating 246 deaths and \$2 billion in property damage); Miriam Gradie Anderson and Rutherford H. Platt, "St. Charles County, Missouri: Federal Dollars and the 1993 Flood," in Platt, *Disasters and Democracy: The Politics of Extreme Natural Events* (Washington, DC: Island Press, 1999), 215-216 (estimating 245-500 deaths).

For Hurricane Camille, see Ernest Zebrowski and Judith A. Howard, *Category 5: The Story of Camille* [*The Story of Camille*] (Ann Arbor, MI: University of Michigan Press, 2005), 266 (reporting 335 deaths); Roger A. Pielke, Jr., Chantal Simonpietri, and Jennifer Oxelson, *Thirty Years After Hurricane Camille: Lessons Learned, Lessons Lost* (Boulder, Colorado, July 1999) (estimating more than 200 deaths); *Hurricane History—Hurricane Camille* (reporting 256 deaths and \$6 billion in damage).

For Hurricanes Hugo and Andrew, the East Coast Blizzard, and the major 2004 hurricanes, see U.S. Department of Commerce, National Oceanic and Atmospheric Administration Satellite and Information Service and National Climatic Data Center, "1980-2003 Billion Dollar U.S. Disasters," in *A Climatology of 1980-2003 Extreme Weather and Climate Events*, Technical Report 2003-01 [*Billion Dollar U.S. Disasters*] (Asheville, NC, December 2003), <http://www.ncdc.noaa.gov/oa/reports/billionz.html>; Ed Rappaport, "Preliminary Report: Hurricane Andrew, 16 - 28 August, 1992, prepared for the National Hurricane Center" [*Preliminary Report: Hurricane Andrew*] (Miami, Florida, December 1993), <http://www.nhc.noaa.gov/1992andrew.html>; U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Hurricane Center, "Hurricane History," <http://www.nhc.noaa.gov/HAW2/english/history.shtml>.

For Hurricane Katrina deaths, see Louisiana Department of Health and Hospitals, "Reports of Missing and Deceased" [*Louisiana Missing and Deceased*], February 17, 2006, <http://www.dhh.louisiana.gov/offices/page.asp?ID=192&Detail=5248>; *Katrina Tropical Cyclone Report*. For property damage, see U.S. Department of Commerce, Bureau of Economic Analysis, "Damages and Insurance Settlements from the Third-quarter Hurricanes," <http://www.bea.gov/bea/faq/national/2005q3hurricanes.pdf> (estimates reflect data as of December 21, 2005); U.S. Department of Commerce, Bureau of Economic Analysis, "Estimated Damage and Insurance Settlements Effects from Hurricanes Katrina, Rita, and Wilma on Monthly Personal Income," [*Estimated Damage and Insurance Settlements Effects from Hurricanes Katrina, Rita, and Wilma*] <http://www.bea.gov/bea/faq/national/oct2005hurricane.pdf> (accessed on January 20, 2006).

For GDP deflation, see U.S. Department of Commerce, Bureau of Economic Analysis, "Gross Domestic Product and Corporate Profits: Third Quarter 2005 'final' estimates," news release, December 21, 2005, <http://www.bea.gov/bea/newsrelarchive/2005/gdp305f.htm>; and Louis D. Johnston and Samuel H. Williamson, "The Annual Real and Nominal GDP for the United States, 1790—Present," *Economic History Services*, October 2005, <http://www.eh.net/hmit/gdp>.

22 The three next most costly natural disasters are Hurricane Andrew, which hit south Florida in 1992 (\$33 billion), the Midwest Floods of 1993 (\$27 billion), and the Northridge Earthquake, which hit southern California in 1994 (\$25 billion). By comparison, the direct damages caused by the 9/11 terrorist attacks totaled \$18 billion. See Robert Looney, "Economic Costs to the United States Stemming From the 9/11 Attacks," *Strategic Insights* 1, no. 6 (Monterey, CA, August 2002), <http://www.ccc.nps.navy.mil/si/aug02/homeland.asp>. Damages are in 2005 dollars. For Hurricane Andrew, see note 21, above. For the Midwest Floods, see *Billion Dollar U.S. Disasters*. For the Northridge Earthquake, see U.S. Geological Survey, *USGS Response to an Urban Earthquake – Northridge '94* (n.d., ca. 1996), <http://pubs.usgs.gov/of/1996/ofr-96-0263/introduc.htm#impacts>.

23 Numbers do not equal sum due to rounding. Estimate derived from the U.S. Department of Commerce, Bureau of Economic Analysis, "Damages and Insurance Settlements from the Third-quarter Hurricanes," <http://www.bea.gov/bea/faq/national/2005q3hurricanes.pdf> (estimates reflect data as of December 21, 2005); *Estimated Damage and Insurance Settlements Effects from Hurricanes Katrina, Rita, and Wilma*.

24 Michael Chertoff, Secretary of the Department of Homeland Security, prepared written statement for a hearing on Hurricane Katrina: The Homeland Security Department's Preparation and Response, on February 15, 2006, submitted to the Senate Homeland Security and Governmental Affairs Committee, 109th Congress, 2nd session. Depending on the definition of "damaged and destroyed homes," this number could be considerably higher or lower than the figure cited.

25 Damage to homes includes major but not minor damage. Stanley K. Smith and Christopher McCarty, *Demographic Effects of Natural Disasters: A Case Study of Hurricane Andrew* [*Demographic Effects of Natural Disasters*], *Demography*, Vol. 33, No. 2 (May, 1996), 266 (repeating results of American Red Cross survey). Note that the authors of the case study provide a higher estimate of 144,100 houses destroyed or suffering major damage.

26 American Red Cross, "Hurricane Season 2004," <http://www.redcross.org/sponsors/dr/h2004-stewardreport.html>.

27 Damage to homes includes major but not minor damage. For statistics on Hurricane Camille, see *The Story of Camille*, 226 (reporting 335 deaths); Roger A. Pielke, Jr., Chantal Simonpietri, and Jennifer Oxelson, *Thirty Years After Hurricane Camille: Lessons Learned, Lessons Lost* (Boulder, Colorado, July 1999) (estimating more than 200 deaths and 22,008 homes destroyed or damaged); *Hurricane History—Hurricane Camille* (reporting 256 deaths and \$6 billion in damage). For statistics on Hurricane Andrew, see *Preliminary Report: Hurricane Andrew* (reporting 61 deaths and \$25 billion in damage); *Demographic Effects of Natural Disasters* (reporting 15 deaths and \$22 billion in damage). For statistics on Hurricane Ivan, see *Billion Dollar U.S. Disasters*, Technical Report 2003-01 (Asheville, NC, December 2003), <http://www.ncdc.noaa.gov/oa/reports/billionz.html> (reporting 57 deaths); American Red Cross, "Hurricane Season 2004," <http://www.redcross.org/sponsors/dr/h2004-stewardreport.html> (reporting 63 deaths). For statistics on Hurricane Katrina, see note 21.

28 Michael Chertoff, Secretary of the Department of Homeland Security, written statement submitted for a hearing on Hurricane Katrina: The Homeland Security Department's Preparation and Response, on February 15, 2006, to the Senate Homeland Security and Governmental Affairs Committee, 109th Congress, 2nd session.

29 Michael Chertoff, Secretary of the Department of Homeland Security, written statement for a hearing on "Hurricane Katrina: The Homeland Security Department's Preparation and Response," on February 15, 2006, submitted to the Senate Homeland Security and Governmental Affairs Committee, 109th Congress, 2nd session.

30 A football field is 120 yards long by 53 yards wide. End-zones are included in this calculation. National Football League, "Beginner's Guide to Football," <http://www.nfl.com/fans/rules/basics>. Based upon this, the height of debris is calculated by finding the volume of the debris stacked on the football field. This is done by dividing 118,000,000 by the product of 120 and 53: $118,000,000 / 6360 = 18,553$ yards. There are 1760 yards in a mile, so the number of miles high is then calculated by dividing 18,553 by 1760: $18,553 / 1760 = 10.5$. So the debris, if stacked onto the space of a football field, would reach ten and a half miles high.

31 The methodology and time period examined by the Bureau of Labor Statistics in developing these statistics for "most affected areas" differ from those used to develop the estimate of areas "impacted" by Hurricane Katrina included in note 11. First, the Bureau of Labor Statistics defines "most affected areas" as the thirty-four parishes in Louisiana and forty-seven counties in Mississippi that FEMA designated for both individual and public disaster assistance. This Report defines areas "impacted" by Hurricane Katrina as those parishes and counties designated for individual assistance and/or public assistance, categories C-G (reimbursement for rebuilding and/or replacing disaster-damaged public facilities such as roads, bridges, and public buildings). Second, the Bureau of Labor Statistics includes all counties designated for assistance as of September 30, 2005, thereby including the areas affected by Hurricane Rita in addition to those affected by Katrina. By contrast, this Report's methodology on this point only includes those counties and parishes designated for assistance as of August 29, 2005, thereby counting only those counties that were affected by Katrina. U.S. Department of Labor, Bureau of Labor Statistics, "Labor Market Statistics for Areas Affected by Hurricanes Katrina and Rita: September and October 2005,"

- http://www.bls.gov/katrina/data_after.htm; U.S. Department of Labor, Bureau of Labor Statistics, "Labor Market Statistics Prior to Disaster for Areas Affected by Hurricanes Katrina and Rita," <http://www.bls.gov/katrina/data.htm#2>.
- 32** U.S. Department of Commerce, Bureau of Economic Analysis, "State Personal Income: Third Quarter 2005," news release, December 20, 2005, 4, <http://www.bea.gov/bea/newsrelarchive/2005/spi1205.pdf>.
- 33** Nationwide all grade conventional retail prices increased from \$2.28 per gallon on August 1 and \$2.62 on August 29, to peak at \$3.08 on September 5. U.S. Department of Energy, Energy Information Administration, "Retail Gasoline Historical Prices, Worksheet for U.S. All Grades Conventional Retail Gas Prices (Cent Per Gallon)," All Grades spreadsheet, http://www.eia.doe.gov/oil_gas/petroleum/data_publications/wrgp/mogas_history.html. While gas prices had risen steadily throughout 2005 due to increasing global demand for crude oil, the temporary shutdown of major oil refineries and pipelines in the Gulf region as a direct result of Hurricane Katrina spurred a sharp and sudden drop in domestic supply that further exacerbated this price incline. See U.S. Department of Energy, Energy Information Administration, "A Primer on Gasoline Prices," http://www.eia.doe.gov/pub/oil_gas/petroleum/analysis_publications/primer_on_gasoline_prices/html/petbro.html (accessed February 6, 2006).
- 34** U.S. Department of the Interior, Minerals Management Service, "Hurricane Katrina/Hurricane Rita Evacuation and Production Shut-in Statistics Report," news release, January 11, 2006, <http://www.mms.gov/ooc/press/2006/press0111.htm>.
- 35** U.S. Department of Energy, Office of Electricity Delivery and Energy Reliability, "Hurricane Katrina Situation Report #10," August 30, 2005.
- 36** Stacy R. Stewart, *Tropical Cyclone Report: Hurricane Ivan, 2-24 September 2004*, prepared for the National Hurricane Center (Miami, Florida, May 2005), <http://www.nhc.noaa.gov/2004ivan.shtml>.
- 37** Kenneth Moran, Director of the Office of Homeland Security, Enforcement Bureau, Federal Communications Commission, testimony before a hearing on Ensuring Operability During Catastrophic Events, House Committee on Homeland Security, Subcommittee on Emergency Preparedness, Science, and Technology, October 26, 2005, 109th Congress, 1st session.
- 38** Kenneth Moran, Director of the Office of Homeland Security, Enforcement Bureau, Federal Communications Commission, written statement for a hearing on Hurricane Katrina and Communications Interoperability, on September 29, 2005, submitted to the Senate Committee on Commerce, Science and Transportation, 109th Congress, 1st session.
- 39** Kevin J. Martin, Chairman, Federal Communications Commission, written statement provided for a hearing on Public Safety Communications from 9/11 to Katrina: Critical Public Policy Lessons, submitted to Subcommittee on Telecommunications and the Internet, Committee on Energy and Commerce, U.S. House of Representatives September 29, 2005.
- 40** Louisiana Hurricane Recovery Resources, "Energy, Oil, and Gas," <http://www.laseagrant.org/hurricane/oil.htm> (accessed January 11, 2006); U.S. Department of Energy, Office of Electricity Delivery and Energy Reliability, "Gulf Coast Hurricanes Situation Report #31," October 31, 2005.
- 41** The ten major to medium spills caused by Katrina accounted for 7,359,990 gallons. Given that 134 spills of less than 10,000 gallons have not been assessed in detail, the actual oil spill figure for Hurricane Katrina is likely higher than 7.4 million gallons. Louisiana Hurricane Recovery Resource, "Energy, Oil, and Gas," <http://www.laseagrant.org/hurricane/oil.htm> (accessed January 11, 2006). The Exxon Valdez spilled about 10.8 million gallons into the waters off of Alaska. See Exxon Valdez Oil Spill Trustee Council, "Excerpt from the Official Report on the 1989 Exxon Valdez Oil Spill," <http://www.evostc.state.ak.us/History/excerpt.htm> (accessed January 11, 2006).
- 42** *Gulf Coast Hurricane Emergency Environmental Protection Act of 2005*, H. Res. 4139, 109th Congress, 1st session (October 25, 2005).
- 43** As of the time of writing, Louisiana has recovered 1,103 bodies, 23 of which were not storm related, for 1,080 storm related deaths. See *Louisiana Missing and Deceased*. There were 231 deaths in Mississippi, fifteen in Florida, two in Alabama, and two in Georgia. See *Katrina Tropical Cyclone Report*, 10. Since there are still at least 2,096 people from the Gulf Coast area missing, it is likely that the death toll numbers will increase.
- 44** For the number of dead in other states, see *Katrina Tropical Cyclone Report*, 10. For the definition of the New Orleans metropolitan area, see The White House, Office of Management and Budget, "Updates of Statistical Area Definitions and Guidance on Their Uses," *OMB Bulletin 06 – 01*, December 5, 2005, 42, [/omb/bulletins/fy2006/b06-01.pdf](http://omb/bulletins/fy2006/b06-01.pdf).
- 45** These numbers were extrapolated from data on 754 released bodies of known age, of which 183 were between the ages of sixty-one and seventy-five and 355 were over the age of seventy-five. Louisiana Department of Health and Hospitals, "Vital Statistics of All Bodies at St. Gabriel Morgue," January 18, 2006, www.dhh.state.la.us/offices/publications/pubs-192/5796.pdf.

⁴⁶ Louisiana Department of Health and Hospitals, “Deceased Katrina Victims Released to Families 11-4-2005,” news release, November 4, 2005, <http://www.dhh.louisiana.gov/news.asp?ID=145&Detail=728&Arch=2005>.

⁴⁷ As of February 17, 2006, 191 victims were unclaimed. *Louisiana Missing and Deceased*.

⁴⁸ *Louisiana Missing and Deceased*. In the immediate wake of the hurricane, the Department of Justice requested that the National Center for Missing and Exploited Children (NCMEC) establish a hotline to accept reports of missing children and adults related to both Hurricanes Katrina and Rita. As of February 13, 2006, 97 percent of the 5,071 missing children cases reported to the NCMEC for Hurricane Katrina had been resolved, with the majority of the unresolved cases in Louisiana. The NCMEC received 12,514 reports of missing adults, all of which were referred to the National Center for Missing Adults (NCMA). National Center for Missing and Exploited Children, “Katrina/Rita Missing Persons Hotline: Update on calls/cases,” report through February 13, 2006, http://www.missingkids.com/en_US/documents/KatrinaHotlineUpdate.pdf.

⁴⁹ Michael Chertoff, Secretary of the Department of Homeland Security, testimony before a hearing on Hurricane Katrina: The Homeland Security Department’s Preparation and Response, on February 15, 2006, Senate Homeland Security and Governmental Affairs Committee, 109th Congress, 2nd session. In the first half of the 1930s, almost one million people left the plains, and after 1935, 2.5 million left. Not all of this migration, however, was due to the Dust Bowl, as drought and changing economic conditions played a factor as well. Donald Worster, *Dust Bowl: The Southern Plains in the 1930s* (New York: Oxford University Press, 1979), 49.

⁵⁰ By January 13, only 82 individuals still resided in transient shelters in Louisiana, representing those few who were ineligible for housing programs or had refused other housing options. Scott Wells, Deputy Federal Coordinating Officer for Louisiana, testimony before a hearing on Housing Needs after Hurricanes Katrina and Rita, on January 13, 2006, House Financial Services Committee, Subcommittee on Housing and Community Opportunity, 109th Congress, 2nd session.

⁵¹ U.S. Department of Health and Human Services, “Secretary Leavitt To Gulf Region: Announces Streamlines Access to Benefits for Hurricane Katrina Victims,” news release, September 13, 2005. See also Arizona Department of Health Services, “Hurricane Evacuees Find Lost Records-And More-Through Arizona’s Office of Vital Records,” news release, September 23, 2005, http://www.azdhs.gov/news/2005all/katrina_vrecords.htm; District of Columbia Office of the Mayor, “Mayor Williams Introduces Legislation to Aid Katrina Victims,” September 20, 2005, <http://dc.gov/mayor/news/release.asp?id=763&mon=200509>.

⁵² HHS Secretary Mike Leavitt said that most of those displaced by Katrina did not have access to their medical records. Sarah A. Lister, *Hurricane Katrina: The Public Health and Medical Response*, Congressional Research Service Report for Congress RL33096 (Washington, DC, September 21, 2005).

⁵³ Bruce Katz, Matt Fellowes, and Mia Mabanta, *Katrina Index: Tracking Variables of Post-Katrina Reconstruction* (Washington, DC: Brookings Institute, February 2006), 24, 38, 40, 44.

⁵⁴ U.S. Department of Commerce, Economics and Statistics Administration, “Addendum: Revisions/Updates to the Dec. 15 Katrina Economic Impact Report,” December 2005. In total, Katrina, combined with Hurricanes Rita and Wilma, forced about 600,000 into unemployment. This is measured by the number of jobless claims benefits with the hurricanes listed as the primary reason.

⁵⁵ U.S. Department of Labor, Bureau of Labor Statistics, “Labor Market Statistics Prior to Disaster for Areas Affected by Hurricane Katrina,” September and October 2005, http://www.bls.gov/katrina/data_archived.htm.

Chapter Two: National Preparedness — A Primer

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¹ Homeland Security Presidential Directive 5, Domestic Incident Management, states “[t]he Federal Government recognizes the roles and responsibilities of State and local authorities in domestic incident management. Initial responsibility for managing domestic incidents generally falls on State and local authorities. The Federal Government will assist State and local authorities when their resources are overwhelmed, or when Federal interests are involved. The Secretary will coordinate with State and local governments to ensure adequate planning, equipment, training, and exercise activities. The Secretary will also provide assistance to State and local governments to develop all-hazards plans and capabilities, including those of greatest importance to the security of the United States, and will ensure that State, local, and Federal plans are compatible.” The White House, *Homeland Security Presidential Directive-5* [“HSPD-5”] (Washington, DC, February 2003), § 6.

² “The powers delegated by the proposed Constitution to the federal government, are few and defined. Those which are to remain in the State governments are numerous and indefinite.” The Federalist No. 45.

³ U.S. Constitution art. 1, sec. 10; U.S. Constitution art. 4, sec. 2; *United States v. Lopez*, 514 U.S. 549, 552 (1995) (“The Constitution creates a Federal Government of enumerated powers”); *McCulloch v. Maryland*, 17 U.S. 316 (1819); The Federalist No. 45. “It must never be forgotten that the Federal government is one of enumerated powers

and that it does not possess a general police power,” Ronald D. Rotunda and John E. Novak, *Treatise on Constitutional Law*, 3rd ed. (Minnesota: West Group Publishing, 1999), 346.

⁴ U.S. Constitution, amend. 10.

⁵ U.S. Constitution, art. 1, sec. 8; art. 2, sec. 2.

⁶ U.S. Constitution, art. 4, sec. 4.

⁷ 10 U.S.C. § 331 (2005). The other two sections of the Insurrection Act permit Presidential action independent of State requests. The President may send in Federal military forces or federalize a State's National Guard troops without a request from the Governor in those situations where the President finds it necessary to enforce Federal laws, judicial decisions, or protect Federal rights. 10 U.S.C. §§ 332, 333 (2005).

⁸ See generally, Thomas E. Drabek and Gerard J. Hoetmer ["*Drabek & Hoetmer*"], *Emergency Management: Principles and Practice for Local Government* (Washington, DC: International City Management Association, 1991), 3-29.

⁹ National Academy of Public Administration, *Coping With Catastrophe: Building an Emergency Management System to Meet People's Needs in Natural and Manmade Disasters* ["*NAPA Report*"] (Washington, DC: National Academy of Public Administration, 1993), 10.

¹⁰ *NAPA Report*, 10.

¹¹ See *Drabek & Hoetmer*, 6-7; *NAPA Report*, 10-11.

The Federal Emergency Management Agency—a former independent agency that became part of the new Department of Homeland Security in March 2003—is tasked with responding to, planning for, recovering from and mitigating against disasters. FEMA can trace its beginnings to the Congressional Act of 1803, generally considered the first piece of disaster legislation. In the century that followed, *ad hoc* legislation was passed more than 100 times in response to hurricanes, earthquakes, floods and other natural disasters.

By the 1930s, when the Federal approach to problems became popular, the Reconstruction Finance Corporation was given authority to make disaster loans for repair and reconstruction of certain public facilities following an earthquake, and later, other types of disasters. In 1934, the Bureau of Public Roads was given authority to provide funding for highways and bridges damaged by natural disasters. The Flood Control Act, which gave the U.S. Army Corps of Engineers greater authority to implement flood control projects, was also passed. This piecemeal approach to disaster assistance was problematic and it prompted legislation that required greater cooperation between Federal agencies and authorized the President to coordinate these activities.

The 1960s and early 1970s brought massive disasters requiring major Federal response and recovery operations by the Federal Disaster Assistance Administration, established within the Department of Housing and Urban Development (HUD). Hurricane Carla struck in 1962, Hurricane Betsy in 1965, Hurricane Camille in 1969 and Hurricane Agnes in 1972. The Alaskan Earthquake hit in 1964 and the San Fernando Earthquake rocked Southern California in 1971. These events served to focus attention on the issue of natural disasters and brought about increased legislation. In 1968, the National Flood Insurance Act offered new flood protection to homeowners, and in 1974 the Disaster Relief Act firmly established the process of Presidential disaster declarations.

However, emergency and disaster activities were still fragmented. When hazards associated with nuclear power plants and the transportation of hazardous substances were added to natural disasters, more than 100 Federal agencies were involved in some aspect of disasters, hazards and emergencies. Many parallel programs and policies existed at the State and local level, compounding the complexity of Federal disaster relief efforts. The National Governor's Association sought to decrease the many agencies with whom State and local governments were forced to work. They asked President Jimmy Carter to centralize Federal emergency functions.

President Carter's 1979 executive order merged many of the separate disaster-related responsibilities into a new Federal Emergency Management Agency (FEMA). Among other agencies, FEMA absorbed: the Federal Insurance Administration, the National Fire Prevention and Control Administration, the National Weather Service Community Preparedness Program, the Federal Preparedness Agency of the General Services Administration and the Federal Disaster Assistance Administration activities from HUD. Civil defense responsibilities were also transferred to the new agency from the Defense Department's Defense Civil Preparedness Agency. See U.S. Department of Homeland Security, Federal Emergency Management Agency, "FEMA History," <http://www.fema.gov/about/history>.

¹² The Red Cross had originally been chartered in 1900, but its re-chartering in 1905 significantly expanded its role in responding to disasters. See Brien R. Williams, "The Federal Charter of the American Red Cross," American Red Cross Museum, April 2005, <http://www.redcross.org/museum/history/charter.asp>; and American Red Cross, "A Brief History of the American Red Cross 2001," <http://www.redcross.org/museum/briefarc.html>. In response to the San Francisco earthquake and fire of 1906, President Theodore Roosevelt announced that all Federal aid was to be channeled through the American Red Cross. Federal troops were sent to the city in order to provide security and the Federal government established tent camps where those affected by the disaster were provided with shelter and food. *NAPA Report*, 10.

13 *NAPA Report*, 11.

14 *NAPA Report*, 11; *Federal Civil Defense Act of 1950*, as amended, Public Law 920, 81st Congress, 2nd session (January 12, 1951)

15 The order stated, "Federal disaster relief provided under the [Federal Civil Defense Act of 1950] shall be deemed to be supplementary to relief afforded by state, local, or private agencies and not in substitution therefor. . ." Executive Order no. 10427, 18 Fed. Reg. 407 (1953).

16 *NAPA Report*, 11 (citing Message from the President of the United States transmitting a report on "New Approaches to Federal Disaster Preparedness and Assistance," May 14, 1973).

17 *The Robert T. Stafford Disaster Relief and Emergency Assistance Act*, Pub. L. No. 100-707, § 5170, 102 Stat. 4689 (1988) (amended 2000) [*"Stafford Act"*].

18 *Stafford Act*, 42 U.S.C. § 5170 and § 5191 (2005) require the Governor's request as a condition for Presidential declaration of a major disaster. Robert Theodore Stafford served in Congress as a Representative and a Senator from Vermont. Prior to his Congressional career, Stafford served in the United States Navy during both World War II and during the Korean conflict. He was the Governor of Vermont from 1959-1961. While in the Senate, he led the passage of the Stafford Act, which was the amended version of the 1974 Disaster Relief Act (*Disaster Relief Act of 1974*, Pub. L. No. 93-288, § 401, 88 Stat. 143). For additional information, "Stafford, Robert Theodore," *Biographical Directory of the United States Congress*, <http://bioguide.congress.gov/scripts/biodisplay.pl?index=S000776>.

19 This figure represents an average since the Disaster Relief Act was enacted in 1974. U.S. Department of Homeland Security, Federal Emergency Management Agency, "Annual Major Disaster Declaration Totals," http://www.fema.gov/news/disaster_totals_annual.fema. U.S. Department of Homeland Security, Federal Emergency Management Agency, "2004 Federal Disaster Declarations," <http://www.fema.gov/news/disasters.fema?year=2004>.

20 "Discipline" refers to the various emergency response fields (e.g., police, medical, firefighters).

21 The White House, Office of Homeland Security, *National Strategy for Homeland Security* (Washington, DC, July 2002), 42.

22 6 U.S.C. § 312 (2005) (requiring the Secretary to execute these responsibilities through the Under Secretary for Emergency Preparedness and Response).

23 The White House, "President Bush signs Homeland Security Act," news release, November 25, 2002, </news/releases/2002/11/20021125-6.html>.

24 U.S. Department of Homeland Security, "Department of Homeland Security Facts for March 1, 2003," February 28, 2003, <http://www.dhs.gov/dhspublic/display?content=817>. See also The White House, "Ridge Sworn In as Secretary of Homeland Security," news release, January 24, 2003, </news/releases/2003/01/print/20030124-5.html>. Before becoming Secretary of Homeland Security, Thomas Joseph Ridge was the first Homeland Security Advisor to the President of the United States and Director of the White House Office of Homeland Security, the precursor to the current Homeland Security Council. Prior to his service to the President, Secretary Ridge was the governor of Pennsylvania. The White House, "Biography of Secretary Tom Ridge," </homeland/ridgebio.html>.

25 *HSPD-5*, § 4.

26 *HSPD-5*, § 18.

27 U.S. Department of Homeland Security, *National Incident Management System* [*"National Incident Management System"*] (Washington, DC, 2004), ix.

28 *National Incident Management System*, 2.

29 U.S. Department of Homeland Security, Federal Emergency Management Agency, "NIMS and the Incident Command System," http://www.fema.gov/txt/nims/nims_ics_position_paper.txt. The 9/11 Commission found that the September 11, 2001, attacks demonstrated the need for nationwide adoption of the ICS. See National Commission on Terrorist Attacks Upon the United States, *The 9/11 Commission Report* (New York: WW Norton and Company), 397. After President Bush issued HSPD-5 on February 28, 2003, the Department of Homeland Security worked with State and local governments, the emergency management community, the private sector and other key stakeholders to develop the *National Incident Management System*.

30 *National Incident Management System*, 7.

31 *National Incident Management System*, 138.

32 *National Incident Management System*, 11.

33 *National Incident Management System*, 7.

34 *National Incident Management System*, 14-16.

35 The President directed the development of a National Response Plan to align Federal coordination structures, capabilities, and resources into a unified, all-discipline, and all-hazards approach to domestic incident management. See HSPD-5. The development of the NRP included extensive vetting and coordination with Federal, State, local, and tribal agencies, nongovernmental organizations, private-sector entities, and the first-responder and emergency management communities. For a list of the signatories of the NRP, see U.S. Department of Homeland Security, *National Response Plan* [*"National Response Plan"*] (Washington, DC, December 2004), iii-viii.

36 *National Response Plan*, 15.

37 States and locals, using mutual aid agreements, are frequently able to respond without Federal assistance. In addition, many requests by Governors for Federal assistance are made that do not result in a disaster declaration but are nevertheless significant.

38 See generally, *National Response Plan*.

39 The *Catastrophic Incident Annex* is an integral part of the *National Response Plan*. It lays out the "context and overarching strategy" for response to catastrophic incidents. It also presages the publication of the *Catastrophic Incident Supplement*—"a more detailed and operationally specific" plan for catastrophic incident response. U.S. Department of Homeland Security, "Catastrophic Incident Annex," in *National Response Plan*, pg."CAT-1." As of February 2006, the *Catastrophic Incident Supplement* exists in draft form only, and has not been officially released. A *catastrophic incident* is defined as "Any natural or manmade incident, including terrorism, that results in extraordinary levels of mass casualties, damage, or disruption severely affecting the population, infrastructure, environment, economy, national morale, and/or government functions. . . ." *National Response Plan*, 63. Although the *National Response Plan* by virtue of the *Catastrophic Incident Annex* did anticipate the need for a more robust Federal response to a catastrophic incident, that is all it did. Without the *Catastrophic Incident Supplement*, that acknowledgement was not made operational and thus had no practical effect.

40 *National Response Plan*, 3.

41 *National Response Plan*, 3.

42 *National Response Plan*, 1.

43 HSPD-5, § 4.

44 *National Response Plan*, 4.

45 Governor Blanco's letter to the President requesting Federal assistance in the form of an emergency declaration seems to have satisfied the second criterion, while the substantial involvement of multiple Federal departments and agencies seems to have satisfied the third. On August 27, 2005, Governor Kathleen Blanco sent a letter to President Bush requesting an emergency declaration for the State of Louisiana. The letter stated, "I have determined that this incident is of such severity and magnitude that effective response is beyond the capabilities of the State and affected local governments, and that supplementary Federal assistance is necessary to save lives, protect property, public health, and safety, or to lessen or avert the threat of a disaster." Kathleen Blanco, Governor of Louisiana, "Letter to President Bush requesting that he declare an emergency for the State of Louisiana due to Hurricane Katrina" (Baton Rouge, August 27, 2005). That same day President Bush declared a state of emergency in Louisiana, stating, "I have determined that the emergency conditions in certain areas of the State of Louisiana, resulting from Hurricane Katrina beginning on August 26, 2005, and continuing is of sufficient severity and magnitude to warrant an emergency declaration..." For complete text of declaration, see 70 Fed. Reg. 53238 (Sept. 7, 2005).

46 *National Response Plan*, 4.

47 *National Response Plan*, 7.

48 Prior to Katrina's landfall on the Gulf Coast, all of the lead agencies responsible for various support activities had already deployed liaisons to FEMA headquarters or field locations, and the Federal and State coordinating officers had co-located in Baton Rouge to begin establishing a unified command. Upon declaring an INS, the Secretary designated a PFO. NRP actions that had not yet been taken at this time included standup of the Interagency Incident Management Group and establishment of a fully functional Joint Field Office. U.S. Department of Homeland Security, "Hurricane Katrina DHS SITREP #4," August 27, 2005, 11-15, indicates all ESFs have been activated. Former Federal Coordinating Officer of Louisiana, William Lokey, states, "On Saturday morning, August 27, 2005, I was assigned to respond with the ERT-N to Louisiana as FCO for Katrina Operations. I arrived in Baton Rouge late in the afternoon. After checking in with FEMA staff who had been working in New Orleans on a previously declared disaster and who had evacuated to Baton Rouge, I went to the Louisiana State Emergency Operations Center. There, I met with FEMA staff from Region VI that had responded as the Advance Emergency Response Team (ERT-A), other members of the ERT-N who were arriving, and Colonel Jeff Smith (State Coordinating Officer), my primary counterpart for State of Louisiana operations. My first priority was to work with Jeff Smith to identify the State's priorities, then to organize my staff to start planning and working with our State counterparts to identify tasks and objectives to meet those priorities. The State was heavily involved in the ongoing evacuation efforts but did

begin working with us on such issues as search and rescue, commodity distribution, and medical needs. We worked late into the night and began again early on Sunday morning . . . Other ERT members from the Emergency Support Functions (ESF) had arrived and began discussions with their counterparts. These included but were not limited to people from ESF-1 Transportation, ESF-8 Health and Medical, and the Defense Coordinating Officer. We worked on identifying distribution sites; sending food and water to the Superdome; coordinating with health officials in New Orleans and the State; and planning with State and Federal agencies on potential search and rescue efforts.” William Lokey, Federal Coordinating Officer for Louisiana, testimony before a hearing on Hurricane Katrina Preparedness and Response by the State of Louisiana, on December 14, 2005, House Select Bipartisan Committee to Investigate the Preparation for and Response to Hurricane Katrina, 109th Congress, 1st session.

⁴⁹ FEMA has used the NRP during all major disasters since the NRP was adopted. *National Response Plan*, Appendix 5. <http://www.fema.gov/news/disasters.fema?year=2005>.

⁵⁰ Operationally, the Federal government was utilizing the NRP before landfall and prior to the declaration of an INS.

⁵¹ The Joint Field Office (JFO) structure and Principal Federal Official (PFO) position can be implemented without an INS declaration by the Secretary of Homeland Security. *National Response Plan*, 28-33. The NRP states, “During actual or *potential* Incidents of National Significance, the overall coordination of Federal incident management activities is executed through the Secretary of Homeland Security” (emphasis added). *National Response Plan*, 15. This suggests that the Secretary can create the structures found in the NRP, such as JFO and PFO, even if there is only the potential for an INS, and an INS has not yet been declared.

⁵² *National Response Plan*, 28-33.

⁵³ HSPD-5, § 5.

⁵⁴ *National Response Plan*, 71.

⁵⁵ 42 U.S.C. § 5143 (2005); *National Response Plan*, 65. The delineation of roles and responsibilities between the statutorily empowered FCO and the policy constructed PFO are unclear. Section 5143 of the Stafford Act expressly requires the President, immediately upon his declaration of a major disaster or emergency, to appoint a FCO to conduct response and recovery operations in the affected area. The President has also formally delegated his response and recovery powers granted him in the Stafford Act to the Secretary of Homeland Security. The Stafford Act of 1974 gave this authority (to direct other departments) to the President; Executive Order 12148 delegated this authority in 1979 to the FEMA Director; and Executive Order 13286 subsequently transferred the authority in 2003 to the Secretary of Homeland Security. See Executive Order no. 12148, 44 Fed. Reg. 43239 (1979); Executive Order no. 13286, 68 Fed. Reg. 10619 (2003). This delegation of authority is consistent with the Secretary’s designation as PFO for incident management in HSPD-5. However, the Secretary has delegated his Stafford Act authority to the FEMA Director and according to the NRP can name a third and separate individual PFO for an Incident of National Significance.

⁵⁶ *National Response Plan*, 16. See also note 65.

⁵⁷ *National Response Plan*, 15, 25.

⁵⁸ *National Response Plan*, 15.

⁵⁹ See “Emergency Support Function Annexes” in *National Response Plan*, pgs. “ESF-i” et seq.

⁶⁰ *Reorganization Plan no. 3 of 1978*, 43 Fed. Reg. 41943 (June 19, 1978). The organization of FEMA was further defined in Executive Order no. 12,127, 44 Fed. Reg. 19367 (March 31, 1979) and Executive Order no. 12148, 44 Fed. Reg. 43239 (July 20, 1979).

⁶¹ *Homeland Security Act of 2002* [“*Homeland Security Act*”], Public Law 296, 107th Congress, 2nd session (November 25, 2002) § 501, codified at 6 U.S.C. § 312 (2005).

⁶² *National Response Plan*, pg. “ESF 5-1.” See also *Homeland Security Act*, § 507, codified at 6 U.S.C. § 317 (2005).

⁶³ U.S. Department of Homeland Security, Federal Emergency Management Agency, “Regional and Area Offices,” <http://www.fema.gov/regions>.

⁶⁴ FEMA Disaster Assistance Employees (DAEs) are on-call personnel, not carried on the permanent payroll, activated to augment the full time employee pool when a surge capacity is required to respond to a disaster. Many have years of experience, while others may have little to no prior disaster or emergency response experience. These employees are only used to assist in the aftermath of specific disasters and emergencies. The reservists are trained to fulfill specific disaster response staffing needs, including key program, technical, and administrative functions.

⁶⁵ The RRCC is a standing facility operated by FEMA that is activated to coordinate regional response efforts, establish Federal priorities, and implement local Federal support until a JFO is established in the field and/or the

PFO, FCO, or Federal Resource Coordinator (FRC) can assume their NRP coordination responsibilities. The RRCC establishes communications with the affected State emergency management agency and the National Response Coordination Center (NRCC) coordinates deployment of the Emergency Response Team—Advance Element (ERT-A) to field locations, assesses damage information, develops situation reports, and issues initial mission assignments. *National Response Plan*, 27.

⁶⁶ These regions have two of the largest regional staffs within FEMA: Region VI has 100 employees and over 300 reservists, and Region IV has 115 employees and over 550 reservists. See U.S. Department of Homeland Security, Federal Emergency Management Agency, “FEMA: Region VI – About Region VI,” <http://www.fema.gov/regions/vi/about.shtm> (last updated March 3, 2005); U.S. Department of Homeland Security, Federal Emergency Management Agency, “FEMA: Region IV,” <http://www.fema.gov/regions/iv/index.shtm> (last updated October 22, 2004). The NRCC and the RRCC in Region IV began monitoring Hurricane Katrina as early as Tuesday, August 23. On Thursday, August 25, the NRCC activated to Level 2—partial activation—at 7:00 am, and the Region IV RRCC activated to Level 2 at 12:30 pm. On Saturday, August 27, the NRCC went to Level 1—full activation—at 7:00 am, and Region IV and Region VI RRCCs went to Level 1 activation at 12:00 pm. U.S. Department of Homeland Security, Federal Emergency Management Agency, “Hurricane Katrina Response Timeline,” September 10, 2005. FEMA employs more than 2,600 full-time staff, about 1,000 of them in its ten regional offices, and nearly 4,000 disaster reservists. FEMA disaster reservists, officially known as Disaster Assistance Employees, serve as a surge force for rapidly increasing the pool of Federal response personnel during a major disaster. The program recruits and trains citizen volunteers to become full Federal employees when a major disaster exceeds the capacity of FEMA’s permanent staff. The agency has access to this collective pool of human resources, but does not have its own critical response assets, such as buses, trucks, and ambulances.

⁶⁷ *Stafford Act*, 42 U.S.C. § 5170 (2005).

⁶⁸ *Stafford Act*, 42 U.S.C. § 5191 (2005).

⁶⁹ *Stafford Act*, 42 U.S.C. § 5170 (2005).

⁷⁰ Louisiana Office of Homeland Security and Emergency Preparedness, *Emergency Operations Plan* (Baton Rouge, April 5, 2005), 3.

⁷¹ The Constitution requires that “[n]o State shall, without the Consent of Congress, . . . enter into any Agreement or Compact with another State” U.S. Constitution, art.1, sec.10.

⁷² EMAC was developed in the 1990s and officially ratified by Congress as an organization with thirteen member States in 1996. *Emergency Management Assistance Compact*, Public Law 104-321, 104th Congress, 2nd session, (October 19, 1996). As of October 2005, 49 States, the District of Columbia, the U.S. Virgin Islands, and Puerto Rico had enacted EMAC legislation. National Emergency Management Association, “EMAC Overview,” December 2005, <http://www.emacweb.org/?323>. EMAC is administered by the National Emergency Management Association (NEMA). During an emergency, NEMA’s staff works with EMAC member states to coordinate the EMAC system.

⁷³ Louisiana Office of Homeland Security and Emergency Preparedness, *Emergency Operations Plan* (Baton Rouge, April 5, 2005), 3.

⁷⁴ U.S. Department of Homeland Security, *Catastrophic Incident Annex* [“*Catastrophic Incident Annex*”], in *National Response Plan*, pg. “CAT-1.”

⁷⁵ *National Response Plan*, 63.

⁷⁶ *Catastrophic Incident Annex*, pg. “CAT-1.”

⁷⁷ *National Response Plan*, 44.

⁷⁸ Given its draft status, the *Catastrophic Incident Supplement* has never been part of incident planning or exercises nor had it been widely disseminated, and as a result is not a part of current operational plans for incident management. Furthermore, our experience in Hurricane Katrina suggests it must now be reconsidered to make it more robust in ensuring that Federal assistance arrives as soon as possible.

⁷⁹ The White House, “President Discusses Hurricane Relief in Address to the Nation,” news release, September 15, 2005, [/news/releases/2005/09/20050915-8.html](http://news/releases/2005/09/20050915-8.html).

Chapter Three: Hurricane Katrina — Pre-Landfall

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¹ The White House, “President Discusses Hurricane Katrina, Congratulates Iraqis on Draft Constitution,” news release, August 28, 2005.

² U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Atlantic Oceanographic and Meteorological Laboratory, Hurricane Research Division, "Frequently Asked Questions,"

<http://www.aoml.noaa.gov/hrd/tcfaq/A3.html>. The National Hurricane Center defines "major hurricanes" as hurricanes that reach maximum sustained 1-minute surface winds of at least 111 mph.

³ U.S. Department of Commerce, National Oceanic and Atmospheric Administration, "NOAA: 2005 Atlantic Hurricane Season Outlook," May 16, 2005. In 2004, the hurricane season had been particularly devastating. Twenty seven disasters were declared in fifteen States and two U.S. Territories. The season was especially difficult for Florida, which took a direct hit from four hurricanes and one tropical storm in six weeks. Together, Hurricanes Charlie, Frances, Ivan, and Jeanne, directly or indirectly resulted in over 150 U.S. deaths and approximately forty-six billion dollars in damage. Richard J. Pasch, Daniel P. Brown, and Eric S. Blake, *Tropical Cyclone Report: Hurricane Charlie*, prepared for the National Hurricane Center, National Oceanic and Atmospheric Administration (Miami, Florida, October 18, 2004), (updated January 5, 2005); Jack Beven II, *Tropical Cyclone Report: Hurricane Frances*, prepared for National Hurricane Center, National Oceanic and Atmospheric Administration (Miami, Florida, December 17, 2004); Stacy R. Stewart, *Tropical Cyclone Report: Hurricane Ivan*, prepared for the National Hurricane Center, National Oceanic and Atmospheric Administration (Miami, Florida, December 16, 2004), (updated May 27, 2005); Miles B. Lawrence and Hugh D. Cobb, *Tropical Cyclone Report: Hurricane Jeanne*, prepared for the National Hurricane Center, National Oceanic and Atmospheric Administration (Miami, Florida, November 22, 2004), (updated January 7, 2005).

⁴ U.S. Department of Commerce, National Oceanic and Atmospheric Administration, "NOAA Issues 2005 Atlantic Hurricane Season Outlook: Another Above Normal Season Expected," news release, May 16, 2005.

⁵ U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Weather Service, "New Weather Forecast Office in Key West Hoists Hurricane Flags for Wilma," news release, October 24, 2005: "Hurricane Wilma is part of a hurricane season replete with "firsts": . . . a record of seven named storms had formed by the end of July."

⁶ Jack Beven II, *Tropical Cyclone Report: Hurricane Dennis*, prepared for the National Hurricane Center, National Oceanic and Atmospheric Administration (Miami, Florida, November 22, 2005) (updated December 16, 2005).

⁷ Monroe County, Key West Florida, "Emergency News Hurricane Dennis," July 8, 2005, http://www.monroecounty-fl.gov/Pages/MonroeCoFL_EmerNews/EmergencyArchives/S00633CB7. Evacuations were ordered in the Florida Keys for "all non-residents" and "all residents west of the Seven Mile Bridge." For information on major disaster declarations, see *Federal Register*. U.S. Department of Homeland Security, "Alabama; Major Disaster and Related Determinations," July 10, 2005, <http://www.fema.gov/news/dfrn.fema?id=4284>; U.S. Department of Homeland Security, "Mississippi; Major Disaster and Related Determinations," July 10, 2005, <http://www.fema.gov/news/dfrn.fema?id=4285>; U.S. Department of Homeland Security, "Florida; Major Disaster and Related Determinations," July 10, 2005, <http://www.fema.gov/news/dfrn.fema?id=4286>. In preparation for Hurricane Dennis, FEMA activated its Regional Response Coordination Center (RRCC) in Atlanta at the highest operational level. FEMA conducted coordination calls between Federal, State and local officials, positioned liaison officers at State Emergency Operations Centers, pre-staged emergency supplies and response teams at various locations, and requested the activation of the First U.S. Army's crisis action team. See U.S. Department of Homeland Security, Federal Emergency Management Agency, "FEMA Regional Center at Highest Level in Preparation for Hurricane Dennis," news release, July 9, 2005; Department of Defense, First U.S. Army, "First U.S. Army Stands up Crisis Action Team for Hurricane Dennis," news release, July 9, 2005. Other military preparations for Hurricane Dennis included the alert of National Guardsmen in Florida, Mississippi, Alabama, Louisiana and Georgia. See U.S. Department of Defense, "Military Taking Precautions as Hurricane Dennis Approaches," news release, July 8, 2005.

⁸ State of Louisiana, Office of the Governor, "Governor Blanco Declares State of Emergency Regarding Hurricane Dennis," news release, July 8, 2005, <http://gov.louisiana.gov/index.cfm?md=newsroom&tmp=detail&articleID=717>.

⁹ Jack Beven II, *Tropical Cyclone Report: Hurricane Dennis*, prepared for the National Hurricane Center, National Oceanic and Atmospheric Administration (Miami, Florida, November 22, 2005), (updated December 16, 2005).

¹⁰ U.S. Department of Commerce, National Oceanic and Atmospheric Administration, *August 2005 Update to Atlantic Hurricane Season Outlook: Bulk of This Season's Storms Still to Come* (Washington, D.C., August 2, 2005).

¹¹ U.S. Department of Commerce, National Oceanic and Atmospheric Administration, "NOAA Raises the 2005 Atlantic Hurricane Season Outlook," August 2, 2005, <http://www.noaanews.noaa.gov/stories2005/s2484.htm>.

¹² Richard D. Knabb, Jamie R. Rhome, and Daniel Brown, *Tropical Cyclone Report: Hurricane Katrina, August 23-30, 2005*, prepared for the National Hurricane Center, National Oceanic and Atmospheric Administration (Miami, Florida, December 2005), 1. Excerpt from this text: "The complex genesis of Katrina involved the interaction of a tropical wave, the middle tropospheric remnants of Tropical Depression Ten, and an upper tropospheric trough. This trough, located over the western Atlantic and the Bahamas, produced strong westerly shear across Tropical Depression Ten, causing it to degenerate on 14 August approximately 825 n. mi. east of Barbados. The low-level circulation gradually weakened while continuing westward, and it eventually dissipated on 21 August in the vicinity of Cuba. Meanwhile, a middle tropospheric circulation originating from Tropical Depression Ten lagged behind and passed north of the Leeward Islands on 18-19 August. A tropical wave moved through the Leeward Islands and merged with the middle tropospheric remnants of Tropical Depression Ten on 19 August, forming a large area of

showers and thunderstorms north of Puerto Rico. This activity continued to move slowly northwestward, passing north of Hispaniola and then consolidating just east of the Turks and Caicos during the afternoon of 22 August.

Dvorak satellite classifications from the Tropical Analysis and Forecast Branch (TAFB) of the Tropical Prediction Center (TPC) began at 1800 utc that day. The upper tropospheric trough weakened as it moved westward toward Florida, and the shear relaxed enough to allow the system to develop into a tropical depression by 1800 utc 23 August over the southeastern Bahamas about 175 n. mi. southeast of Nassau. The depression was designated Tropical Depression Twelve rather than "Ten" because a separate tropical wave appeared to be partially responsible for the cyclogenesis, and, more importantly, the low-level circulation of Tropical Depression Ten was clearly not involved."

13 U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Hurricane Center, *Hurricane Katrina Advisory #1* (Miami, Florida, August 23, 2005). National Hurricane Center Katrina Advisories were released every several hours beginning at 5:00 pm edt on August 23 and ending at 10:00 am cdt on August 30. Advisories were typically issued at 5:00 am, 11:00 am, 5:00 pm, and 11:00 pm edt each day. The advisories are numbered sequentially from 1 to 31. Most of the advisories were updated with supplemental advisories—for example, Hurricane Katrina Advisory 1 was released at 5:00 pm edt and Advisory 1a was released at 8:00 pm edt. Advisory 2 was released at 11:00 pm edt. The official publication time zone switched from Eastern Daylight Time to Central Daylight Time with Advisory #17, released at 10:00 am cdt, August 27, 2005. All Hurricane Katrina Advisories are available from the National Hurricane Center. See U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Hurricane Center, "Hurricane Katrina Advisory Archive," <http://www.nhc.noaa.gov/archive/2005/KATRINA.shtml?>.

14 Admiral Timothy J. Keating, Commander North American Aerospace Defense Command and U.S. Northern Command, written statement for a hearing on Hurricane Katrina: Preparedness and Response by the Department of Defense, the Coast Guard, and the National Guard of Louisiana, Mississippi, and Alabama, on October 27, 2005, submitted to the House Select Bipartisan Committee to Investigate the Preparation for and Response to Hurricane Katrina, 109th Congress, 1st session.

15 "Based on aircraft reconnaissance flight-level wind data, the cyclone became Katrina, the 11th tropical storm of the 2005 Atlantic hurricane season, at 1200 utc 24 August when it was centered over the central Bahamas about 65 n. mi. east-southeast of Nassau." Richard D. Knabb, Jamie R. Rhome, and Daniel Brown, *Tropical Cyclone Report: Hurricane Katrina, August 23-30, 2005*, prepared for the National Hurricane Center, National Oceanic and Atmospheric Administration (Miami, Florida, December 20, 2005), 1.

16 FEMA's Hurricane Liaison Team became operational at 7:00 am edt on August 24, 2005. The HLT had begun monitoring the storm the previous evening. FEMA Tropical Storm Katrina Briefing, August 25, 2005.

17 U.S. Department of Defense, OASD HD, Hurricane Katrina/Rita/Ophelia Interim Timeline (Aug. – Sept. 2005), November 2, 2005, 2.

18 U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Hurricane Center, *Tropical Storm Katrina Advisory 4* (Washington, D.C., August 24, 2005).

19 U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Weather Service Tropical Prediction Center and National Hurricane Center, "Hurricane Katrina Discussion Number 9," August 25, 2005; U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Weather Service Tropical Prediction Center and National Hurricane Center, "Tropical Storm Katrina Discussion Number 8," August 25, 2005.

20 U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Weather Service, Miami-South Florida Forecast Office, "Hurricane Katrina Storm Report," September 1, 2005, <http://www.srh.noaa.gov/mfl/events/?id=katrina>.

21 Richard D. Knabb, Jamie R. Rhome, and Daniel P. Brown, *Tropical Cyclone Report: Hurricane Katrina, 23-30 August 2005*, prepared for the National Hurricane Center (Miami, Florida, August 2005), 10.

22 Florida Power & Light, Company, "FPL begins assessment process following Hurricane Katrina," news release, August 26, 2005, <http://www.fpl.com/news/2005/contents/05101.shtml>.

23 National Aeronautics and Space Administration, Remote Sensing Tutorial, "Hurricanes Katrina, Rita, and Wilma," http://rst.gsfc.nasa.gov/Sect14/Sect14_10a.html.

24 U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Weather Service, Miami-South Florida Forecast Office, "Hurricane Katrina Storm Report," September 1, 2005, <http://www.srh.noaa.gov/mfl/events/?id=katrina>; and Florida Department of Agriculture and Consumer Services, "Bronson to Assess Hurricane Katrina Damage to South Florida Agriculture," news release, August 29, 2005, <http://www.doacs.state.fl.us/press/2005/08292005.html>.

25 U.S. Department of Homeland Security, "Hurricane Katrina DHS SITREP # 1," August 25, 2005. The Emergency Operations Center is the physical location at which the coordination of information and resources to support domestic incident management activities normally takes place. An EOC may be a temporary facility or may be located in a

more central or permanently established facility. See U.S. Department of Homeland Security, *National Response Plan* (Washington, D.C., December 2004), 64.

26 Hurricane Katrina DHS SITREP #1, August 25, 2005.

27 “Despite all of our efforts and despite the fact that we pre-positioned more commodities and staged more rescue and medical teams than ever before in our agency’s history, our initial response was overwhelmed.” William Lokey, Federal Coordinating Officer, Baton Rouge, written statement for a hearing on Hurricane Katrina Response in Louisiana, on December 14, 2005, submitted to the House Select Bipartisan Committee to Investigate the Preparation for and Response to Hurricane Katrina, 109th Congress, 1st session.

28 On August 25, FEMA began to identify ERT-A teams for deployment to Florida and Alabama. FEMA Tropical Storm Katrina Briefing, August 25, 2005. For definition of ERT-A, see U.S. Department of Homeland Security, Federal Emergency Management Agency, “Glossary,” <http://training.fema.gov/EMIWeb/IS/is14/glossary.htm#E>.

29 U.S. Department of Homeland Security, Federal Emergency Management Agency, “National Situation Update,” August 26, 2005, <http://www.fema.gov/emanagers/2005/nat082605.shtm>. Throughout this Report, note that events were occurring in different time zones. Times referenced as Central Daylight Time (cdt) reflect the local time events took place in Louisiana. All Noon FEMA video teleconferences took place at 12:00 pm Eastern Daylight Time (edt), which was 11:00 am in Louisiana and Mississippi. Throughout the report, times are referenced in accordance with the source material supporting the text.

30 U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Hurricane Center, *Hurricane Katrina Advisory #11* (Washington, D.C., August 26, 2005).

31 Richard D. Knabb, Jamie R. Rhome, and Daniel Brown, *Tropical Cyclone Report: Hurricane Katrina (23-30 August 2005)*, prepared for the National Hurricane Center, National Oceanic and Atmospheric Administration (Miami, Florida, December 2005), 2-3.

32 U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Hurricane Center, *Hurricane Katrina Intermediate Advisory # 14* (Miami, Florida, August 26, 2005); U.S. Department of Homeland Security, Federal Emergency Management Agency, “National Situation Update,” August 26, 2005.

33 See National Weather Service Tropical Prediction Center and National Hurricane Center Hurricane Katrina Advisories 15 through 26, covering a period from August 26, 2005, 11:00 pm edt to August 29, 2005, 6:00 am cdt. These advisories are available at the U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Weather Service Tropical Prediction Center and National Hurricane Center, “Hurricane Katrina Advisory Archive,” <http://www.nhc.noaa.gov/archive/2005/KATRINA.shtml?>.

34 U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Hurricane Center, “Hurricane Katrina Forecast Timeline,” n.d., ca. 2005.

35 Brigadier General David L. Johnson (USAF, Ret.), Director of the National Weather Service, National Oceanic and Atmospheric Administration, U.S. Department of Commerce, written statement for a hearing on NOAA Hurricane Forecasting, on October 7, 2005, submitted to the House Committee on Science, 109th Congress, 1st session, 2.

36 The last National Hurricane Center Advisory on August 26 was issued at 11:00 pm edt. Katrina made landfall at 6:10 am cdt on August 29, fifty-six hours later. U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Hurricane Center, *Hurricane Katrina Advisory # 15* (Miami, Florida, August 26, 2005).

37 State of Louisiana, Executive Department, *Proclamation No. 48 KBB 2005: State of Emergency—Hurricane Katrina* (Baton Rouge, August 26, 2005); State of Alabama, Office of the Governor, *State of Emergency Proclamation* (Jackson, August 26, 2005).

38 Brent Warr, Mayor of Gulfport, Mississippi, written statement for a hearing on Hurricane Katrina: Preparedness and Response by the State of Mississippi, on December 7, 2005, submitted to the Select Bipartisan Committee to Investigate the Preparation for and Response to Hurricane Katrina, 109th Congress, 1st session.

39 Department of Homeland Security SITREP #4, August 27, 2005. See generally, Robert R. Latham Jr., Executive Director of the Mississippi Emergency Management Agency, written statement for a hearing on Hurricane Katrina: Preparedness and Response by the State of Mississippi, on December 7, 2005, submitted to the House Select Bipartisan Committee to Investigate the Preparation for and Response to Hurricane Katrina, 109th Congress, 1st session.

40 Louisiana State Police, “LSP Timeline of Events,” n.d., ca. 2005, 2.

41 Louisiana National Guard, Task Force Pelican, “Hurricane Katrina Overview of Significant Events,” November 28, 2005, 4.

42 State of Alabama, Office of the Governor, *Executive Order No. 939* (Jackson, August 26, 2005).

43 U.S. Department of Defense, "Mississippi Guard Provide Relief to State," *Armed Forces Press Service*, September 8, 2005, http://www.defenselink.mil/news/Sep2005/20050908_2648.html.

44 "More than 8,000 people perished September 8, 1900 when the category 4 hurricane barreled into Galveston..." U.S. Department of Commerce, National Oceanic and Atmospheric Administration, "The Galveston Storm of 1900 - The Deadliest Disaster in History," <http://www.noaa.gov/galveston1900/>. See also Erik Larson, *Isaac's Storm: A Man, a Time, and the Deadliest Hurricane in History* (New York: Random House, 1999), 264-265. Note that statistics for disasters can vary significantly depending on the source consulted, due to both variances in how terms are defined and the difficulty of confirming specific data in the aftermath of a devastating event.

45 The Saffir-Simpson scale for measuring hurricane strength had not been developed until 1969—four years after Hurricane Betsy made landfall on the Louisiana coast. The classification of Hurricane Betsy as a Category 3 storm was made retroactively based on wind speed readings. For general information on Hurricane Betsy, see U.S. Army Corps of Engineers, "Historical Records of the U.S. Army Corps of Engineers' Response to Recent Hurricanes," http://www.hq.usace.army.mil/history/Hurricane_files/Hurricane.htm. For deaths, see Eric S. Blake et al., *The Deadliest, Costliest, and Most Intense United States Tropical Cyclones from 1851 to 2004 (And Other Frequently Requested Hurricane Facts)*, NOAA Technical Memorandum NWS TPC-4 (Miami, Florida, August 2005), 7, http://www.nhc.noaa.gov/Deadliest_Costliest.shtml; compare to U.S. Army Corps of Engineers, "How Safe is New Orleans from Flooding?" September 11, 2003, http://www.usace.army.mil/inet/functions/cw/hot_topics/11sep_msy.htm (reporting 81 deaths). For extent of flooding by parish see, Joseph A. Towers, former Attorney for the Army Corps of Engineers, testimony before the Task Force on Updating the National Environmental Policy Act, Congressional Resources Committee, 109th Congress, 1st session, 2005, <http://resourcescommittee.house.gov/nepataskforce/archives/joseph towers.htm>.

46 "Damaged homes" include those with major damage, but not those with minor damage. For deaths, see Ernest Zebrowski and Judith A. Howard, *Category 5: The Story of Camille* (Ann Arbor, MI: University of Michigan Press, 2005); For homes damaged or destroyed, see Roger A. Pielke, Jr., Chantal Simonpietri, and Jennifer Oxelson, *Thirty Years After Hurricane Camille: Lessons Learned, Lessons Lost* (Boulder, Colorado, July 1999). For other information, see U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Hurricane Center, "Hurricane History – Hurricane Camille, 1969," <http://www.nhc.noaa.gov/HAW2/english/history.shtml#camille>.

47 See Greg Brouwer "The Creeping Storm," *Civil Engineering Magazine*, June, 2003, <http://www.pubs.asce.org/ceonline/ceonline03/0603feat.html>. See also U.S. Army Corps of Engineers, "Morganza to the Gulf of Mexico Hurricane Protection Project," <http://www.mvn.usace.army.mil/prj/mtog/>. It is important to note that the levees protecting New Orleans were designed in advance of the Saffir-Simpson model. Although it is often reported that New Orleans levees were constructed to protect against a Category 3 storm, the levee system was actually designed to withstand a Standard Project Hurricane (SPH)—a theoretical hybrid of many different storms. The central pressure for an SPH is in the Category 4 range, the highest wind speed is that of a high strength Category 2, and the surge is similar to that of a Category 3. Al Naomi (Senior Project Manager, U.S. Army Corps of Engineers), "Talkback," *Riverside* (a publication of the U.S. Army Corps of Engineers), January, 2005, 8, http://www.mvn.usace.army.mil/pao/Riverside/Jan_05_Riv.pdf.

48 In 1999, the Senate of the State of Louisiana issued a resolution "to authorize and to urge the governor of ... Louisiana to support the development of the 'Comprehensive Hurricane Protection Plan for Coastal Louisiana' by the U.S. Army Corps of Engineers to provide continuous hurricane protection from Morgan City to the Mississippi border." Senate of the State of Louisiana, *House Concurrent Resolution No. 142* (Baton Rouge, June 18, 1999). The Comprehensive Hurricane Protection Plan for Coastal Louisiana by the New Orleans District U.S. Army Corps of Engineers was released in June 2000. U.S. Army Corps of Engineers, *Comprehensive Hurricane Protection Plan for Coastal Louisiana* (New Orleans, June 2000).

49 U.S. Army Corps of Engineers, *Comprehensive Hurricane Protection Plan for Coastal Louisiana* (New Orleans, June 2000).

50 U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Weather Service, Southern Region headquarters, "Tropical Cyclone Hazards: Inland Flooding," July 27, 2004, <http://www.srh.noaa.gov/srh/tropicalwx/awareness/flooding.htm>: "It is common to think the stronger the storm the greater the potential for flooding. However, this is not always the case. A weak, slow moving tropical storm can cause more damage due to flooding than a more powerful fast moving hurricane." See also, U.S. Army Corps of Engineers, *Comprehensive Hurricane Protection Plan for Coastal Louisiana* (New Orleans, June 2000).

51 Statement of Vice Admiral Conrad C. Lautenbacher, Jr (Undersecretary of Commerce for Oceans and Atmosphere.), before 31st AMS Broadcasters Conference 200-300 Broadcast Meteorologists/Private Sector and Industry, June 26, 2002, <http://www.noaa.gov/lautenbacher/ams-broadcasters.htm>

52 The origins of the Southeast Louisiana Catastrophic Hurricane Planning Project can be traced back to 1998 when, in the wake of Hurricane Georges, the Louisiana Office of Homeland Security and Emergency Preparedness recognized the need for more comprehensive hurricane planning. After an initial period of development, the State of Louisiana submitted planning proposals to FEMA for approval. FEMA granted the State funding in 2001, but was forced to withdraw those funds a year later, due to budgetary constraints. Despite this setback, the need for catastrophic hurricane planning in Louisiana continued to be recognized at both the Federal and State level. On

March 17, 2004, FEMA awarded funding to the State of Louisiana for what would become the Southeast Louisiana Catastrophic Hurricane Planning Project. See Sean E. Fontenot, Former Chief, Planning Division, Louisiana Office of Homeland Security and Emergency Preparedness, written statement submitted for a hearing on Preparing for Catastrophe: The Hurricane Pam Exercise, on January 24, 2006, before the Senate Committee on Homeland Security and Governmental Affairs, 109th Congress, 2nd session, 10.

53 U.S. Department of Homeland Security, Federal Emergency Management Agency, “Hurricane PAM Exercise Concludes,” July 23, 2004. The Hurricane PAM exercise included participants from thirteen southeast Louisiana Parishes: Ascension, Assumption, Jefferson, Lafourche, Orleans, Plaquemines, St. Bernard, St. Charles, St. James, St. John, St. Tammany, Tangipahoa, and Terrebonne. See also Senator Susan Collins (R-Maine), statement at a hearing on Preparing for a Catastrophe: The Hurricane Pam Exercise, on January 24, 2006, to the Senate Committee Homeland Security and Governmental Affairs, 109th Congress, 2nd session.

54 Wayne Fairley, Chief, Response Operation Branch, Response and Recovery Division, FEMA Region IV, written statement submitted for a hearing on Preparing for Catastrophe: The Hurricane Pam Exercise, on January 24, 2006, before the Senate Committee on Homeland Security and Governmental Affairs, 109th Congress, 2nd session, 9.

55 U.S. Department of Homeland Security, Federal Emergency Management Agency, National Response Coordination Center, video teleconference, August 27, 2005.

56 Department of Commerce, National Oceanic and Atmospheric Administration, National Hurricane Center, *Hurricane Katrina Advisory # 15A* (Washington, D.C., August 27, 2005); Department of Commerce, National Oceanic and Atmospheric Administration, National Hurricane Center, *Hurricane Katrina Advisory # 19* (Washington, D.C., August 27, 2005). As noted previously, times are referenced in accordance with the time zone—Eastern Daylight Time or Central Daylight Time—listed on the source material supporting the text.

57 U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Weather Service Tropical Prediction Center and National Hurricane Center, *Hurricane Katrina Advisory # 19* (Miami, Florida, August 27, 2005).

58 NHC’s Bill Reeve warned that the storm was headed toward “the worst possible locations for storm surge” and would produce a surge typical of a Category 4 or Category 5 hurricane. See U.S. Department of Homeland Security, Federal Emergency Management Agency, National Response Coordination Center, video teleconference, August 27, 2005.

59 Richard D. Knabb, Jamie R. Rhome, and Daniel Brown, *Tropical Cyclone Report: Hurricane Katrina: August 23-30, 2005*, prepared for the National Hurricane Center, National Oceanic and Atmospheric Administration (Miami, Florida, December 2005). See also U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Weather Service Tropical Prediction Center and National Hurricane Center, *Hurricane Katrina Intermediate Advisory # 18A*, (Miami, Florida, August 27, 2005).

60 Louisiana Office of the Governor, Response to U.S. Senate Committee on Homeland Security and Governmental Affairs and Information Request Dated October 7, 2005 (Baton Rouge, December 2005), 4. State Representative Cedric Richmond called Governor Blanco on Saturday afternoon after visiting a ballpark where hundreds were in attendance. Representative Richmond “learned that some people had not paid attention to the weekend news and did not realize the severity of the hurricane aiming at New Orleans. He worries that many may have thought that the hurricane was still targeting the Florida panhandle....”

61 Louisiana Office of the Governor, Response to U.S. Senate Committee on Homeland Security and Governmental Affairs and Information Request Dated October 7, 2005 (Baton Rouge, December 2005), 4.

62 Louisiana Department of Transportation and Development, “Timeline for Hurricane Katrina,” n.d., ca. 2005, 2.

63 In Phase I or the Precautionary Phase, “The Plan prescribes that during the Precautionary phase, the location of staging areas for people who need transportation will be announced and that public transportation will concentrate on moving people from the staging areas to safety in host parishes with priority given to people with special needs. Furthermore, during the Precautionary stage the Plan directs that nursing homes and other custodial care organizations in the risk areas should be contacted to ensure that they are prepared to evacuate their residents.” Louisiana Office of Homeland Security and Emergency Preparedness, “Southeast Louisiana Hurricane Evacuation and Sheltering Plan,” in *State of Louisiana Emergency Operations Plan Supplement 1A* (Baton Rouge, January 2000); Louisiana State Police, “LSP Timeline of Events,” n.d., ca. 2005, 2. On Saturday August 27, 2005, representatives of the Louisiana Nursing Home Association (LNHA), sitting at the Louisiana State EOC, started calling and emailing all the at-risk nursing homes in Louisiana, checking on their preparedness for the storm and determining if they were planning to evacuate or shelter-in-place. They were able to reach most of the nursing homes. They learned that the State EOP was also calling nursing homes, as were the local parish sheriffs. By Sunday morning, some nursing homes that intended to shelter-in-place had decided to evacuate. They had previously been told that buses were available but, by the time they decided to evacuate, drivers were not available. At that point the LNHA made formal requests for bus drivers, but none materialized prior to landfall. In all, prior to the storm, twenty-one nursing homes evacuated and sixty-eight sheltered-in-place. See generally, Joseph A. Donchess, Executive Director of the Louisiana Nursing Home Association, written statement for a hearing on Challenges in a

Catastrophe: Evacuating New Orleans in Advance of Hurricane Katrina, on January 31, 2006, submitted to the Senate Committee on Homeland Security and Governmental Affairs, 109th Congress, 2nd session.

⁶⁴ Mississippi State officials estimated that approximately 400,000 people used U.S. 49 and Interstates 55 and 59 to evacuate during the 2004 hurricane season.

⁶⁵ The TCC received traffic reports from Louisiana State Police troops, LA DOTD traffic counters, and other sources. Louisiana State Police, "LSP Timeline of Events," n.d., ca. 2005, 2-4.

⁶⁶ Louisiana State Police, "LSP Timeline of Events," n.d., ca. 2005, 4; State of Mississippi, Mississippi Emergency Management Agency, "Highway Evacuation Advisory," news release, August 27, 2005.

⁶⁷ According to Robert Latham Jr., Executive Director of MEMA, "During the 2004 hurricane season, culminating with Hurricane Ivan on September 13, 2004, the contra-flow plan was never executed, but major congestion in and around Hattiesburg, Mississippi resulted in a comprehensive review of our evacuation plan . . . As a result of these problems, Governor Barbour asked Mississippi Public Safety Commissioner George Phillips to develop a plan that would provide additional law enforcement officers to support evacuations, especially in the Hattiesburg area. This plan was completed prior to this year's hurricane season and executed flawlessly for the evacuation, including execution of contra-flowing both Interstates 55 and 59 from Louisiana to Mississippi." Robert R. Latham Jr., Executive Director of the Mississippi Emergency Management Agency, written statement for a hearing on Hurricane Katrina: Preparedness and Response by the State of Mississippi, on December 7, 2005, submitted to the House Select Bipartisan Committee to Investigate the Preparation for and Response to Hurricane Katrina, 109th Congress, 1st session; Louisiana Office of the Governor, Response to U.S. Senate Committee on Homeland Security and Governmental Affairs and Information Request Dated October 7, 2005 (Baton Rouge, December 2005).

⁶⁸ City of New Orleans, Office of Emergency Preparedness, *Hurricanes Annex--Part Three: Sheltering* (New Orleans, n.d.).

⁶⁹ Erin Fowler of the Department of Health and Human Services Regional Emergency Coordination Program Office spoke with Dr. Roseanne Pratts, Director of Emergency Preparedness for the Louisiana Department of Health, on August 27, "and inquired if federal HHS assistance was needed for patient movement or evacuation, or anything else. [Dr. Pratts] responded no, that they do not require anything at this time, and they would be in touch if and when they needed assistance." Senators Susan Collins and Joseph Lieberman, statements during a hearing on Challenges in a Catastrophe: Evacuating New Orleans in Advance of Hurricane Katrina, on January 31, 2006, Senate Committee on Homeland Security and Governmental Affairs, 109th Congress, 2nd session. HHS also offered assistance to New Orleans health officials on August 27, 2005. See generally, Joseph A. Donchess, Executive Director of the Louisiana Nursing Home Association, written statement for a hearing on Challenges in a Catastrophe: Evacuating New Orleans in Advance of Hurricane Katrina, on January 31, 2006, submitted to the Senate Committee on Homeland Security and Governmental Affairs, 109th Congress, 2nd session.

⁷⁰ Louisiana Office of the Governor, Response to U.S. Senate Committee on Homeland Security and Governmental Affairs and Information Request Dated October 7, 2005 (Baton Rouge, December 2005).

⁷¹ Liability concerns may have constrained the development of this program. Nicholas Riccardi and James Rainey, "Katrina's Aftermath," *Los Angeles Times*, September 13, 2005; Bruce Nolan, "In Storm, N.O. Wants No One Left Behind," *The Times-Picayune*, July 24, 2005.

⁷² Louisiana Office of the Governor, Response to U.S. Senate Committee on Homeland Security and Governmental Affairs and Information Request Dated October 7, 2005 (Baton Rouge, December 2005).

⁷³ For the notice on recommended evacuations of Algiers, the Lower Ninth Ward, and low-lying areas, see City of New Orleans, "Mayor Nagin Urges Citizens to Prepare for Hurricane Katrina," news release, August 27, 2005. The Louisiana evacuation plan called for New Orleans to begin evacuations thirty hours prior to projected landfall. This delay was designed to enable residents of coastal areas to evacuate, see Mayor's Office of Communications, City of New Orleans, "Mayor Nagin Urges Citizens to Prepare for Hurricane Katrina," news release, August 27, 2005; "Mayor Urges Storm Preparations," *NOLA.com: Times Picayune Breaking News Weblog*, August 27, 2005

⁷⁴ Bruce Nolan, "Katrina Takes Aim," *The New Orleans Times-Picayune*, August 28, 2005: "New Orleans Mayor Ray Nagin followed at 5:00 pm, issuing a voluntary evacuation."

⁷⁵ City of New Orleans, Mayor's Office of Communications, "Mayor Nagin Urges Citizens to Prepare for Hurricane Katrina," news release, August 27, 2005.

⁷⁶ State of Mississippi, Mississippi Emergency Management Agency, "Evacuation Traffic Expected to Increase on Interstates," news release, August 27, 2005; U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Hurricane Center, "Hurricane Katrina Forecast Timeline," n.d., ca. 2005. See also U.S. Department of Homeland Security, Federal Emergency Management Agency, National Response Coordination Center, video teleconference, August 27, 2005, (Mississippi EOC reporting voluntary evacuations being encouraged along coastal counties).

77 In an interview with *Frontline*, New Orleans Mayor Ray Nagin described the difficulty completing a mandatory evacuation: "But keep in mind the last time a hurricane event happened is 1965. Most people ride out these storms—they're Category 2s or whatever, and it's no big deal. The storm before Katrina a couple of weeks earlier—another Parish official made this huge declaration to mandatorily evacuate in spite of what everyone else was saying. So public confidence was a little low at the time . . . I think regardless of what we do in this town, some people will stay." Ray Nagin, Mayor of New Orleans, interview by Public Broadcasting Service, *Frontline*, November 22, 2005.

78 Louisiana Office of the Governor, Response to U.S. Senate Committee on Homeland Security and Governmental Affairs and Information Request Dated October 7, 2005 (Baton Rouge, December 2005).

79 American Red Cross, "Gulf Coast States Prepare for Hurricane Katrina," news release, August 27, 2005, http://www.redcross.org/article/0,1072,0_332_4467,00.html

80 State of Mississippi, Mississippi Emergency Management Agency, "Evacuation Traffic Expected to Increase on Interstates," news release, August 27, 2005.

81 Louisiana Office of Emergency Preparedness, "Situation Report Executive Summary: Hurricane Katrina," August 27, 2005.

82 The declaration of the Superdome as a "special needs shelter" was an element of the State's Emergency Operations Plan. According to the plan, the Superdome serves as the Category II special needs shelter for Jefferson, Plaquemines, Orleans, and St. Bernard parishes. "Category II" facilities are for patients whose conditions are "less serious and less likely to undergo a severe deterioration." State of Louisiana, *Emergency Operations Plan, Supplement 1C: Louisiana Shelter Operations Plan* (Baton Rouge, April 2005), Annex X "Special Needs Plan," 5, 10, Appendix 2. The Superdome had also been used as "a shelter of last resort" in previous hurricanes. The Superdome was first used in this capacity in 1998 when people sought refuge from Hurricane Georges. U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Weather Service Forecast Office, "Top Weather Events of the 20th Century within the NWSFO New Orleans/Baton Rouge Service Area," December 8, 2005, <http://www.srh.noaa.gov/lix/html/top10.htm>. The State of Louisiana Emergency Operations Plan defines a shelter of last resort as "a place for persons to be protected from the high winds and heavy rains from the storm. Unlike a shelter, there may be little or no water or food and possibly no utilities. A Last Resort Refuge is intended to provide best available survival protection for the duration of the hurricane only." Louisiana Office of Homeland Security and Emergency Preparedness, *State of Louisiana Emergency Operations Plan: Supplement 1A* (Baton Rouge, January 2000), 29.

83 City of New Orleans, "Comprehensive Emergency Management Plan: Special Needs Shelter Plan," <http://www.cityofno.com/portal.aspx?portal=46&tabid=28>. The Plan states: "[I]t is not appropriate to admit individuals to this shelter who require constant care or who require constant electricity to support machines necessary to maintain their life. Dialysis will not be available. Persons who are acutely ill will be evaluated and referred to local hospitals for definitive care. On a daily basis, every person with a chronic medical problem should have a viable plan that has been discussed with their primary physician so that when a disaster occurs, they will have an action plan established which can be put into effect."

84 State of Texas, Texas State Operations Center, "Situation Report #8," August 27, 2005.

85 State of Mississippi, Mississippi Emergency Management Agency, "Mississippi to Reverse Lane Interstates 55 and 59," news release, August 27, 2005.

86 Robert R. Latham Jr., Executive Director of the Mississippi Emergency Management Agency, written statement for a hearing on Hurricane Katrina: Preparedness and Response by the State of Mississippi, on December 7, 2005, submitted to the House Select Bipartisan Committee to Investigate the Preparation for and Response to Hurricane Katrina, 109th Congress, 1st session.

87 Louisiana National Guard, Task Force Pelican, "Hurricane Katrina Overview of Significant Events," November 28, 2005, 5.

88 State of Alabama, Office of the Governor, "Governor Riley Says Supplies Ready to Assist Hurricane Victims," news release, August 28, 2005: "Alabama has pre-positioned supplies . . . Governor Riley said the state already has 290,000 bags of ice, more than 250,000 gallons of water, 652,000 MREs (meals ready to eat), and 110,000 tarps measuring 20 feet by 25 feet."

89 Office of the Governor of Alabama, "Governor Riley Briefed on State's Hurricane Preparations," news release, August 27, 2005; State of Alabama, Office of the Governor, "Governor Riley Says Supplies Ready to Assist Hurricane Victims," news release, August 28, 2005.

90 State of Texas, State Operations Center, "Situation Report #8," August 27, 2005.

91 Level 1 operations began at 7:00 am edt. U.S. Department of Homeland Security, "Hurricane Katrina DHS SITREP # 4," August 27, 2005, 11.

92 Hurricane Katrina DHS Situation Report #4, 27 Aug 05, 1800 hrs.

93 See U.S. Department of Homeland Security, Federal Emergency Management Agency, National Response Coordination Center, video teleconference, August 27, 2005, 16.

94 See U.S. Department of Homeland Security, Federal Emergency Management Agency, National Response Coordination Center, video teleconference, August 27, 2005, 16 – 17.

95 See U.S. Department of Homeland Security, Federal Emergency Management Agency, National Response Coordination Center, video teleconference, August 27, 2005, 16-18. The figures for liters of water, pounds of ice, and number of MREs and tarps were converted using FEMA conversion factors of 18,000 liters of water, 40,000 pounds of ice, 2,520 tarps, and 21,888 MREs per truckload. FEMA Office of Legislative Affairs, Hurricane Katrina Response Fact Sheet.

96 U.S. Department of Homeland Security, “Hurricane Katrina DHS SITREP # 4,” August 27, 2005.

97 See U.S. Department of Homeland Security, Federal Emergency Management Agency, National Response Coordination Center, video teleconference, August 27, 2005, 22.

98 Colonel Jeff Smith, Acting Deputy Director, Louisiana Office of Homeland Security and Emergency Preparedness, testimony at hearing on the Hurricane Katrina Response in Louisiana, on December 14, 2005, before the House Select Committee to Investigate the Preparation and Response to Hurricane Katrina, 109th Congress, 2nd session. See also transcript of August 27, 2005, NRCC Video Teleconference. The Emergency Response Team-National is a national “on-call” team that is ready to deploy to large disasters such as Category 3 or 4 hurricanes. See also, U.S. Department of Homeland Security, “Hurricane Katrina DHS SITREP # 4,” August 27, 2005. For definition of ERT-N, see U.S. Department of Homeland Security, Federal Emergency Management Agency. See also FEMA National Situation Update, August 28, 2005, <http://www.fema.gov/emanagers/2005/nat082805.shtm>. “Glossary,” <http://training.fema.gov/EMIWeb/IS/is14/glossary.htm#E>.

99 U.S. Department of Homeland Security, *National Response Plan* (Washington, DC, December 2004), 40. See also Dan Bement, “FEMA Operations,” prepared for the U.S. Department of Transportation, Federal Highway Administration, <http://www.fhwa.dot.gov/modiv/fema.htm>.

100 U.S. Department of Defense, “Hurricane Katrina Timeline,” August 29, 2005.

101 U.S. Department of Defense, “Hurricane Katrina Timeline,” August 29, 2005.

102 See U.S. Department of Homeland Security, “Hurricane Katrina DHS SITREP #4,” August 27, 2005.

103 The emergency declaration for Mississippi was requested by Governor Barbour on Saturday, August, 27, 2005; the emergency declaration for Alabama was requested by Governor Riley on Sunday, August 28, 2005. Presidential states of emergency were declared for both States on August 28. 70 Fed. Reg. 53239 (Aug. 28, 2005) (Mississippi); 70 Fed. Reg. 54061-62 (Aug. 28, 2005) (Alabama).

104 President Bush authorized FEMA “. . . to identify, mobilize, and provide at its discretion, equipment and resources necessary to alleviate the impacts of the emergency” for the parishes of Allen, Avoyelles, Beauregard, Bienville, Bossier, Caddo, Caldwell, Claiborne, Catahoula, Concordia, De Soto, East Baton Rouge, East Carroll, East Feliciana, Evangeline, Franklin, Grant, Jackson, LaSalle, Lincoln, Livingston, Madison, Morehouse, Natchitoches, Pointe Coupee, Ouachita, Rapides, Red River, Richland, Sabine, St. Helena, St. Landry, Tensas, Union, Vernon, Webster, West Carroll, West Feliciana, and Winn. The White House, “Statement on Emergency Assistance for Louisiana,” news release, August 27, 2005. See also, *Robert T. Stafford Disaster Relief and Emergency Assistance Act*, Public Law 93-288, as amended [“*Stafford Act*”], § 502(a)(b).

105 Data on pre-landfall disaster declarations compiled from: Department of Homeland Security, Federal Emergency Management Agency, “Federally Declared Disasters by Calendar Year,” Library, <http://www.fema.gov/library/drcys.shtm>. Hurricane Floyd did not make landfall until 6:30 am on September 16, 1999, but the storm caused significant coastal damage as it passed offshore Florida, Georgia, and the Carolinas; as a result, President Clinton issued emergency declarations for Florida and Georgia on September 14. He did the same for the Carolinas the following day. For more information, see: U.S. Department of Homeland Security, Federal Emergency Management Agency, “Emergency Aid Ordered For Florida Hurricane Response,” news release, September 14, 1999, <http://www.fema.gov/news/newsrelease.fema?id=8554>; U.S. Department of Homeland Security, Federal Emergency Management Agency, “Emergency Aid Ordered For Georgia Hurricane Response,” news release, September 14, 1999, <http://www.fema.gov/news/newsrelease.fema?id=8553>; U.S. Department of Homeland Security, Federal Emergency Management Agency, “Emergency Aid Ordered For South Carolina Hurricane Response,” news release, September 15, 1999, <http://www.fema.gov/news/newsrelease.fema?id=8552> and U.S. Department of Homeland Security, Federal Emergency Management Agency, “Emergency Aid Ordered For North Carolina Hurricane Response,” news release, September 15, 1999, <http://www.fema.gov/news/newsrelease.fema?id=8551>.

106 On August 27, 2005, Governor Kathleen Blanco sent a letter to President Bush requesting an emergency declaration for the State of Louisiana. The letter stated, “I have determined that this incident is of such severity and magnitude that effective response is beyond the capabilities of the State and affected local governments, and that supplementary Federal assistance is necessary to save lives, protect property, public health, and safety, or to lessen

or avert the threat of a disaster.” The letter contained a list of “State and local resources that have been or will be used to alleviate the conditions of this emergency.” It also certified that “the State and local governments will assume all applicable non-Federal share of costs required by the Stafford Act.” Governor Blanco specifically requested “emergency protective measures, direct Federal Assistance, Individual and Household Program (IHP) assistance, Special Needs Program assistance, and debris removal” for all affected areas. She defined the affected areas as “all the southeastern parishes including the New Orleans Metropolitan area and the mid-state Interstate I-49 corridor and northern parishes along the I-20 corridor that are accepting the thousands of citizens evacuating,” Kathleen Blanco, Governor of Louisiana, Letter to President Bush requesting that he declare an emergency for the State of Louisiana due to Hurricane Katrina (Baton Rouge, August 27, 2005). That same day President Bush declared a state of emergency in Louisiana. 70 Fed. Reg. 53238 (August 27, 2005).

107 William Lokey, Federal Coordinating Officer for Baton Rouge, written statement for a hearing on Louisiana Hurricane Katrina Response and Recovery, on December 14, 2005, submitted to the House Select Committee to Investigate the Preparation for and Response to Hurricane Katrina, 109th Congress, 1st session.

108 Louisiana Office of the Governor, Response to U.S. Senate Committee on Homeland Security and Governmental Affairs and Information Request Dated October 7, 2005 (Baton Rouge, December 2005); U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Hurricane Center, “Hurricane Katrina Forecast Timeline,” n.d., ca. 2005.

109 Max Mayfield, testimony before a hearing on “The Lifesaving Role of Accurate Hurricane Prediction,” Disaster Prevention and Prediction Hearing, U.S. Senate Committee on Commerce, Science, and Transportation, on September 20, 2005, 109th Congress, 1st session, 11. Mayfield said: “Yes Sir, I called. I don’t do that very often. But I—in fact, I have only done that only one other time for Hurricane Lili in the— when it was a Category 4 Hurricane in the Gulf of Mexico. I called the former Governor of Louisiana in 2002. And this was Saturday night around 8:30 or 9 o’clock eastern time and I called the—I got hold of the Governor of Louisiana, the Governor of Mississippi and Governor Blanco in Louisiana suggested I call Mayor Nagin in New Orleans. I called him and left a message and he called me right back and I have—a lot of people have asked me what I said and I, you know, with the hundreds of briefings that we did, I don’t remember exactly. But the whole purpose of that was just to be absolutely sure that they understood the severity of the situation and I do remember telling all three of them that I want to leave the National Hurricane Center that night and be able to go home and sleep knowing that I had done everything that I could do.”

110 Max Mayfield, testimony before a hearing on “The Lifesaving Role of Accurate Hurricane Prediction,” Disaster Prevention and Prediction, U.S. Senate Committee on Commerce, Science, and Transportation, on September 20, 2005, 109th Congress, 1st session, 11.

111 See U.S. Department of Homeland Security, Federal Emergency Management Agency, National Response Coordination Center, video teleconference, August 27, 2005.

112 Brigadier General David L. Johnson, Director, National Oceanographic and Atmospheric Administration, National Weather Service, testimony before a hearing on “Predicting Hurricanes: What We Knew About Katrina,” U.S. House Select Committee on Hurricane Katrina, on September 22, 2005, 109th Congress, 1st session, 43 (testifying that Hurricane Katrina became a Category 4 storm at 12:40 am on Sunday, August 28, and became a Category 5 storm at 6:15 am that same day).

113 Richard D. Knabb, Jamie R. Rhome, and Daniel Brown, *Tropical Cyclone Report: Hurricane Katrina: August 23-30, 2005*, National Hurricane Center, National Oceanic and Atmospheric Administration (Miami, Florida, December 2005), 3.

114 U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Weather Service, New Orleans/Baton Rouge Forecast Office, Slidell, Louisiana, “Urgent Weather Message,” August 28, 2005.

115 U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Hurricane Center, *Hurricane Katrina Advisory # 25*, (Miami, Florida, August 28, 2005).

116 U.S. Department of Commerce, U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Weather Service, New Orleans/Baton Rouge Forecast Office, Slidell, LA, “Urgent Weather Message,” August 28, 2005.

117 The Emergency Alert System (EAS) is a mechanism for public officials—Federal, State, and local—to communicate disaster information and instructions rapidly and widely. The system aims to reach the broadest possible audience by disseminating emergency updates on existing radio and television stations, including via digital and satellite networks. Federal Communications Commission, FCC Consumer Facts: The Emergency Alert System (Washington, DC, 2005), 1. See also State of California, “What Is EAS?,” <http://eas.oes.ca.gov/Pages/whatseas.htm>. The new EAS system is the direct descendent of the Emergency Broadcast System (EBS), the Nation’s alert system from 1963 until the advent of EAS. EAS was officially launched on January 1, 1997 (for radio stations) and December 31, 1998 (for television). Federal Emergency Management Agency, “Background on the Emergency Alert System,” October 23, 2004, <http://www.fema.gov/rrr/rep/easrep.shtm>. While EAS fulfills the same function as EBS, it differs in that it takes advantage of digital technology to permit automation of transmission. Federal Emergency Management Agency, “Background on the Emergency Alert System,” October 23, 2004, <http://www.fema.gov/rrr/rep/easrep.shtm>. The Emergency Broadcast System and its

EAS successor were originally designed for the President to speak to the Nation during an emergency, particularly following catastrophic nuclear attacks. But the system was made available to State and local officials in 1963, and since then has been used primarily for weather emergencies. "There are two contexts in which the EAS will be used—Presidentially-initiated alerts and messages and those initiated by State and local governments in concert with the broadcast industry." Federal Emergency Management Agency, "Background on the Emergency Alert System," October 23, 2004, <http://www.fema.gov/rrr/rep/easrep.shtm>. See also, Federal Communications Commission, *FCC Consumer Facts: The Emergency Alert System* (Washington, DC, 2005), 2. The document states: "a state emergency manager may use the system to send out a public warning by broadcasting that warning from one or more major radio stations in a particular state." EAS was not activated prior to landfall aside from NOAA hurricane warnings and advisories. "The Emergency Alert System was never activated by the White House or by State or local governments during Katrina." Ken Kerschbaumer, "Broadcasters Seek Better Emergency Alert System," *Broadcasting and Cable*, September 12, 2005.

118 National Oceanic and Atmospheric Administration, National Weather Service, "NOAA Weather Radio All Hazards," January 31, 2006, <http://www.weather.gov/nwr/>. The Federal Communication Commission's EAS Primary Entry Point (PEP) station in New Orleans (station WWL) was one of the few radio stations in the area to provide continuous service to the New Orleans area. The NOAA Weather Radio (NWR) is a national network of radio stations that continuously broadcast weather and hazard information from local Weather Service offices. Operating in close conjunction with EAS, NOAA Weather Radio comprises an "all hazards" radio network that acts as a "single source for comprehensive weather and emergency information." National Oceanic and Atmospheric Administration, National Weather Service, "NOAA Weather Radio All Hazards," January 31, 2006, <http://www.weather.gov/nwr/>.

119 Transcript of August 27, 2005, NRCC Video Teleconference.

120 U.S. Department of Homeland Security, Coast Guard, *Hurricane Katrina: The U.S. Coast Guard at its Best* (Washington, D.C., 2005), 15.

121 "New Orleans Mayor, Louisiana Governor Hold Press Conference," *CNN*, August 28, 2005, <http://transcripts.cnn.com/TRANSCRIPTS/0508/28/bn.04.html>.

122 "New Orleans Mayor, Louisiana Governor Hold Press Conference," *CNN*, August 28, 2005, <http://transcripts.cnn.com/TRANSCRIPTS/0508/28/bn.04.html>. Louisiana law provides the parish presidents with the authority to issue mandatory evacuation orders. The law allows the Parish President to "Direct and compel the evacuation of all or part of the population from any stricken or threatened area within the boundaries of the parish if he deems this action necessary for mitigation, response, or recovery measures." The law declares the penalty for violating such an order to be a fine not more than five hundred dollars, or confinement in the parish jail for not more than six months, or both. *Louisiana Homeland Security and Emergency Assistance and Disaster Act*, La. Rev. Stat. 29-727. Although a State responsibility, it is unclear how the State or Parish law enforcement authorities intended to enforce this order. The Mayor ordered a mandatory evacuation for the entire Parish of Orleans, with the exceptions of essential personnel of the Federal government, State of Louisiana and City of New Orleans, as well as essential personnel of regulated utilities and mass transportation services, hospitals and their patients, essential media, Orleans Parish Criminal Sheriff's office and its inmates, and the essential personnel of operating hotels and their patrons. The Mayor ordered every person not exempt to immediately evacuate the City of New Orleans, or if no other alternative was available, to immediately move to one of the facilities within the City that would be designated a refuge of last resort.

123 U.S. Department of Homeland Security, National Response Coordination Center, video teleconference, August 28, 2005.

124 Frances Fragos Townsend, Assistant to the President for Homeland Security and Counterterrorism, remarks to the National Emergency Management Association's 2006 mid-year conference, February 13, 2006.

125 See U.S. Department of Homeland Security, National Response Coordination Center, video teleconference, August 28, 2005.

126 See U.S. Department of Homeland Security, National Response Coordination Center, video teleconference, August 28, 2005.

127 Secretary Chertoff asked, "...are there any DOD assets that might be available. Have we reached out to them, and have we I guess made any kind of arrangement in case we need some additional help from them?" Director Brown responded, "We have DOD assets over here at the EOC. They are fully engaged, and we are having those discussions with them now." U.S. Department of Homeland Security, Federal Emergency Management Agency, National Response Coordination Center, video teleconference, August 28, 2005.

128 Michael Chertoff, Secretary, Department of Homeland Security, testimony on the Department of Homeland Security Relief Response, on October 19, 2005, before the House Select Bipartisan Committee to Investigate the Preparation for and Response to Hurricane Katrina, 109th Congress 1st session, 48. Secretary Chertoff testified, "it is correct that under the declaration there's an FCO appointed. It was Lokey in Louisiana and Carwile in Mississippi. But Brown went down as their supervisor with direct authority over them to be on the ground in charge of the entire Gulf Coast response. In other words, he went down on Sunday. He was—on Saturday he was in FEMA in Washington running the operation with each of the support function representatives, including DOD literally sitting at

the table with him at FEMA headquarters. He then moved himself—after the Sunday VTC, down to Baton Rouge and operated using his authority over the FCOs as the head of the whole agency. He was in charge of this thing on the ground from his arrival on Sunday through the end. The designation as a PFO, I guess, was a kind of formal recognition of that.”

129 Michael Chertoff, Secretary of the Department of Homeland Security, written statement for a hearing on the Department of Homeland Security’s Hurricane Relief Response, on October 19, 2005, submitted to the House Select Bipartisan Committee to Investigate the Preparation for and Response to Hurricane Katrina, 109th Congress, 1st session, 14.

130 The White House, “President Discusses Hurricane Katrina, Congratulates Iraqis on Draft Constitution,” news release, August 28, 2005.

131 By Sunday afternoon, Mississippi ordered mandatory or voluntary evacuation orders for six counties. Alabama Governor Bob Riley issued evacuation orders for Mobile and Baldwin counties. State of Mississippi, Mississippi Emergency Management Agency, “Mississippians Urged to Take Precautions for Hurricane Katrina,” news release, August 28, 2005; State of Alabama, Office of the Governor, “Governor Riley Orders Evacuation of Parts of Mobile and Baldwin Counties,” news release, August 28, 2005; Leigh Ann Ryals, Director of the Baldwin County Emergency Management Agency, testimony before a hearing on Hurricane Katrina: Preparedness and Response by the State of Alabama, on November 9, 2005, House Committee on Government Reform on the State of Alabama’s Preparation for and Response to Hurricane Katrina, 109th Congress, 1st session.

132 “Before Katrina came, I developed a new evacuation plan that includes contra-flow, where both sides of the interstates are used for outbound traffic. I am proud that we rapidly moved over 1.2 million people - some 92% of the population - to safety without gridlock or undue delay prior to Katrina.” Governor Kathleen Blanco, written statement for a hearing on Hurricane Katrina: Preparedness and Response by the State of Louisiana, on December 14, 2005, submitted to the U.S. House Select Committee to Investigate the Preparation for and Response to Hurricane Katrina, 109th Congress, 1st session. See also, Johnny Bradberry, Secretary of the Louisiana Department of Transportation and Development, testimony before a hearing on the Evacuation of New Orleans, Senate Homeland Security and Governmental Affairs Committee, January 31, 2006, 109th Congress, 2nd session.

133 U.S. Department of Transportation, “Hurricane Katrina - Situation Report Five,” August 29, 2005; Louis Armstrong New Orleans International Airport, “Hurricane Katrina from the Airport’s Point of View,” <http://www.flymsy.com/>.

134 Governor Kathleen Blanco, written statement for a hearing on Hurricane Katrina: Preparedness and Response by the State of Louisiana, on December 14, 2005, submitted to the U.S. House Select Committee to Investigate the Preparation for and Response to Hurricane Katrina, 109th Congress, 1st session. The Louisiana DOTD estimated that 500,000 vehicles evacuated during Phase 3 operations, see Louisiana State Police, “LSP Timeline of Events,” n.d., ca. 2005, 5.

135 U.S. Department of Homeland Security, “Hurricane Katrina DHS SITREP #6,” August 29, 2005, 12.

136 State of Texas, State Operations Center, “Situation Report #9,” August 28, 2005.

137 Ray Nagin, Mayor of New Orleans, testimony before a hearing on Hurricane Katrina: Preparedness and Response by the State of Louisiana, on December 14, 2005, U.S. House Select Committee to Investigate the Preparation for and Response to Hurricane Katrina, 109th Congress, 1st session, “After a Sunday morning statewide conference call, I announced the first ever in our almost 300-year history a citywide mandatory evacuation order, which followed the evacuation orders, I might add, of some of the other low-lying parishes that also were encouraging their citizens to evacuate post haste. We opened the Superdome as our refuge of last resort, and we staged buses throughout the city to transport people to the Superdome, and set a curfew for dusk. The city also evacuated 400 special needs residents to the state shelter and then opened the Superdome at 8 a.m. that morning for the remaining special needs populations. There were thousands of residents that did not leave, including those with means who would choose to ride out the storm like their parents had done during Hurricane Betsy. When reality set in for many of them on Sunday, they made their way to the refuge of last resort, the Superdome.”

Louisiana National Guard personnel on-scene reported no evacuees at the Superdome until after noon. Louisiana National Guard, Task Force Pelican, “Hurricane Katrina Overview of Significant Events,” November 28, 2005, 5-6.

138 Major General Bennett Landreneau, Louisiana National Guard, testimony before a hearing on Hurricane Katrina: Preparedness and Response by the Department of Defense, the Coast Guard, and the National Guard of Louisiana, Mississippi, and Alabama, on October 27, 2005, House Select Bipartisan Committee to Investigate the Preparation for and Response to Hurricane Katrina, 109th Congress, 1st session. A shelter of last resort is intended to serve only as a location to ride out the winds of a storm. Under the State of Louisiana Emergency Operations Plan, it could “be located either inside or outside of the Hurricane Risk” and did not have to meet American Red Cross shelter standards. It is required to be “wind resistant” and “located outside of the flood zone or [provide the] ability to locate on floors.” Louisiana Office of Emergency Preparedness, *State of Louisiana Emergency Operations Plan Supplement 1C: Louisiana Shelter Operations Plan* (Baton Rouge, as revised July 2000), Annex M.

139 Marty Bahamonde, Regional Director for External Affairs, Region One, FEMA, written statement for a hearing on Hurricane Katrina in New Orleans, A Flooded City, A Chaotic Response, on October 20, 2005, submitted to the

Senate Committee on Homeland Security and Governmental Affairs, 109th Cong., 1st session, 2, stating, "Later that night after most of the 12,000 evacuees entered the Superdome, I returned to the EOC around midnight to ride out the storm." Although estimates put the Superdome population at between 20,000 and 40,000 by Friday, September 2, when evacuations of the Superdome began, Louisiana officials have stated that this increase took place after landfall on the Gulf Coast. Colonel Jeff Smith, Acting Deputy Director, Louisiana Office of Homeland Security and Emergency Preparedness, testimony before a hearing on the Hurricane Katrina Response in Louisiana, on December 14, 2005, House Select Committee to Investigate the Preparation and Response to Hurricane Katrina, 109th Congress, 2nd session. Jeff Smith had recently taken the job of Acting Deputy Director of the Louisiana Office of Homeland Security and Emergency Preparedness. On November 29, 2004, a Federal grand jury had indicted Michael L. Brown, the former Deputy Director of the Louisiana Office of Homeland Security and Emergency Preparedness (LOHSEP) and the State official responsible for overall management of Louisiana's Hazardous Mitigation Grants from FEMA, on charges of obstructing a Federal audit. This grant program funds mitigation projects to prevent flood losses or flood claims made upon the National Flood Insurance Program. Two other LOHSEP officials were indicted with him. U.S. Department of Justice, Three State Officials Indicted for Obstructing Federal Audit, press release, November 29, 2004, <http://www.usdoj.gov/usao/law/news/wdl20041129.html>; Ken Silverstein and Josh Meyer, "Katrina's Aftermath: Louisiana Officials Indicted Before Katrina Hit," Los Angeles Times, September 17, 2005, 17.

140 For example, the State of Alabama made a request on August 28 for shuttle trucks and tarps to be delivered to Maxwell Air Force Base. Alabama also requested the transport and delivery of two 50-man Joint Field Office kits to Montgomery. Mississippi requested the pre-positioning of 30 trucks of water with tractors at Meridian NAS and two helicopters to transport response personnel.

141 FEMA Office of Legislative Affairs, Hurricane Katrina Response Fact Sheet.

142 Speaking before the House Ways and Means Committee, Joseph C. Becker, Senior Vice President, American Red Cross, stated "It has been the policy of the Red Cross that there are no safe areas south of the I-10/I-12 corridor for a large-scale hurricane . . . We do not establish shelters in facilities that do not meet our criteria for safety during landfall." In saying this, Mr. Becker clearly implies that the Superdome is considered by the Red Cross to be an "unsafe" shelter. See Joseph C. Becker, Senior Vice President of Preparedness and Response, American Red Cross, written statement for a hearing on the Response of Charities to Hurricane Katrina, on December 13, 2005, before the House Ways and Means Committee, 109th Congress 1st session. However, the Red Cross was not against the use of the Superdome as a shelter of last resort. In a "frequently asked questions" portion of the official Red Cross website the organization states, "the original plan was to evacuate all the residents of New Orleans to safe places outside the city. With the hurricane bearing down, the city government decided to open a shelter of last resort in the Superdome downtown. *We applaud this decision and believe it saved a significant number of lives.*" See American Red Cross, "Frequently Asked Questions," http://www.redcross.org/faq/0,1096,0_682_4524,00.html (emphasis added). Thus, the Superdome, while it did not meet the Red Cross' safety requirements, served a valuable purpose as a shelter of last resort. Although the Red Cross's own policies prevented it from directly staffing the Superdome, the organization claims that it was willing to supply the shelter with essential commodities after Katrina made landfall. According to the "Frequently Asked Questions" statement on its website, the organization was prevented from carrying out this mission by the National Guard and local authorities.

143 "New Orleans Mayor, Louisiana Governor Hold Press Conference," *CNN Breaking News*, August 28, 2005, <http://transcripts.cnn.com/transcripts/0508/28/bn.04.html>.

144 Major General Bennett Landreneau, Adjutant General, State of Louisiana, testimony before a hearing on Military Disaster Relief, on October 27, 2005, House Select Bipartisan Committee to Investigate the Preparation for and response to Hurricane Katrina, 109th Congress, 1st session.

145 Louisiana National Guard, Task Force Pelican, "Hurricane Katrina Overview of Significant Events," November 28, 2005, 3, 5.

146 Louisiana National Guard, Task Force Pelican, "Hurricane Katrina Overview of Significant Events," November 28, 2005, 6.

147 Louisiana National Guard, Task Force Pelican, "Hurricane Katrina Overview of Significant Events," November 28, 2005, 6.

148 Louisiana National Guard, Task Force Pelican, "Hurricane Katrina Overview of Significant Events," November 28, 2005, 7.

149 Louisiana National Guard, Task Force Pelican, "Hurricane Katrina Overview of Significant Events," November 28, 2005, 7.

150 Louisiana National Guard, Task Force Pelican, "Hurricane Katrina Overview of Significant Events," November 28, 2005, 7-8. U.S. Department of Health and Human Services (HHS) contacted the Director of Emergency Preparedness for the Louisiana Health Department. The State declined assistance.

151 "New Orleans Mayor, Louisiana Governor Hold Press Conference," *CNN*, August 28, 2005, <http://transcripts.cnn.com/TRANSCRIPTS/0508/28/bn.04.html>.

152 Louisiana State Police, “LSP Timeline of Events,” n.d., ca. 2005. 5. The storm forced Troop B of the Louisiana State Police to relocate from their barracks to the Kenner Police Department’s headquarters.

153 Parish officials declared mandatory evacuations for Lafourche, Orleans, Plaquemines, St. Bernard, St. Charles and St. John the Baptist parishes. Officials declared mandatory evacuations for limited geographical or flood-prone areas of the following parishes: Jefferson, St. James, Livingston, Tangipahoa, St. Tammany and Terrebonne. Parish officials recommended evacuations in Ascension, Assumption and Washington parishes. See Louisiana State Police, “Southeast Louisiana Evacuations Continue,” news release, August 28, 2005; Louisiana State Police, “Hurricane Evacuations: Livingston Parish,” news release, August 28, 2005; Louisiana State Police, “Hurricane Evacuations: St. Tammany Parish,” news release, August 28, 2005; Louisiana State Police, “Hurricane Evacuations: Washington Parish,” news release, August 28, 2005.

154 U.S. Department of Homeland Security, Federal Emergency Management Agency, Tropical Storm Katrina Briefing, August 25, 2005.

155 Mobile Emergency Response Support (MERS) detachments consist of trained personnel and mobile response assets. FEMA has five MERS detachments strategically placed across the country. MERS detachments are designed to provide communications capabilities and operational and logistical support to first responders. Each MERS detachment has a suite of vehicle assets to provide support. Because its diverse assets are housed on a number of different trucks, a single MERS detachment “can concurrently support a large Disaster Field Office and multiple field operating sites within the disaster area.” Thus, the deployment of one MERS unit is not married to a single location. The communications component of MERS capabilities consists of Ku-band satellite, International Maritime Satellite (INMARSAT) and American Mobile Satellite Corporation (AMSC) satellite terminals, line of sight microwave transmission, and high frequency, very high frequency, and ultra high frequency radio. MERS logistics support includes power, heating, ventilation, and cooling (HVAC), fuel, and [potable] water.” A MERS detachment can provide “generators to supply the power generation requirements of one or more facilities or locations within the disaster area,” and “heating, ventilation, and cooling requirements for a large office building.” A MERS detachment also provides personnel experienced in facility management, acquisition support, warehouse operation, transportation management, and property accountability.” Further, “the MERS Detachments have resources that can provide temporary office or operational space.” The Denton, Texas MERS team operates FEMA’s *Emergency Operations Vehicle* (EOV), an “82 foot long expandable trailer providing office workstations and conference space for 20-25 people.” The EOV also has kitchen, power generation, and communications facilities. MERS detachments also have rapid response teams to provide initial support immediately following a disaster. The Quick Reaction System (QRS) consists of “13 people with 4-wheel drive vehicles and support equipment for 72 hours that provide the initial damage assessment.” This unit also has “an INMARSAT and AMSC satellite terminal, cellular telephones and laptop computers, VHF and HF radios, life support (water, food, batteries, etc.), and generators.” Finally, ERTA and ERTS units are “preloaded trucks with food, water, clothing, first aid items, safety equipment, sleeping bags, hygiene items, office equipment, tools, and lumber.” These trucks can support “100 people for 10 days.” For a detailed assessment of MERS capabilities, see U.S. Department of Homeland Security, Federal Emergency Management Agency, *Response and Recovery: Mobile Operations Capability Guide for Emergency Managers and Planners*, October 23, 2004, <http://www.fema.gov/rrr/mers01.shtm>.

156 U.S. Department of Homeland Security, Federal Emergency Management Agency, “FEMA National Situation Update,” August 29, 2005, 3.

157 U.S. Department of Homeland Security, Federal Emergency Management Agency, Office of Legislative Affairs, *Hurricane Katrina Response Fact Sheet*.

158 National Aeronautics and Space Administration, Goddard Space Flight Center, “Hurricane Katrina from TRMM: August 28, 2005,” <http://svs.gsfc.nasa.gov/vis/a000000/a003200/a003218/> (data from NASA spacecraft).

159 “New Orleans Mayor, Louisiana Governor Hold Press Conference,” CNN, August 28, 2005, <http://transcripts.cnn.com/TRANSCRIPTS/0508/28/bn.04.html>.

Chapter Four: A Week of Crisis — August 29 – September 5

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1 The White House, “President Discusses Hurricane Relief in Address to the Nation,” news release, September 15, 2005, [/news/releases/2005/09/20050915-8.html](http://news/releases/2005/09/20050915-8.html).

2 These wind gusts were reported in Poplarville, Mississippi, at the Pearl River County Emergency Operations Center. See Richard D. Knabb, Jamie R. Rhome, and Daniel P. Brown, *Tropical Cyclone Report: Hurricane Katrina, 23-30 August 2005*, prepared for the National Hurricane Center (Miami, Florida, December 20, 2005), 3, 8.

3 Hurricane Katrina was downgraded to Category 1 on the Saffir-Simpson scale at 6:00 pm utc on August 29. Richard D. Knabb, Jamie R. Rhome, and Daniel P. Brown, *Tropical Cyclone Report: Hurricane Katrina, 23-30 August 2005*, prepared for the National Hurricane Center (Miami, Florida, December 20, 2005), 4.

⁴ Richard D. Knabb, Jamie R. Rhome, and Daniel P. Brown, *Tropical Cyclone Report: Hurricane Katrina, 23-30 August 2005*, prepared for the National Hurricane Center (Miami, Florida, December 20, 2005), 4.

⁵ Richard D. Knabb, Jamie R. Rhome, and Daniel P. Brown, *Tropical Cyclone Report: Hurricane Katrina, 23-30 August 2005*, prepared for the National Hurricane Center (Miami, Florida, December 20, 2005). A National Data Buoy Center (NDBC) buoy located 64 nautical miles south of Dauphin Island, Alabama, measured a peak significant wave height of 55 feet on August 28, matching the record for “the largest significant wave height ever measured by a NDBC buoy.”

⁶ Richard D. Knabb, Jamie R. Rhome, and Daniel P. Brown, *Tropical Cyclone Report: Hurricane Katrina, 23-30 August 2005*, prepared for the National Hurricane Center (Miami, Florida, December 20, 2005), 8-9.

⁷ As of the time of this writing, Louisiana had counted 1,103 deaths, twenty-three of which were not storm related, for 1,080 storm related deaths. See Louisiana Department of Health and Hospitals, “Reports of Missing and Deceased,” February 17, 2006, <http://www.dhh.louisiana.gov/offices/page.asp?ID=192&Detail=5248> (accessed February 17, 2006). There were 231 deaths in Mississippi, fifteen in Florida, two in Alabama, and two in Georgia. See Richard D. Knabb, Jamie R. Rhome, and Daniel P. Brown, *Tropical Cyclone Report: Hurricane Katrina, 23-30 August 2005*, prepared for the National Hurricane Center (Miami, Florida, December 20, 2005), 10. Since there are still 2,096 people from the Gulf Coast area missing, it is likely that the death toll numbers will increase. See also U.S. Department of Commerce, National Oceanic and Atmospheric Administration Satellite and Information Service and National Climatic Data Center, *2005 Annual Climate Review: U.S. Summary* (Asheville, NC, January 2006), <http://www.ncdc.noaa.gov/oa/climate/research/2005/ann/us-summary.html>; and Ray Nagin, Mayor of New Orleans, testimony before a hearing on Hurricane Katrina: Managing the Crisis and Evacuating New Orleans, on February 1, 2006, Senate Committee on Homeland Security and Governmental Affairs, 109th Congress, 2nd session.

⁸ The White House, “President Outlines Hurricane Katrina Relief Efforts,” news release, August 31, 2005.

⁹ Richard D. Knabb, Jamie R. Rhome, and Daniel P. Brown, *Tropical Cyclone Report: Hurricane Katrina, 23-30 August 2005*, prepared for the National Hurricane Center (Miami, Florida, December 20, 2005), 11.

¹⁰ Brett Martel, “What Hiroshima looked like’ - Katrina’s full wrath still being felt, death toll soars past 100,” Associated Press, August 31, 2005.

¹¹ U.S. Department of Homeland Security, “Hurricane Katrina DHS SITREP #8,” August 30, 2005. See also American Red Cross, “Hurricane Katrina Damage Assessments,” <http://www.msema.org/redcrossassessments.htm> (accessed February 13, 2006).

¹² Guy Gugliotta and Peter Whoriskey, “Floods Ravage New Orleans; Two Levees Give Way; in Mississippi, Death Toll Estimated at 110,” *Washington Post*, August 31, 2005.

¹³ “The eastbound lanes of Interstate 10 between Gulfport and Biloxi were impassable because of storm debris.” “Katrina kills 50 in one Mississippi county,” *CNN.com*, August 30, 2005, <http://www.cnn.com/2005/WEATHER/08/29/hurricane.katrina>.

¹⁴ “Katrina kills 50 in one Mississippi county,” *CNN.com*, August 30, 2005, <http://www.cnn.com/2005/WEATHER/08/29/hurricane.katrina>. See also U.S. Department of Homeland Security, “Hurricane Katrina DHS SITREP #8,” August 30, 2005, 3 (“Widespread flooding has also been reported across coastal Mississippi and Alabama”).

¹⁵ U.S. Department of Commerce, National Oceanic and Atmospheric Administration Satellite and Information Service and National Climatic Data Center, “Hazards/Climate Extremes,” <http://www.ncdc.noaa.gov/oa/climate/research/2005/aug/hazards.html>; and Richard D. Knabb, Jamie R. Rhome, and Daniel P. Brown, *Tropical Cyclone Report: Hurricane Katrina, 23-30 August 2005*, prepared for the National Hurricane Center (Miami, Florida, December 20, 2005), 8-9, 10.

¹⁶ U.S. Department of Homeland Security, “Hurricane Katrina DHS SITREP #14,” September 2, 2005.

¹⁷ Norman Mineta, Secretary of the Department of Transportation, written statement for a hearing on the Department of Transportation (Hurricane Katrina), on October 6, 2005, submitted to the House Committee on Appropriations, Subcommittee on Transportation, Treasury, Housing and Urban Development, the Judiciary, District of Columbia, and Independent Agencies, 109th Congress, 1st session.

¹⁸ Tommy Longo, Mayor of Waveland, Mississippi, testimony before a hearing on Hurricane Katrina: Preparedness and Response by the State of Mississippi, on December 7, 2005, House Select Bipartisan Committee to Investigate the Preparation for and Response to Hurricane Katrina, 109th Congress, 1st session, 51.

¹⁹ Tommy Longo, Mayor of Waveland, Mississippi, testimony before a hearing on Hurricane Katrina: Preparedness and Response by the State of Mississippi, on December 7, 2005, House Select Bipartisan Committee to Investigate the Preparation for and Response to Hurricane Katrina, 109th Congress, 1st session. See also U.S. Department of the Interior, U.S. Geological Survey, Coastal & Marine Geology Program, “Before and After Photo Comparisons:

Mainland Mississippi," *Hurricane Katrina Impact Studies*, August 31, 2005, <http://coastal.er.usgs.gov/hurricanes/katrina/photo-comparisons/mainmississippi.html>.

20 Haley Barbour, Governor of Mississippi, testimony via video teleconference before a hearing on Hurricane Katrina: Recovering from Hurricane Katrina, on September 7, 2005, House Committee on Energy and Commerce, 109th Congress, 1st session.

21 U.S. Department of Homeland Security, Homeland Security Operations Center, "Hurricane Katrina Update," August 30, 2005, 12.

22 U.S. Department of Energy, "Department of Energy's Hurricane Response Chronology, as Referred to by Secretary Bodman at Today's Senate Energy and Natural Resources Committee Hearing," news release, October 27, 2005, <http://energy.gov/news/2404.htm>.

23 U.S. Department of Energy, Office of Electricity Delivery and Energy Reliability, "Hurricane Katrina Situation Report #10," August 30, 2005, 1; and U.S. Department of Energy, "Department of Energy's Hurricane Response Chronology, as Referred to by Secretary Bodman at Today's Senate Energy and Natural Resources Committee Hearing," news release, October 27, 2005, <http://energy.gov/news/2404.htm>.

24 U.S. Department of Homeland Security, "Hurricane Katrina DHS SITREP #36," September 13, 2005, 7. "The wireline telecommunications network sustained enormous damage both to the switching centers that route calls and to the lines used to connect buildings and customers to the network." Kenneth Moran, Director of the Office of Homeland Security, Enforcement Bureau, Federal Communications Commission, written statement for a hearing on Hurricane Katrina and Communications Interoperability, on September 29, 2005, submitted to the Senate Committee on Commerce, Science and Transportation, 109th Congress, 1st session.

25 Nearly one hundred radio and television stations remained off the air a month after Hurricane Katrina's landfall. Kenneth Moran, Director of the Office of Homeland Security, Enforcement Bureau, Federal Communications Commission, written statement for a hearing on Hurricane Katrina and Communications Interoperability, on September 29, 2005, submitted to the Senate Committee on Commerce, Science, and Transportation, 109th Congress, 1st session.

26 Paul McHale, Assistant Secretary of Defense for Homeland Defense, testimony before a hearing on Hurricane Katrina: Preparedness and Response by the Department of Defense, the Coast Guard, and the National Guard of Louisiana, Mississippi, and Alabama, on October 27, 2005, House Select Bipartisan Committee to Investigate the Preparation for and Response to Hurricane Katrina, 109th Congress, 1st session, 74.

27 "The public health and health care delivery infrastructures have been either completely destroyed or have sustained significant damage across the affected Gulf Coast. Existing facilities that are operational are under extreme stress as they assume even greater responsibilities to fill the gaps created by the loss of so many facilities. Physician offices, cancer, imaging, dialysis and rehabilitation centers, hospitals, clinics, long-term care facilities, pharmacies, laboratories, etc., need to be rebuilt or repaired, not to mention re-supplied, with information technology systems, equipment and inventory." Ardis D. Hoven, Member of the American Medical Association Board of Trustees, written statement for a hearing on Assessing Public Health and the Delivery of Care in the Wake of Hurricane Katrina, on September 22, 2005, submitted to the House Energy and Commerce Committee, Subcommittees on Health and Oversight and Investigations, 109th Congress, 1st session.

28 "Nursing homes and hospitals were not a priority during the rescue process. For the first two days, [the Louisiana Nursing Home Association] was on its own to improvise and find ways to rescue the elderly in nursing homes." Joseph A. Donchess, Executive Director of the Louisiana Nursing Home Association, written statement for a hearing on Challenges in a Catastrophe: Evacuating New Orleans in Advance of Hurricane Katrina, on January 31, 2006, submitted to the Senate Committee on Homeland Security and Governmental Affairs, 109th Congress, 2nd session. "Only a third of nursing homes in the New Orleans area evacuated before Katrina, according to state and industry officials. In hard-hit Orleans and Jefferson parishes, eight of forty-one nursing homes removed residents before the storm." Roma Khanna, "Katrina's toll on the sick, elderly emerges," *Houston Chronicle*, November 28, 2005. Fatality statistics illustrate Hurricane Katrina's heavy toll on older Louisiana residents. For example, 71% of the dead at St. Gabriel Morgue whose age could be determined were more than sixty years old. See Louisiana Department of Health and Hospitals, "Vital Statistics of All Bodies at St. Gabriel Morgue," January 4, 2006, <http://www.dhh.louisiana.gov/publications.asp?ID=192&Detail=878>.

29 For example, Dr. Mark Peters of East Jefferson General Hospital in Metairie, Louisiana, stated that, "A day or two after the storm, we ran low on food. We always were able to feed our patients, and there were only two days when the staff had to eat once a day, and in small amounts. After that, we were able to contact various businesses and vendors to replenish our supplies and food." Dr. Mark Peters, President and Chief Executive Officer of East Jefferson General Hospital, written statement for a hearing on Assessing Public Health and Delivery of Care in the Wake of Hurricane Katrina, on September 22, 2005, submitted to the House Committee on Energy and Commerce, Subcommittee on Health and Subcommittee on Oversight and Investigations, 109th Congress, 1st session. Also see U.S. Department of Health and Human Services, "Secretary's Operations Center Flash Report #8--Hurricane Katrina," August 31, 2005, 1-2; and U.S. Department of Health and Human Services, "Secretary's Operations Center Flash Report #9--Hurricane Katrina," August 31, 2005, 1.

30 For example, six or seven patients at the Bethany Home, a nursing facility in New Orleans, succumbed to the conditions as they awaited evacuation. See Joseph A. Donchess, Executive Director of the Louisiana Nursing Home Association, testimony before a hearing on Challenges in a Catastrophe: Evacuating New Orleans in Advance of Hurricane Katrina, on January 31, 2006, Senate Committee on Homeland Security and Governmental Affairs, 109th Congress, 2nd session. See also Roma Khanna, "Katrina's Aftermath," *Houston Chronicle*, November 27, 2005.

31 The Louisiana State Attorney General subsequently charged the nursing home's owners with thirty-four counts of negligent homicide. Louisiana Office of the Attorney General, "Nursing Home Owners Surrender to Medicaid Fraud Control Unit Investigators," news release, September 14, 2005, <http://www.ag.state.la.us/ViewPressRel.aspx?RelID=420>.

32 Ray Nagin, Mayor of New Orleans, testimony before a hearing on Hurricane Katrina: Preparedness and Response by the State of Louisiana, on December 14, 2005, House Select Committee to Investigate the Preparation for and Response to Hurricane Katrina, 109th Congress, 1st session, 3.

33 Richard D. Knabb, Jamie R. Rhome, and Daniel P. Brown, *Tropical Cyclone Report: Hurricane Katrina, 23-30 August 2005*, prepared for the National Hurricane Center (Miami, Florida, December 20, 2005), 9.

34 U.S. Department of Homeland Security, "Hurricane Katrina SITREP #6," August 29, 2005.

35 R.B. Seed, P.G. Nicholson, R.A. Dalrymple, et al., *Preliminary Report on the Performance of the New Orleans Levee Systems in Hurricane Katrina on August 29, 2005*, November 17, 2005.

36 U.S. Department of Homeland Security, Federal Emergency Management Agency, "Urban Search and Rescue Operations Completed: Hurricane Katrina Urban Search and Rescue Teams Are Due to Return Home," news release, September 30, 2005, <http://www.fema.gov/news/newsrelease.fema?id=19320.html>

37 Governor Kathleen Blanco, Michael Brown, Senator Mary Landrieu, Bill Lokey, and Senator David Vitter, "Governor Kathleen Blanco (D-LA) Hold a News Conference Regarding Hurricane Katrina," Congressional Quarterly Transcription, August 30, 2005.

38 FEMA Urban Search and Rescue teams "helped 6,582 people reach safety in the hours and days immediately following Hurricane Katrina. U.S. Department of Homeland Security, Federal Emergency Management Agency, "Urban Search and Rescue Operations Completed: Hurricane Katrina Urban Search and Rescue Teams Are Due to Return Home," September 30, 2005, <http://www.fema.gov/news/newsrelease.fema?id=19320.html>. National Guard forces were engaged in search and rescue operations within four hours after landfall. Lieutenant General H. Steven Blum, written statement for a hearing on Responding to Catastrophic Events: The Role of the Military and National Guard in Disaster Response, on October 20, 2005, submitted to the House Committee on Government Reform, 109th Congress, 1st session. Early search and rescue actions of local first responders: Ray Nagin, Mayor of New Orleans, written statement submitted for a hearing on Hurricane Katrina: Preparedness and Response by the State of Louisiana, on December 14, 2005, to the House Select Committee to Investigate the Preparation for and Response to Hurricane Katrina, 109th Congress, 1st session, 1.

39 U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Weather Service, *Flash Flood Warning for Louisiana, August 29, 2005* (New Orleans, LA, August 2005).

40 U.S. Department of Homeland Security, "Hurricane Katrina DHS SITREP #7," August 29, 2005.

41 U.S. Department of Homeland Security, Homeland Security Operations Center, "FEMA National Sitrep 2005 Aug 29," August 29, 2005.

42 U.S. Department of Homeland Security, Homeland Security Operations Center, "HSOC#4317-05: HC Katrina Update- 11:30hrs," August 29, 2005.

43 U.S. Department of Homeland Security, Homeland Security Operations Center, "HSOC#4317-05: VTC NOTES 29 AUG 05."

44 It was not until 7:30 PM that the HSOC developed a spot report that described the USACE report, but it is unclear if this spot report was distributed outside of the HSOC.

45 Marty Bahamonde, Regional Director for External Affairs, Region One, Federal Emergency Management Agency, testimony before a hearing on Hurricane Katrina in New Orleans, A Flooded City, A Chaotic Response, on October 20, 2005, Senate Committee on Homeland Security and Governmental Affairs, 109th Congress, 1st session.

46 Marty Bahamonde, Regional Director for External Affairs, Region One, Federal Emergency Management Agency, testimony before a hearing on Hurricane Katrina in New Orleans, A Flooded City, A Chaotic Response, on October 20, 2005, Senate Committee on Homeland Security and Governmental Affairs, 109th Congress, 1st session.

47 Michael Brown, former Director of the Federal Emergency Management Agency, testimony before a hearing on Hurricane Katrina: Hurricane Preparedness, on February 10, 2006, Senate Committee on Homeland Security and Governmental Affairs, 109th Congress, 2nd session.

- 48** Marty Bahamonde, Regional Director for External Affairs, Region One, Federal Emergency Management Agency, testimony before a hearing on Hurricane Katrina in New Orleans, A Flooded City, A Chaotic Response, on October 20, 2005, Senate Committee on Homeland Security and Governmental Affairs, 109th Congress, 1st session.
- 49** U.S. Department of Homeland Security, Homeland Security Operations Center, "HSOC Spot Rep #13," August 29, 2005).
- 50** U.S. Department of Homeland Security, "Hurricane Katrina DHS Sit Rep #8," August 30, 2005.
- 51** U.S. Department of Homeland Security, Homeland Security Operations Center, "HSOC #4217-05: HC Katrina—NO 200 Ft Breached Levee Update," August 30, 2005; U.S. Department of Homeland Security, Homeland Security Operations Center, "HSOC #4317-05: HC Katrina – NO 200 Ft of Levee Breached," August 30, 2005; and U.S. Department of Homeland Security, Homeland Security Operations Center, "HSOC Spot Rep FW: US Army Corps of Engineers Spot Rep," August 30, 2005.
- 52** Governor Kathleen Blanco, Michael Brown, Senator Mary Landrieu, Bill Lokey, and Senator David Vitter, "Governor Kathleen Blanco (D-LA) Hold a News Conference Regarding Hurricane Katrina," Congressional Quarterly Transcription, August 30, 2005.
- 53** Richard D. Knabb, Jamie R. Rhome, and Daniel P. Brown, *Tropical Cyclone Report: Hurricane Katrina, 23-30 August 2005*, prepared for the National Hurricane Center (Miami, Florida, December 20, 2005); and Ray Nagin, Mayor of New Orleans, testimony before a hearing on Hurricane Katrina: Preparedness and Response by the State of Louisiana, on December 14, 2005, House Select Committee to Investigate the Preparation for and Response to Hurricane Katrina, 109th Congress, 1st session. In contrast, Raymond B. Seed, prepared statement for a hearing on Hurricane Katrina: Performance of the Flood Control System, on November 2, 2005, submitted to the Senate Committee on Homeland Security and Governmental Affairs, 109th Congress, 1st session, 2, http://hsgac.senate.gov/_files/110205Seed.pdf. Both sources report that eighty percent of New Orleans experienced some amount of flooding.
- 54** Michael Brown, former Director of the Federal Emergency Management Agency, testimony before a hearing on Hurricane Katrina: Hurricane Preparedness, on February 10, 2006, Senate Committee on Homeland Security and Governmental Affairs, 109th Congress, 2nd session.
- 55** International Association of Firefighters, "Reports from the Hurricane Frontlines: Katrina (August 29-September 6)," August 30, 2005, <http://daily.iaff.org/Katrina/Katrina.htm?c=report1>.
- 56** International Association of Firefighters, "Reports from the Hurricane Frontlines: Katrina (September 7-September 13)," September 10, 2005, <http://daily.iaff.org/Katrina/Katrina.htm?c=report2>.
- 57** Warren J. Riley, Superintendent of the New Orleans Police Department, written statement for a hearing on Hurricane Katrina: Managing Law Enforcement and Communications in a Catastrophe, on February 6, 2006, submitted to the Senate Committee on Homeland Security and Governmental Affairs, 109th Congress, 2nd session.
- In contrast, see Ray Nagin, Mayor of New Orleans, testimony before a hearing on Hurricane Katrina: Preparedness and Response by the State of Louisiana, on December 14, 2005, House Select Committee to Investigate the Preparation for and Response to Hurricane Katrina, 109th Congress, 1st session ("Pre-Katrina, we had 1,668 officers. Post-Katrina, we're at 1,506 -- so we're down 162 officers. We've had about 133 officers that have either been terminated, resigned, you know, are under investigation or resigned for personal reasons.").
- 58** Louisiana State Police, "Hurricane Katrina Timeline of Events," n.d., ca. 2005.
- 59** Christopher Rhoads, "Cut Off: At Center of Crisis, City Officials faced struggle to keep in touch," *Wall Street Journal*, September 9, 2005.
- 60** Willis Carter, Chief of Communications, Shreveport, Louisiana Fire Department, written statement for a hearing on Communications Interoperability, on September 29, 2005, submitted to the Senate Committee on Commerce, Science and Transportation, 109th Congress, 1st session.
- 61** Louisiana State Police, "Hurricane Katrina Timeline of Events," n.d., ca. 2005.
- 62** Senator Robert Barham, quoted in Joby Warrick, "Crisis Communications Remain Flawed," *Washington Post*, December 10, 2005.
- 63** Nick Felton, New Orleans Local 632 President, quoted in International Association of Firefighters, "Reports from the Hurricane Frontlines: Katrina (September 7-September 13)," September 13, 2005, <http://daily.iaff.org/Katrina/Katrina.htm?c=report2>.
- 64** Lieutenant Colonel Keith LaCaze, Louisiana Department of Wildlife and Fisheries, Enforcement Division, *Activity Report on Hurricane Katrina* (Baton Rouge, 2005), 2; Massachusetts Urban Search and Rescue Task Force One, *Hurricane Katrina: National Urban Search and Rescue Response System Issue Statements and Recommendations*

(Beverly, MA, 2005), 7; and Ceci Connolly, "I Don't Think I've Ever Had a More Surreal Experience"; Veteran Rescue Workers Surprised by Challenges in Louisiana," *Washington Post*, September 12, 2005.

65 Juliet Eilperin, "Flooded Toxic Waste Sites Are Potential Health Threat," *Washington Post*, September 10, 2005. "A Superfund site is any land in the United States that has been contaminated by hazardous waste and identified by the Environmental Protection Agency (EPA) as a candidate for cleanup because it poses a risk to human health and/or the environment." See U.S. Environmental Protection Agency, "About Superfund," <http://www.epa.gov/superfund/about.htm> (accessed January 28, 2005).

66 *Gulf Coast Hurricane Emergency Environmental Protection Act of 2005*, HR Res. 4139, section 102 (c), 109th Congress, 1st session (October 25, 2005). See also U.S. Department of Homeland Security, "Hurricane Katrina: What Government is Doing," <http://www.dhs.gov/interweb/assetlibrary/katrina.htm> (accessed February 10, 2006).

67 For first-hand accounts of these conditions, see Lieutenant Colonel Keith LaCaze, Louisiana Department of Wildlife and Fisheries, Enforcement Division, *Activity Report on Hurricane Katrina* (Baton Rouge, 2005), 2; Massachusetts Urban Search and Rescue Task Force One, *Hurricane Katrina: National Urban Search and Rescue Response System Issue Statements and Recommendations* (Beverly, MA, 2005), 7; and Ceci Connolly, "I Don't Think I've Ever Had a More Surreal Experience"; Veteran Rescue Workers Surprised by Challenges in Louisiana," *Washington Post*, September 12, 2005. For details on the contaminants found in tested floodwaters, see U.S. Environmental Protection Agency, "Environmental Assessment Summary for Areas of Jefferson, Orleans, St. Bernard, and Plaquemines Parishes Flooded as a Result of Hurricane Katrina," December 6, 2005, http://www.epa.gov/katrina/testresults/katrina_env_assessment_summary.htm.

68 For example, see Governor Kathleen Babineaux Blanco, letter to Governor Bill Owens, entitled "Calling Certain Elements of the Colorado National Guard to Active Duty to Assist with Emergency Response Efforts Related to Hurricane Katrina," September 1, 2005. Governor Blanco signed similar memoranda with fifteen other States on the same date.

EMAC was established to provide form and structure to interstate mutual aid. Approved by Congress in 1996 (Public Law 104-321), the EMAC membership has since grown to include 49 States, the District of Columbia, Puerto Rico and the Virgin Islands. Through EMAC, a disaster-struck member State may request and receive assistance from other member States quickly and efficiently, facilitated by the Compact's legal foundation. Once the conditions for providing assistance to a requesting State have been set, the terms constitute a legally binding contractual agreement that obligates States for reimbursement. See Emergency Management Assistance Compact, "About EMAC," <http://www.emacweb.org>.

69 U.S. Department of Defense, National Guard Bureau, *After Action Review: Hurricane Response September 2005*, December 21, 2005, 57.

70 Ray Nagin, Mayor of New Orleans, written statement for a hearing on Hurricane Katrina: Preparedness and Response by the State of Louisiana, on December 14, 2005, submitted to the House Select Committee to Investigate the Preparation for and Response to Hurricane Katrina, 109th Congress, 1st session, 1.

71 U.S. Department of Homeland Security, Federal Emergency Management Agency, "Urban Search and Rescue Operations Completed: Hurricane Katrina Urban Search and Rescue Teams Are Due to Return Home," news release, September 30, 2005, <http://www.fema.gov/news/newsrelease.fema?id=19320.html>. FEMA pre-positioned US&R teams to the region and eventually deployed all twenty-eight National US&R teams within the first week after Hurricane Katrina's second landfall. FEMA US&R Task Forces, in conjunction with USCG, DOD, other Federal agencies, and State and local first responders, rescued over 6,500 people.

72 Donna Miles, "Military Support to Katrina Relief Effort Continues to Grow," American Forces Information Service, August 31, 2005, http://www.defenselink.mil/news/Aug2005/20050831_2576.html.

73 U.S. Department of Homeland Security, Coast Guard, *Hurricane Katrina: The U.S. Coast Guard at its Best* (Washington, D.C., 2005), 7, 47. See also U.S. Department of Homeland Security, Coast Guard, "Coast Guard Response to Hurricane Katrina," *Coast Guard Fact File*, <http://www.uscg.mil/hq/g-cp/comrel/factfile/index.htm> (accessed February 10, 2006); and U.S. Department of Homeland Security, "Hurricane Katrina: What Government is Doing," <http://www.dhs.gov/interweb/assetlibrary/katrina.htm> (accessed February 10, 2006).

74 John Sherffius, cartoon, reproduced by the U.S. Department of Homeland Security, Coast Guard Aviation Association, September 2005, <http://www.aoptero.org/images/nola%20st.gif> (accessed February 7, 2006).

75 Haley Barbour, Governor of Mississippi, written statement for a hearing on Hurricane Katrina: Preparedness and Response by the State of Mississippi, on December 7, 2005, submitted to the House Select Bipartisan Committee to Investigate the Preparation and Response to Hurricane Katrina, 109th Congress, 1st session, 2-3.

76 U.S. Department of Homeland Security, Federal Emergency Management Agency, "Urban Search and Rescue Operations Completed: Hurricane Katrina Urban Search and Rescue Teams Are Due to Return Home," September 30, 2005, <http://www.fema.gov/news/newsrelease.fema?id=19320.html>.

77 Lieutenant General H. Steven Blum, written statement for a hearing on Responding to Catastrophic Events: The Role of the Military and National Guard in Disaster Response, on October 20, 2005, submitted to the House Committee on Government Reform, 109th Congress, 1st session.

78 "US&R activities include locating, extricating, and providing onsite medical treatment to victims trapped in collapsed structures." U.S. Department of Homeland Security, *National Response Plan* (Washington, D.C., December 2004), ESF #9-1.

79 National Search and Rescue Committee, *National Search and Rescue Plan* (Washington, D.C., 1999), 8-9.

80 East Baton Rouge Parish, *Draft After-Action Report for Hurricanes Katrina and Rita* (Baton Rouge, 2005), 37-38.

81 Louisiana Office of the Governor, *Response to U.S. Senate Committee on Homeland Security and Governmental Affairs Document and Information Request Dated October 7, 2005 and to the U.S. House of Representatives Select Committee to Investigate the Preparation for and Response to Hurricane Katrina* (Baton Rouge, December 2, 2005), 11; and Lieutenant Colonel Keith LaCaze, Louisiana Department of Wildlife and Fisheries, Enforcement Division, *Activity Report on Hurricane Katrina* (Baton Rouge, 2005).

82 U.S. Department of Homeland Security, *National Response Plan* (Washington, D.C., December 2004), ESF #9-1.

83 Louisiana Office of Emergency Preparedness, *Emergency Operations Plan Supplement 1A: Southeast Louisiana Hurricane Evacuation and Sheltering Plan* (Baton Rouge, January 2000), Parts I, II, VI. The City of New Orleans had drafted a hurricane annex to its emergency management plan that outlined the responsibilities of municipal organizations for executing the City's evacuation. See New Orleans Office of Emergency Preparedness, *City of New Orleans Comprehensive Emergency Management Plan: Hurricanes Annex* (New Orleans, n.d.).

84 William Lokey, Federal Coordinating Officer for Louisiana, written statement for a hearing on Hurricane Katrina: Preparedness and Response by the State of Louisiana, on December 14, 2005, submitted to the House Select Committee to Investigate the Preparation for and Response to Hurricane Katrina, 109th Congress, 1st session, 93 ; Brigadier General Mark Graham, Deputy Commanding General, Fifth U.S. Army, written statement for a hearing on Hurricane Katrina: Managing the Crisis and Evacuating New Orleans, on February 1, 2006, submitted to the Senate Homeland Security and Governmental Affairs Committee, 109th Congress, 2nd session; and Vince Pearce, National Response Program Manager, Department of Transportation, written statement for a hearing on Hurricane Katrina: Managing the Crisis and Evacuating New Orleans, on February 1, 2006, submitted to the Senate Committee on Homeland Security and Government Affairs, 109th Congress, 2nd session, 1-2.

85 On August 29, the population of evacuees at the facility was estimated to be between 10,000 and 12,000. Marty J. Bahamonde, Office of Public Affairs, Federal Emergency Management Agency, testimony before the Senate Homeland Security Committee and Governmental Affairs, October 20, 2005, 2; Louisiana Office of the Governor, *Response to U.S. Senate Committee on Homeland Security and Governmental Affairs and Information Request Dated October 7, 2005 and to the U.S. House of Representatives Select Committee to Investigate the Preparation for and Response to Hurricane Katrina*, (Baton Rouge, December 2, 2005), 7; and Louisiana National Guard, Task Force Pelican, "Hurricane Katrina: Overview of Significant Events," November 28, 2005, 14. An inaccurate estimate of 25,000 general population evacuees at the Superdome was reported by DHS on August 29. U.S. Department of Homeland Security, "Hurricane Katrina DHS SITREP #6," August 29, 2005, 13.

FEMA estimated the Superdome population at 20,000 people on August 29. The Louisiana National Guard estimates that the crowd grew to 35,000 over the course of the next three days. See Louisiana National Guard, Task Force Pelican, "Hurricane Katrina: Overview of Significant Events," November 28, 2005, 13, 15-17.

86 Louisiana National Guard, Task Force Pelican, "Hurricane Katrina: Overview of Significant Events," November 28, 2005, 16, 17.

87 Major General Bennett Landreneau, Adjutant General for the State of Louisiana, testimony before a hearing on Hurricane Katrina: Preparedness and Response by the Department of Defense, on October 27, 2005, House Select Bipartisan Committee to Investigate the Preparation for and Response to Hurricane Katrina, 109th Congress, 1st session.

88 Louisiana National Guard, Task Force Pelican, "Hurricane Katrina: Overview of Significant Events," November 28, 2005, 17.

89 Louisiana National Guard, Task Force Pelican, "Hurricane Katrina: Overview of Significant Events," November 28, 2005, 15-17; Marty Bahamonde, Regional Director for External Affairs, Region One, Federal Emergency Management Agency, written statement for a hearing on Hurricane Katrina in New Orleans: A Flooded City, a Chaotic Response, on October 20, 2005, submitted to the Senate Committee on Homeland Security and Governmental Affairs, 109th Congress, 1st session.

90 U.S. Department of Health and Human Services, "Secretary's Operations Center Flash Report #6," August 30, 2005.

- 91** Louisiana Office of the Governor, *Response to U.S Senate Committee on Homeland Security and Governmental Affairs Document and Information Request Dated October 7, 2005 and to the U.S House of Representatives Select Committee to Investigate the Preparation for and Response to Hurricane Katrina* (Baton Rouge, December 2, 2005), 9.
- 92** FEMA requested of the Governors of a number of States that their States accept and temporarily house evacuees. See, e.g., Arizona Department of Housing, "Arizona to Accept Evacuees from Gulf Coast," news release, n.d., ca. 2005, <http://www.housingaz.com/evacuees.asp>; Oregon Office of the Governor, "Questions and Answers on Relief Efforts," http://governor.oregon.gov/Gov/hurricane_qa.shtml. The Governor of Louisiana and her staff also made direct requests to States. See Louisiana Office of the Governor, *Response to U.S Senate Committee on Homeland Security and Governmental Affairs Document and Information Request Dated October 7, 2005 and to the U.S House of Representatives Select Committee to Investigate the Preparation for and Response to Hurricane Katrina* (Baton Rouge, December 2, 2005), 9-10.
- 93** Louisiana Office of the Governor, *Response to U.S Senate Committee on Homeland Security and Governmental Affairs Document and Information Request Dated October 7, 2005 and to the U.S House of Representatives Select Committee to Investigate the Preparation for and Response to Hurricane Katrina* (Baton Rouge, December 2, 2005), 10.
- 94** The provision of buses occurred through ESF-1, which is led by the Department of Transportation. Vincent Pearce, National Response Program Manager for the Department of Transportation, written statement submitted for a hearing on Hurricane Katrina: Managing the Crisis and Evacuating New Orleans, on February 1, 2006, to the Senate Homeland Security and Governmental Affairs Committee; and U.S. Department of Transportation, "Actions for Hurricane Katrina: Annotated Chronology of Significant Events," October 6, 2005, 4.
- 95** FEMA directly requested that several States receive and house evacuees. For examples, see Arizona Department of Housing, "Arizona to Accept Evacuees from Gulf Coast," news release, n.d., ca. 2005, <http://www.housingaz.com/evacuees.asp>; and Oregon Office of the Governor, "Questions and Answers on Relief Efforts," http://governor.oregon.gov/Gov/hurricane_qa.shtml. In other cases, such requests were made by one State's governor to another. For example, see District of Columbia Office of the Mayor, "Mayor Williams Announces Airlift of Several Hundred Hurricane Evacuees to DC Armory," news release, September 5, 2005, <http://dc.gov/mayor/news/release.asp?id=758&mon=200509>; and New York Office of the Governor, "Governor: NY Stands Ready to Welcome Hurricane Katrina Evacuees," news release, September 7, 2005, http://www.ny.gov/governor/press/05/sep7_05.htm.
- 96** I-10 is a major interstate cutting east-west through New Orleans. Near the Superdome, I-10 features an elevated four-way interchange, called a cloverleaf due to its distinctive shape. Evacuees gathered atop this interchange to escape Hurricane Katrina's floodwaters. Brigadier General Mark A. Graham, Deputy Commanding General, Fifth U.S. Army, written statement for a hearing on Hurricane Katrina: Managing the Crisis and Evacuating New Orleans, on February 1, 2006, submitted to the Senate Homeland Security and Government Affairs Committee, 109th Congress, 2nd session, 2, 3-4; and William Lokey, Federal Coordinating Officer for Louisiana, written statement for a hearing on Hurricane Katrina: Preparedness and Response by the State of Louisiana, on December 14, 2005, submitted to the House Select Committee to Investigate the Preparation for and Response to Hurricane Katrina, 109th Congress, 1st session, 5, 7, 92.
- 97** Louisiana Office of the Governor, *Response to U.S Senate Committee on Homeland Security and Governmental Affairs Document and Information Request Dated October 7, 2005 and to the U.S House of Representatives Select Committee to Investigate the Preparation for and Response to Hurricane Katrina* (Baton Rouge, December 2, 2005), 10.
- 98** Louisiana National Guard, Task Force Pelican, "Hurricane Katrina: Overview of Significant Events," November 28, 2005, 23, 24. Ray Nagin, Mayor of New Orleans, written statement for a hearing on Hurricane Katrina: Preparedness and Response by the State of Louisiana, on December 14, 2005, submitted to the House Select Committee to Investigate the Preparation for and Response to Hurricane Katrina, 109th Congress, 1st session.
- 99** Louisiana National Guard, Task Force Pelican, "Hurricane Katrina: Overview of Significant Events," November 28, 2005, 23.
- 100** Louisiana National Guard, Task Force Pelican, "Hurricane Katrina: Overview of Significant Events," November 28, 2005, 23; Ray Nagin, Mayor of New Orleans, written statement for a hearing on Managing the Crisis: Evacuating New Orleans, on February 1, 2006, submitted to the Senate Homeland Security and Governmental Affairs Committee, 109th Congress, 2nd session; and Louisiana Office of the Governor, *Response to U.S Senate Committee on Homeland Security and Governmental Affairs Document and Information Request Dated October 7, 2005 and to the U.S House of Representatives Select Committee to Investigate the Preparation for and Response to Hurricane Katrina* (Baton Rouge, December 2, 2005), 10.
- 101** Louisiana Office of the Governor, *Response to U.S Senate Committee on Homeland Security and Governmental Affairs Document and Information Request Dated October 7, 2005 and to the U.S House of Representatives Select Committee to Investigate the Preparation for and Response to Hurricane Katrina* (Baton Rouge, December 2, 2005), 11. Also see Kathleen Blanco, written statement for a hearing on Hurricane Katrina: Preparedness and Response by

the State of Louisiana, on December 14, 2005, submitted to the House Select Committee to Investigate the Preparation for and Response to Hurricane Katrina, 109th Congress, 1st session, 68.

102 “The buses that the city of New Orleans controls are basically Regional Transit Authority. And those buses were always staged, or has been staged in an area that has been high and dry throughout every storm that has ever hit the city of New Orleans. And we expected the same for this event. Unfortunately, those buses flooded also because 80 percent of the city went underwater.” Ray Nagin, Mayor of New Orleans, written statement for a hearing on Hurricane Katrina: Preparedness and Response by the State of Louisiana, on December 14, 2005, submitted to the House Select Committee to Investigate the Preparation for and Response to Hurricane Katrina, 109th Congress, 1st session, 99.

103 Louisiana Office of the Governor, *Response to U.S. Senate Committee on Homeland Security and Governmental Affairs Document and Information Request Dated October 7, 2005 and to the U.S. House of Representatives Select Committee to Investigate the Preparation for and Response to Hurricane Katrina* (Baton Rouge, December 2, 2005), 11.

104 “About 20,000 people were in the dome when efforts began, and that number swelled as people poured in to get a ride out of town, Capt. John Pollard said.” The Associated Press, “Superdome Evacuation Completed,” September 3, 2005. <http://www.msnbc.msn.com/id/9175611/>

105 Medical evacuations from the Convention Center began on September 2, as well. U.S. Department of Homeland Security, “Hurricane Katrina DHS SITREP #14,” September 2, 2005, 1; and Louisiana National Guard, Task Force Pelican, “Hurricane Katrina: Overview of Significant Events,” November 28, 2005, 23-24. Louisiana National Guard, Task Force Pelican, “Hurricane Katrina: Overview of Significant Events,” November 28, 2005, 23-24. U.S. Department of Homeland Security, “Hurricane Katrina DHS SITREP #16,” September 3, 2005, 1.

106 U.S. Department of Homeland Security, “Hurricane Katrina DHS SITREP #17,” September 3, 2005, 1.

107 U.S. Department of Homeland Security, “Hurricane Katrina DHS SITREP #16,” September 3, 2005, 1.

108 U.S. Department of Homeland Security, “Hurricane Katrina DHS SITREP #18,” September 4, 2005, 1.

109 The next three largest U.S. domestic airlifts were: Hurricane Andrew in 1992 (13,500 people), the Mariel Boatlift (12,000 people by helicopter), and Hurricane Rita (9,000 people). U.S. Department of Transportation, “Largest Airlift in U.S. History to Get Over 10,000 People Out of New Orleans by End of Today,” news release, September 3, 2005, <http://www.dot.gov/affairs/dot12005.htm>; National Museum of the U.S. Air Force, “Year by Year Events: 1990-1997,” <http://www.pafb.af.mil/museum/50th/event90.htm>.

110 In addition, the U.S. Army provided ground support at the airport, including physically assisting in loading passengers up airplane stairs and into aircraft. See also U.S. Department of Transportation, “Hurricane Katrina – Situation Report Fifteen,” September 3, 2005, 2; U.S. Department of Homeland Security, “Hurricane Katrina DHS SITREP #14,” September 2, 2005 (“Coordinated major airlift of evacuees to begin 8:00 am cdt, September 3, 2005. Evacuees will depart New Orleans Superdome by bus, and be flown at a rate of 4-5 planes per hour from New Orleans Airport to Lackland Air Force Base, TX for reception and housing at Kelly AFB”); U.S. Department of Transportation, *In re: Foreign Air Carriers: Facilitation of Air Services in Support of Hurricane Katrina Relief Efforts*, Docket OST-2005-22395 (September 2, 2005), 3; and James C. May, President and Chief Executive Officer of Air Transport Association of America, testimony before a hearing on Review of the Impact of Hurricane Katrina on the Aviation Industry, on September 14, 2005, Senate Committee on Commerce, Science, and Transportation, Subcommittee on Aviation, 109th Congress, 1st session, 8.

111 U.S. Department of Homeland Security, Federal Emergency Management Agency, “FEMA VIP Briefing,” slide presentation, September 2, 2005.

112 U.S. Department of Defense, “Hurricane Katrina Update,” September 8, 2005, 4; U.S. Department of Homeland Security, Federal Emergency Management Agency, Region VI Regional Response Coordinating Center, “SITREP #10,” September 4, 2005, 1; and Bryon Okada, “Screeners kept flights moving,” *Dallas Fort-Worth Star Telegram*, September 12, 2005, as reprinted by the Transportation Security Administration, *What Others Are Saying About TSA*, <http://www.tsa.gov/public/display?theme=204&content=090005198016ab96>.

113 The Department of Transportation had arranged for Amtrak to transport evacuees from New Orleans to Lafayette on a twice-daily run. The trains had enough food and water to sustain the passengers during the two to four hour ride. The first Amtrak train arrived at Avondale Station in New Orleans at 4:30 am on September 3. The train could have accommodated 600 passengers, but only ninety-six were at the station because of a bus problem in New Orleans. See U.S. Department of Transportation, “Hurricane Katrina – Situation Report Fifteen,” September 3, 2005, 10. In contrast, however, see Ray Nagin, Mayor of New Orleans, testimony before a hearing on Hurricane Katrina: Managing the Crisis and Evacuating New Orleans, on February 1, 2006, Senate Homeland Security and Governmental Affairs Committee, 109th Congress, 2nd session.

114 CNN, “Rita Now a Monster Category-Five Storm,” transcript, September 22, 2005. <http://transcripts.cnn.com/TRANSCRIPTS/050922/lad.04.html>

115 For examples, see Mississippi Emergency Management Agency, "Hurricane Katrina Situation Report 24," September 1, 2005, 11; For examples of media reports on the looting, see Walt Philbin, "Widespread looting hits abandoned businesses; Lack of police after storm leaves stores vulnerable," *New Orleans Times-Picayune*, August 30, 2005; "Katrina kills 50 in one Mississippi county," *CNN.com*, August 30, 2005, <http://www.cnn.com/2005/WEATHER/08/29/hurricane.katrina>.

116 In one notable example, on August 30, a New Orleans Police officer was shot in the head by looters. See Louisiana State Police, "Hurricane Katrina Timeline of Events," n.d., ca. 2005, 8. Also in New Orleans, a man was arrested by Federal agents for firing at a U.S. military helicopter on a search and rescue mission. U.S. Attorney's Office for the Eastern District of Louisiana, news release, October 8, 2005. The reported target of the gunfire was a U.S. military helicopter on a search and rescue mission. While the gunfire did not hit the helicopter, the incident was widely reported and contributed to the perception of lawlessness in New Orleans. See, e.g., "ATF Makes First Federal Arrest in New Orleans," *US Fed News*, September 6, 2005; "US authorities arrest New Orleans man accused of firing on helicopter," *Agence France Presse*, September 7, 2005; "Federal agents start post-storm arrests; Algiers man accused of shooting at copter," *New Orleans Times-Picayune*, September 7, 2005.

117 For examples, see U.S. Department of Homeland Security, "Hurricane Katrina DHS SITREP #7," August 29, 2005, 5; U.S. Department of Homeland Security, "Hurricane Katrina DHS SITREP #11," August 31, 2005, 4. Additionally, without functioning jails in New Orleans, law enforcement officers initially had no choice but to release those that they arrested for minor crimes.

118 Reports on general lawlessness in New Orleans, were later found to be embellished or completely false. Brian Thevenot and Gordon Russel, "Rape. Murder. Gunfights," *New Orleans Times-Picayune*, September 26, 2005; Robert E. Pierre and Ann Gerhart, "News of Pandemonium May Have Slowed Aid," *Washington Post*, October 5, 2005; and Michelle Roberts, "Reports of rape, murder at Katrina shelters were probably exaggerated, officials now say," *Associated Press*, September 27, 2005.

119 U.S. Department of Homeland Security, Federal Emergency Management Agency, "Hurricane Katrina Response Brief," September 1, 2005. The brief reported that security and lawlessness were becoming a "very critical concern" and were hindering relief efforts. See also U.S. Department of Homeland Security, Federal Emergency Management Agency, "VIP Katrina Briefing," slide presentation, September 1, 2005.

120 U.S. Department of Homeland Security, Coast Guard District Eight, internal message from August 31, 2005; U.S. Department of Homeland Security, Homeland Security Operations Center, "HSOC SPOT REP #53," September 1, 2005; and U.S. Department of Homeland Security, "Hurricane Katrina DHS SITREP #13," September 1, 2005.

121 U.S. Department of Homeland Security, Federal Emergency Management Agency, Region VI Regional Response Coordination Center, "1603-DR-LA SitRep #7," September 1, 2005; U.S. Department of Homeland Security, "Hurricane Katrina DHS SITREP #13," September 13, 2005; and U.S. Department of Defense, "CJCS Katrina Update," draft, September 6, 2005.

122 U.S. Department of Health and Human Services, "Secretary's Operations Center Flash Report #10 – Hurricane Katrina," September 1, 2005; and U.S. Department of Health and Human Services, "Secretary's Operations Center Flash Report #12 – Hurricane Katrina," September 2, 2005.

123 U.S. Department of Homeland Security, "Hurricane Katrina DHS SITREP #15," September 2, 2005; U.S. Department of Homeland Security, "Hurricane Katrina DHS SITREP #19," September 4, 2005; U.S. Department of Homeland Security, "Hurricane Katrina DHS SITREP #18," September 4, 2005; U.S. Department of Homeland Security, "Hurricane Katrina DHS SITREP #29," September 9, 2005.

124 U.S. Department of Homeland Security, "Hurricane Katrina DHS SITREP #13," September 1, 2005, 4, 10, 12; U.S. Department of Homeland Security, "Hurricane Katrina DHS SITREP #15," September 2, 2005, 5, 13, 14; U.S. Department of Homeland Security, "Hurricane Katrina DHS SITREP #16," September 3, 2005, 10; U.S. Department of Homeland Security, "Hurricane Katrina DHS SITREP #18," September 4, 2005, 1; U.S. Department of Homeland Security, "Hurricane Katrina DHS SITREP #19," September 4, 2005, 11; U.S. Department of Homeland Security, "Hurricane Katrina DHS SITREP #21," September 5, 2005, 11; U.S. Department of Homeland Security, "Hurricane Katrina DHS SITREP #22," September 6, 2005, 9.

125 The Department of Homeland Security's law enforcement response began on August 29, when Immigration and Customs Enforcement (ICE) deployed officers from the Federal Protective Service to protect critical Federal facilities and to assist FEMA where needed. From August 30 to September 1, DHS deployed additional ICE personnel to the region to perform public safety and security missions. The U.S. Coast Guard also deployed personnel to conduct security and law enforcement missions. By August 30, Customs & Border Protection (CBP) deployed a site survey team and Special Operations Division agents to the hurricane area; CBP air and maritime assets also joined in conducting law enforcement operations. On August 31, the Secret Service deployed personnel to implement its Continuity of Operations Plan (COOP) and Restoration of Operations, Personnel and Equipment (ROPE) mission assignments.

On September 1, the Office of the Attorney General directed ATF, DEA, FBI, and the U.S. Marshals Service to identify personnel, assets, and other resource for immediate deployment to areas impacted by Hurricane Katrina. On September 2, having received the inventory of assets and personnel available for deployment, the Attorney General

issued a memorandum to the same agencies directing the Federal Bureau of Investigation to continue to deploy agents (including SWAT agents) and tactical assets (including helicopters, boats, and technical/communications assets) to the affected area; the Drug Enforcement Administration to prepare to deploy Mobile Enforcement Teams, special agents, and tactical assets (including helicopters and other aircraft) to the affected area; the Bureau of Alcohol, Tobacco, Firearms, and Explosives to establish a Violent Crime Impact Team (VCIT) in Baton Rouge, Louisiana, with related VCIT personnel and assets, to address any rise in criminal activity in that city; and the United States Marshals Service to continue to deploy Deputy U.S. Marshals and Court Security Officers to conduct prisoner transport operations and provide additional court security and to prepare to utilize the Justice Prisoner and Alien Transportation (JPATS) to deploy law enforcement personnel to airports around the country as needed.

126 In the first week following Hurricane Katrina's landfall, DHS and DOJ deployed the following numbers of law enforcement personnel to New Orleans to assist in restoring order. Other departments contributed significant numbers of law enforcement personnel as well.

<u>Date</u>	<u>DHS</u>	<u>DOJ</u>
Aug 29	66	268
Aug 30	74	292
Aug 31	196	326
Sep 1	162	443
Sep 2	381	547
Sep 3	1033	645
Sep 4	1230	690

127 42 U.S.C. § 10501 *et seq.* See also letter from Governor Kathleen Babineaux Blanco to Attorney General Alberto Gonzales, dated September 3, 2005 [letter is dated September 3, 2005, but was received via facsimile on the following day]; letter from Attorney General Gonzales to Governor Blanco, dated September 4, 2005 (approving request); letter from Governor Blanco to Attorney General Gonzales and Secretary Chertoff, dated September 6, 2005 (requesting additional support); letter from Attorney General Gonzales to Governor Blanco, dated September 7, 2005 (approving request); letter from Secretary Chertoff to Governor Blanco, dated September 7, 2005 (approving request). Governor Barbour of Mississippi made a similar request on September 3, which was granted pursuant to an order by the Attorney General on that date.

128 DHS deployed law enforcement officers from Customs and Border Protection, the Federal Air Marshals Service, the Federal Protective Service, and Immigration and Customs Enforcement. DOJ deployed officers from the Bureau of Alcohol, Tobacco, Firearms, and Explosives, the Drug Enforcement Agency, the Federal Bureau of Investigation, and the U.S. Marshals Service. U.S. Department of Homeland Security, "Hurricane Katrina DHS SITREP #21," September 5, 2005.

129 By September 8, the Department of Interior deployed 175 law enforcement officers from the U.S. Fish and Wildlife Service, the National Park Service, the Bureau of Indian Affairs, and the Tribal Police. The Department of the Treasury and the Department of Veteran Affairs deployed thirty-four and thirty-three law enforcement officers, respectively. The Environmental Protection Agency sent seventeen officers to the region, and the U.S. Postal Inspection Service deployed a total of 117 law enforcement personnel. U.S. Department of Homeland Security, "Federal Law Enforcement Deployed to Region," September 8, 2005. In addition, USDA's Forest Service deployed approximately 300-350 law enforcement officers to the affected area as members of ESF-4 Incident Management Teams. Eventually, over 3,500 Federal law enforcement officers were deployed to the region.

130 In Louisiana, for example, a State Police attorney had to physically be present to swear in Federal agents. Additionally, law enforcement personnel from the Department of the Interior (DOI) had to be sworn in as Deputy U.S. Marshals to give them Federal law enforcement authority beyond their statutory DOI jurisdiction.

131 For additional information on the disarray of the New Orleans criminal justice system in Hurricane Katrina's aftermath, see Melinda Deslatte, "Prisons in New Orleans empty as temporary booking facility up and running," Associated Press, September 3, 2005; Ann Woolner, "A Legal System in Chaos: New Orleans Struggles," *Fulton County Daily Report*, October 4, 2005; and Chuck Crumbo, "Evacuation leaves Louisiana prison system in chaos," *The State (Columbia, SC)*, October 5, 2005.

132 On September 3, the Associated Press reported that "computer logs still hadn't been retrieved from the criminal district court in New Orleans...[and] tracking down witnesses, finding court records and trial transcripts and organizing a temporary court" would remain challenges to the reestablishment of the city's criminal justice system. Melinda Deslatte, "Prisons in New Orleans empty as temporary booking facility up and running," Associated Press, September 3, 2005; Ann Woolner, "A Legal System in Chaos: New Orleans Struggles," *Fulton County Daily Report*, October 4, 2005; and Chuck Crumbo, "Evacuation leaves Louisiana prison system in chaos," *The State (Columbia, SC)*, October 5, 2005. Both State and Federal courts closed their doors. Supreme Court of Louisiana, Order by Justice Catherine D. Kimball, September 2, 2005, Baton Rouge, Louisiana; Supreme Court of Mississippi, Order by Justice James W. Smith, Jr., September 7, 2005; U.S. District Court for the Eastern District of Louisiana, Order by Chief Judge Helen G. Berrigan, September 4, 2005, accessed from <http://katrinalaw.org/dokuphp?>

[id=louisiana_eastern_district_court](#) on February 17, 2006; U.S. Bankruptcy Court for the Eastern District of Louisiana, September 2, 2005, accessed from http://katrinalaw.org/dokuphp?id=louisiana_eastern_bankruptcy_court on February 17, 2006; Fourth Circuit Court of Appeal, State of Louisiana, Order by Justice Max N. Tobias, Jr., September 2, 2005, accessed from http://katrinalaw.org/dokuphp?id=fourth_circuit_court_of_appeal on February 17, 2006; Fifth Circuit Court of Appeal, State of Louisiana, Order by Justice Walter J. Rothschild, September 2, 2005, accessed from: http://katrinalaw.org/dokuphp?id=fifth_circuit_court_of_appeal, accessed on February 17, 2006; Civil District Court, Parish of Orleans, State of Louisiana, Order by Chief Justice Robin M. Giarrusso, September 2, 2005, accessed from http://katrinalaw.org/dokuphp?id=orleans_parish_civil_district_court, accessed on February 17, 2006.

133 The DOJ's Bureau of Prisons moved or facilitated movement of a large number of prisoners incarcerated in Louisiana facilities during the first week of the disaster. The Bureau noted that no major difficulties or issues were encountered during the actual transport of the prisoners, though both the Bureau and the U.S. Marshals Service noted flaws in the decision making process and a general failure on the part of State and local prison authorities to be proactive in evacuating their incarcerated populations.

134 Scott Wells, Deputy Federal Coordinating Officer for Louisiana, written statement for a hearing on Hurricane Katrina: Perspectives of FEMA's Operations Professionals, on December 8, 2005, submitted to the Senate Committee on Homeland Security and Governmental Affairs, 109th Congress, 1st session.

135 Michael Chertoff, Secretary of the Department of Homeland Security, memorandum for distribution entitled "Designation of Principal Federal Official for Hurricane Katrina," August 30, 2005, 1.

An INS was arguably in effect since President Bush earlier issued his Emergency Declarations and Major Disaster Declarations. See the *National Preparedness—A Primer* chapter for a detailed discussion of this issue, as well as U.S. Government Accountability Office, *Preliminary Observations on Hurricane Response* (Washington, DC, February 2006, 4).

136 Though Secretary Chertoff subsequently testified that Director Brown had the authority to manage the incident even prior to his formal designation as PFO, "...when he went down on Sunday it was with the understanding that he was going to manage this thing as the battlefield commander, you know, with the authority he had as the director of FEMA, which put him in supervisory authority over the federal coordinating officers." Secretary Chertoff added, "When I actually formally designated him the PFO, it was essentially formalizing something that had occurred in practice." Michael Chertoff, testimony before a hearing on "Hurricane Katrina: The Role of the Department of Homeland Security," on October 19, 2005, House Select Committee to Investigate the Preparation for and Response to Hurricane Katrina, 109th Congress, 1st session.

137 U.S. Department of Homeland Security, *National Response Plan* (Washington, D.C., December 2004), 33.

138 According to the NRP, the FCO is "The Federal officer who is appointed to manage Federal resource support activities related to Stafford Act disasters and emergencies. The FCO is responsible for coordinating the timely delivery of Federal disaster assistance resources and programs to the affected State and local governments, individual victims, and the private sector." *National Response Plan*, p. 65.

139 "[Director Brown] was going to manage this thing as the battlefield commander, you know, with the authority he had as the director of FEMA, which put him in supervisory authority over the federal coordinating officers." Michael Chertoff, testimony before a hearing on Hurricane Katrina: The Role of the Department of Homeland Security, on October 19, 2005, House Select Committee to Investigate the Preparation for and Response to Hurricane Katrina, 109th Congress, 1st session. See also *Robert T. Stafford Disaster Relief and Emergency Assistance Act* ["Stafford Act"], as amended by Public Law 106-390 (October 30, 2000).

140 Colonel Jeff Smith, Deputy Director of the Louisiana Office of Homeland Security and Emergency Preparedness, written statement for a hearing on Hurricane Katrina: Preparedness and Response by the State of Louisiana, on December 14, 2005, submitted to the House Select Committee to Investigate the Preparation and Response to Hurricane Katrina, 109th Congress, 1st session.

141 A virtual National JIC "links all participants through technological means (secure or nonsecure) when geographical restrictions, incident management requirements, and other limitations preclude physical attendance by public affairs leadership at a central location." U.S. Department of Homeland Security, *National Response Plan* (Washington, D.C., December 2004), PUB-3.

142 U.S. Department of Homeland Security, *National Response Plan* (Washington, D.C., December 2004), 28.

143 Some of this lack of planning can be attributed to the failure to finalize the JFO Standing Operating Procedures prior to Katrina, as required by the National Response Plan.

144 U.S. Department of Homeland Security, "Hurricane Katrina DHS Sitrep #20," September 5, 2005, 1; U.S. Department of Homeland Security, "Hurricane Katrina DHS Sitrep #23," September 6, 2005, 1; U.S. Department of Homeland Security, Federal Emergency Management Agency, Daily Conference Call on Hurricane Katrina, September 7, 2005, 1; U.S. Department of Homeland Security, "Hurricane Katrina DHS Sitrep #27," September 8, 2005, 1; U.S. Department of Homeland Security, Federal Emergency Management Agency, "Region VI Regional Response Coordinating Center Sitrep #15," September 9, 2005, 1; U.S. Department of Homeland Security,

"Hurricane Katrina DHS Sitrep #20," September 5, 2005, 1; U.S. Department of Health and Human Services, "Secretary's Operations Center Flash Report #32—Hurricane Katrina," September 12, 2005, 2, 3; U.S. Department of Health and Human Services, "Secretary's Operations Center Flash Report #32—Hurricane Katrina," September 12, 2005, 2; U.S. Department of Homeland Security, "Emergency Response Issues," September 11, 2005, 10; Robert B. Stephan, Assistant Secretary for Infrastructure Protection, U.S. Department of Homeland Security, prepared statement for a hearing on "Hurricane Katrina: The Roles of DHS and FEMA Leadership," on February 10, 2006, submitted to the Committee on Homeland Security and Governmental Affairs, U.S. Senate, 109th Congress, 2nd session, pgs. 7-8.

145 Federal officials recognized the need for a presence in New Orleans to effectively coordinate the efforts to stabilize the City, so a "forward PFO" in New Orleans was eventually established. The JFO remained in Baton Rouge.

146 Although the JFO in Baton Rouge was located in close proximity to the Louisiana State Emergency Operations Center, the vast majority of the response operations in the early stages of the incident occurred in the greater New Orleans area. It quickly became apparent that the JFO was too far away to coordinate operational activities in New Orleans. For this reason, the Law Enforcement Coordination Center (LECC) was initially established in Baton Rouge and then moved to New Orleans to coordinate law enforcement activities. The Department of Defense (DOD) set up its Katrina Task Force HQ in Mississippi. New Orleans officials established the New Orleans Emergency Operations Center downtown, with no connectivity to the JFO.

147 U.S. Department of Defense, National Guard Bureau, Office of Legislative Liaison, "National Guard Status Comparison Chart," n.d., <http://www.ngb.army.mil/ll/statuscomparison.asp>. State active duty and Title 32 forces are not subject to *posse comitatus* restrictions, see 18 U.S.C. § 1385 (Military forces generally may not perform domestic law enforcement), which bar Federal military forces from enforcing civil law. Thus, while serving in State active duty status or Title 32 status (which allows for Federal pay while under state command and control), the Army National Guard and the Air National Guard can directly assist civil authorities in maintaining peace and order. Lieutenant General Steven H. Blum, "A Vision for the National Guard," *Joint Force Quarterly*, December 2004, 36.

148 U.S. Department of Defense, Under Secretary of Defense for Policy, *Manual 3025.1-M, Manual for Civil Emergencies* (Washington, D.C., June 1994), para. C2.2. Active duty forces are authorized to perform critical functions such as rescue, evacuation, and emergency treatment of casualties; emergency restoration of power; debris removal; food distribution; roadway control, and emergency communications.

149 Chairman of the Joint Chiefs of Staff, Execution Order, August 30, 2005.

150 JTF-Katrina was established at Camp Shelby on August 28 and activated three days later on August 31. It served as U.S. Northern Command's forward joint command element for integrating the military component of the Federal response.

151 Donald H. Rumsfeld, Secretary of the Department of Defense, and General Richard Myers, Chairman of the Joint Chiefs of Staff, "Defense Department Operational Update Briefing," Tuesday, September 6, 2005. <http://www.defenselink.mil/news/Sep2005/d20050906slide.pdf>

152 Department of Defense, *DOD Support to Hurricane Katrina, Executive Summary OASD(HD)*, September 5, 2005.

153 "DOD aircraft have flown mosquito abatement aerial spraying missions covering more than two million acres." Paul McHale, Assistant Secretary of Defense for Homeland Defense, written statement for a hearing on Responding to Catastrophic Events: The Role of the Military and National Guard in Disaster Response, on November 9, 2005, submitted to the House Committee on Armed Services, Subcommittee on Terrorism, Unconventional Threats, and Capabilities jointly with the House Committee on Homeland Security, Subcommittee on Emergency Preparedness, Science, and Technology, 109th Congress, 1st session.

154 U.S. Department of Defense, National Guard Bureau, "After Action Review: Hurricane Response September 2005," December 21, 2005, 6.

155 U.S. Department of Defense, National Guard Bureau, "After Action Review: Hurricane Response September 2005," December 21, 2005, 14.

156 U.S. Department of Defense, National Guard Bureau, "After Action Review: Hurricane Response September 2005," December 21, 2005.

157 U.S. Department of Defense, National Guard Bureau, "After Action Review: Hurricane Response September 2005," December 21, 2005, 57.

158 President George W. Bush, "President Discusses Progress in War on Terror to National Guard," February 9, 2006.

159 U.S. Department of Defense, National Guard Bureau, "After Action Review: Hurricane Response September 2005," December 21, 2005, 57.

160 U.S. Department of Defense, National Guard Bureau, "After Action Review: Hurricane Response September 2005," December 21, 2005, 20; Lieutenant General H. Steven Blum, Chief of the National Guard Bureau, written statement submitted for a hearing on Responding to Catastrophic Events: The Role of the Military and National Guard in Disaster Response, on October 20, 2005, for the House Committee on Government Reform, 109th Congress, 1st session.

161 16,599 National Guard forces were deployed in 1989-90 following the San Francisco Loma Prieta earthquake. U.S. Department of Defense, National Guard Bureau, "After Action Review: Hurricane Response September 2005," December 21, 2005.

162 U.S. Department of Defense, Office of the Assistant Secretary of Defense for Homeland Defense, "DoD Support to Hurricane Katrina, OASD(HD) Executive Summary," September 5, 2005; U.S. Department of Defense, National Guard Bureau, "After Action Review: Hurricane Response September 2005," NGB J7, December 21, 2005; Lieutenant General H. Steven Blum, testimony on Hurricane Katrina: Preparedness and Response by the Department of Defense, the Coast Guard, and the National Guard of Louisiana, Mississippi, and Alabama, before the House Bipartisan Select Committee on Hurricane Katrina, United States House of Representatives, 109th Congress, 1st Session, October 27, 2005.

163 U.S. Department of Defense, National Guard Bureau, "After Action Review: Hurricane Response September 2005," NGB J7, December 21, 2005, 146.

164 U.S. Department of Defense, National Guard Bureau, "After Action Review: Hurricane Response September 2005," NGB J7, December 21, 2005, 6.

165 Paul McHale, Assistant Secretary of Defense for Homeland Defense, testimony before a hearing on Responding to Catastrophic Events: The Role of the Military and National Guard in Disaster Response, on November 9, 2005, Emergency Preparedness, Science, and Technology Subcommittee, House Homeland Security Committee, 109th Congress, 1st session, 14. According to Assistant Secretary McHale, a police officer is likely to be carrying a handheld Motorola while an active duty military officer is likely to use a secure SINCGARS radio; these two radios cannot easily talk to one another.

166 The two deployed MERS detachments were the Region IV detachment from Thomasville, Georgia and the Region VI detachment from Denton, Texas. U.S. Department of Homeland Security, Federal Emergency Management Agency, "FEMA National Situation Report," August 29, 2005, 3; and Michael Brown, former Director of the Federal Emergency Management Agency, testimony before a hearing on Hurricane Katrina: The Role of the Federal Emergency Management Agency, on September 27, 2005, House Select Bipartisan Committee to Investigate the Preparation for and Response to Hurricane Katrina, 109th Congress, 1st session.

Each MERS detachment has a suite of assets that were also deployed to Florida, Georgia, and Texas. U.S. Department of Homeland Security, Federal Emergency Management Agency, "FEMA National Situation Report," August 29, 2005, 3.

167 U.S. Department of Homeland Security, *National Response Plan* (Washington, D.C., December 2004), ESF #15-5.

168 U.S. Department of Homeland Security, Federal Emergency Management Agency, "Response and Recovery: Available Support," October 23, 2004, <http://www.fema.gov/rrr/mers02.shtm>.

169 Rear Admiral Joe Kilkenny, Joint Force Maritime Component Commander and Commander of Carrier Strike Group Ten, U.S. Fleet Forces, Joint Task Force Katrina, *Hurricanes Katrina and Rita: Providing Rescue and Civil Support Relief from the Sea, Air, and Land*, (November 1, 2005). The DJC2 is a standardized, integrated, rapidly deployable, modular, scaleable, command and control (C2) capability that provides a military commander with a planning, operating, and collaborating capability. Lt. Col. Roarke Anderson, JS J6, *Deployable Joint Command and Control (DJC2): DJC2 Program Overview*, (n.d.), 2.

170 U.S. Department of Defense, Office of the Assistant Secretary of Defense, "Defense Department Briefing on DoD Response to Hurricane Katrina," news release on briefing by Lieutenant General H. Steven Blum, August 31, 2005.

171 The National Coordinating Center (NCC) for Telecommunications is defined in the NRP as "A joint telecommunications industry-Federal Government operation established to assist in the initiation, coordination, restoration, and reconstitution of [National Security/Emergency Preparedness] telecommunications services and facilities." U.S. Department of Homeland Security, *National Response Plan* (Washington, D.C., December 2004), 69. For a discussion on NCC, see Dr. Peter M. Fonash, Deputy Manager of the National Communications System, Preparedness Directorate, U.S. Department of Homeland Security, written statement for a hearing on Ensuring Operability during Catastrophic Events, on October 26, 2005, submitted to the House Committee on Homeland Security, Subcommittee on Emergency Preparedness, Science and Technology, 109th Congress, 1st session, 2.

172 Dr. Peter M. Fonash, Deputy Manager of the National Communications System, Preparedness Directorate, U.S. Department of Homeland Security, written statement for a hearing on Ensuring Operability during Catastrophic Events, on October 26, 2005, submitted to the House Committee on Homeland Security, Subcommittee on Emergency Preparedness, Science and Technology, 109th Congress, 1st session.

173 Dr. Peter M. Fonash, Deputy Manager of the National Communications System, Preparedness Directorate, U.S. Department of Homeland Security, written statement for a hearing on Ensuring Operability during Catastrophic Events, on October 26, 2005, submitted to the House Committee on Homeland Security, Subcommittee on Emergency Preparedness, Science and Technology, 109th Congress, 1st session; and Chad Hart, *A Research Note On: Land Mobile Radio and Public Safety Communications*, prepared for the Venture Development Corporation, Datacom and Telecom Practice (Natick, MA, November 2005), http://www.vdc-corp.com/telecom/research/05_lmr_rn.pdf.

174 U.S. Department of Homeland Security, "Hurricane Katrina DHS SITREP #13," September 1, 2005.

175 U.S. Department of Homeland Security, "Hurricane Katrina DHS SITREP #21," September 5, 2005.

176 For examples, see Ardis D. Hoven, Member of the American Medical Association Board of Trustees, testimony before a hearing on Assessing Public Health and the Delivery of Care in the Wake of Katrina, on September 22, 2005, House Energy and Commerce Committee, Subcommittees on Health and Oversight and Investigations, 109th Congress, 1st session, 3; and Robert Latham, Director, Mississippi Emergency Management Agency, testimony before a hearing on Hurricane Katrina: Preparedness and Response by the State of Mississippi, on December 7, 2005, House Select Bipartisan Committee to Investigate the Preparation for and Response to Hurricane Katrina, 109th Congress, 1st session.

177 William Lokey, Federal Coordinating Officer for Louisiana, written statement for a hearing on Hurricane Katrina: Preparedness and Response by the State of Louisiana, on December 14, 2005, submitted to the House Select Committee to Investigate the Preparation for and Response to Hurricane Katrina, 109th Congress, 1st session, 51.

178 In an interview with CNN, FEMA Director Michael Brown stated "we've got enough people and commodities in place right now for a three to five day surge capacity. But what I've ordered my folks to do is to jam that supply line as far back as Fort Worth and as far back as Atlanta so as those supplies begin to run out, we can continue to feed those in here as long as it takes." "Hurricane Katrina," *CNN Breaking News*, August 29, 2005.

179 Michael Brown, former Director of the Federal Emergency Management Agency, testimony before a hearing on Hurricane Katrina: The Role of the Federal Emergency Management Agency, on September 27, 2005, House Select Committee to Investigate the Preparation for and Response to Hurricane Katrina, 109th Congress, 1st session, 49-50.

180 Congressman Tom Davis (R-VA), written opening statement for a hearing on Hurricane Katrina: Preparedness and Response by the State of Mississippi, on December 7, 2005, House Select Bipartisan Committee to Investigate the Preparation for and Response to Hurricane Katrina, 109th Congress, 1st session; and William Carwile, Federal Coordinating Officer for Mississippi, testimony before a hearing on Hurricane Katrina: Preparedness and Response by the State of Mississippi, on December 7, 2005, House Select Bipartisan Committee to Investigate the Preparation for and Response to Hurricane Katrina, 109th Congress, 1st session.

181 William Carwile, Federal Coordinating Officer for Mississippi, testimony before a hearing on Hurricane Katrina: Preparedness and Response by the State of Mississippi, on December 7, 2005, House Select Committee to Investigate the Preparation for and Response to Hurricane Katrina, 109th Congress, 1st session, 45.

182 Tommy Longo, Mayor of Waveland, Mississippi, testimony before a hearing on Hurricane Katrina: Preparedness and Response by the State of Mississippi, on December 7, 2005, House Select Bipartisan Committee to Investigate the Preparation for and Response to Hurricane Katrina, 109th Congress, 1st session, 51; and Ray Nagin, Mayor of New Orleans, written statement for a hearing on Hurricane Katrina: Managing the Crisis and Evacuating New Orleans, on February 1, 2006, submitted to the Senate Committee on Homeland Security, 109th Congress, 2nd session, 3-5.

183 Congressman William Jefferson (D-LA), during a hearing on Hurricane Katrina: The Role of the Federal Emergency Management Agency, on September 27, 2005, House Select Committee to Investigate the Preparation for and Response to Hurricane Katrina, 109th Congress, 1st session, 93.

184 U.S. Department of Commerce, "Gutierrez Announces Hurricane Contracting Information Center: One-Stop Shop to Help U.S. Businesses Participate in Hurricane Rebuilding Efforts," news release, October 11, 2005. Also see U.S. Department of Commerce, "Hurricane Contracting Information Center," <http://www.rebuildingthegulfcoast.gov>.

185 "Under Title I of the Defense Production Act of 1950, as amended (DPA), the President is authorized to require preferential acceptance and performance of contracts or orders supporting certain approved national defense and energy programs, and to allocate materials, services, and facilities in such a manner as to promote these approved programs. Additional priorities authority is found in Section 18 of the Selective Service Act of 1948, in 10 U.S.C. § 2538, and in 50 U.S.C. § 82. The DPA priorities and allocations authority has also been extended to support emergency preparedness activities under Title VI of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act)." [...] "The Department of Commerce is delegated authority to implement these priorities and allocations provisions for industrial resources. The Bureau of Industry and Security's Office of Strategic Industries and Economic Security (SIES) administers this authority through the Defense Priorities and Allocations System (DPAS) regulation (15 CFR Part 700). The purpose of the DPAS is to (1) assure the timely availability of industrial resources to meet current national defense and emergency preparedness program requirements; and (2) provide an

operating system to support rapid industrial response in a national emergency.” U.S. Department of Commerce, Bureau of Industry and Security, “Defense Priorities and Allocations System Program (DPAS),” <https://www.bis.doc.gov/defenseindustrialbaseprograms/OSIES/DPAS/Default.htm>. As an example of how this authority was used in the response to Hurricane Katrina, Norfolk Southern Railway used a DPAS rated contract to procure switch equipment and generators so that it could repair railway automated signals.

186 FEMA issued a mission assignment on the morning of September 3 that stated “FEMA requests that DOD provide planning and execution for transportation and distribution of ice, water, food and medical supplies in support of the Katrina disaster in Louisiana and Mississippi.” U.S. Department of Homeland Security, Federal Emergency Management Agency, “1604DR-MS-DOD-19, Amendment 1,” September 3, 2005.

187 Paul McHale, Assistant Secretary of Defense for Homeland Defense, testimony before a hearing on Hurricane Katrina: Preparedness and Response by the Department of Defense, the Coast Guard, and the National Guard of Louisiana, Mississippi, and Alabama, on October 27, 2005, House Select Bipartisan Committee to Investigate the Preparation for and Response to Hurricane Katrina, 109th Congress, 1st session, 70-71.

188 In developing the NRP, it was envisioned that additional and specific planning would be needed for logistics, international coordination, private sector coordination and donations management. In fact, each issue has its own support annex in the NRP. The annexes, however, provide little detail or operational direction and do not provide clear responsibility for the various roles and tasks referred to in the annexes.

189 The Swiss offer was received September 5, 2005 and not fully vetted by FEMA until September 14. As another example, a C-130 aircraft traveling from Sweden with a water purification system and a cellular network waited four days for flight clearance from the U.S.

190 An estimated \$854.5 million in donations have been pledged to the U.S.

191 USAID Liaisons were sent throughout the region: FEMA RRCCs – Atlanta, GA, Denton, TX, Tucker, AL; JFOs – Baton Rouge, LA, Montgomery, AL, Jackson, MS, New Orleans, LA; JTF – Shreveport, LA, JTF Camp Shelby – Hattiesburg, MS; JTF Forward – USS Iwo Jima, National Guard Forward Deployment – New Orleans, LA, Dobbins AFB – GA; FEMA Disaster Recovery Center – Mobile, AL; NORTHCOM – Colorado Springs, CO; Dobbins AFB – Little Rock, AK. The first four were deployed on September 2 – two went to FEMA HQ and two went to the State Task Force. On September 3, the State Department started sending people to the FEMA call-center, and on September 4 to the RRCC in Atlanta, the JTF at Camp Shelby, and Dobbins AFB in Georgia. On September 5, personnel were deployed to Shreveport, Little Rock, and Denton.

192 U.S. Department of Homeland Security, “Hurricane Katrina DHS SITREP #21,” September 5, 2005; and United States Agency for International Development, “Agency Channels Foreign Aid for Hurricane Katrina Victims,” *Front Lines*, October 2005.

193 It applied to Alabama, Louisiana, and Mississippi since August 29 and to Florida since August 24—after Hurricane Katrina’s first landfall. U.S. Department of Health and Human Services, “HHS Designates First Medical Shelters and Provides Vital Medical Supplies and Medical Assistance,” news release, September 2, 2005, <http://www.hhs.gov/news/press/2005pres/20050902.html>.

194 Sarah A. Lister, *Hurricane Katrina: The Public Health and Medical Response*, Congressional Research Service Report for Congress RL33096 (Washington, D.C., September 2005), summary and CRS-11.

195 “19 NDMS DMATs and other NDMS teams were pre-staged for Katrina, and as the storm passed, they along with the US&R Task Forces, began moving, into the impact areas. By the day after the storm, teams were providing medical care and continue to do so today. The mission is still ongoing, with personnel staffing hospitals and clinics destroyed or rendered inoperable by the storms as we speak.” Dr. Roy L. Alson, Associate Professor of Emergency Medicine at Wake Forest University School of Medicine and Commander of Disaster Medical Assistance Team NC-1, written statement for a hearing on Mitigating Catastrophic Events Through Effective Medical Response, on October 20, 2005, submitted to the House Committee on Homeland Security, Subcommittee on Prevention of Nuclear and Biological Attack, 109th Congress, 1st session. According to an attachment Dr. Alson provided with his testimony, 16,477 patients were treated by NDMS personnel in FEMA region IV through 13 October 2005, and 40,995 patients were treated and 59,917 individuals immunized by NDMS personnel in FEMA region VI through 13 October 2005.

196 Hilarie H. Cranmer, “Hurricane Katrina: Volunteer Work – Logistics First,” *New England Journal of Medicine* 353(15), no. 13, October, 2005. Dr. Cranmer was a member of the American Red Cross team that had been deployed “to perform the critical-needs assessments that would help define the public health response to Hurricane Katrina.” Dr. Thomas Kirsch, Medical Director for Disaster Health Services for the American Red Cross, written statement for a hearing on Assessing Public Health and the Delivery of Care in the Wake of Katrina, on September 22, 2005, submitted to the House Energy and Commerce Committee, Subcommittees on Health and Oversight and Investigations, 109th Congress, 1st session. See Ardis D. Hoven, Member of the American Medical Association Board of Trustees, written statement for a hearing on Assessing Public Health and the Delivery of Care in the Wake of Katrina, on September 22, 2005, submitted to the House Energy and Commerce Committee, Subcommittees on Health and Oversight and Investigations, 109th Congress, 1st session. Dr. Kirsch said he took a team to Louisiana to assess nineteen Red Cross shelters and three very large state shelters: “Every shelter had good access to medical care either through local physicians providing care in the shelter, visiting medical teams, DMAT teams or

relationships with local hospitals.” Moreover, “[w]ith flooding widespread across the region and power and communications networks out, physicians and other health care professionals in hospitals desperately tried to keep patients alive, and appear to have mostly succeeded, even when their back-up generators failed.”

197 Louisiana Nursing Home Association staff lacked means to communicate with key decision makers early in the crisis. The Association “set up our own rescue missions.” Joseph A. Donchess, Executive Director of the Louisiana Nursing Home Association, written statement for a hearing on Challenges in a Catastrophe: Evacuating New Orleans in Advance of Hurricane Katrina, on January 31, 2006, submitted to the Senate Committee on Homeland Security and Governmental Affairs, 109th Congress, 2nd session. Dr. Clyde Martin told *Government Executive* magazine that he joined a private relief effort in Louisiana after waiting for several days for Federal or State agencies to deploy him in their medical response. Justin Rood, “Medical Catastrophe,” *GOVEXEC.com*, November 1, 2005, <http://www.govexec.com/features/1105-01/1105-01s1.htm> (accessed February 6, 2006).

198 Louisiana State University, Office of University Relations, “LSU is Site of Largest Acute-Care Field Hospital in U.S. History,” news release, September 6, 2005; and Elizabeth M. Duke, Health Resources Services Administrator, Department of Health and Human Services, “Remarks to the National Association of Community Health Centers’ 2005 Annual Convention and Community Health Institute,” September 19, 2005, <http://newsroom.hrsa.gov/speeches/2005/NACHC-Sept.htm> (accessed February 10, 2006).

199 Separate JFOs were set up and became fully operational in: Mobile, Alabama on September 1; Denver, Colorado on September 6; Montgomery, Alabama (supplanting the Mobile facility) and Oklahoma (State) on September 10; Austin, Texas on September 11; Baton Rouge and New Orleans, Louisiana on September 12; Little Rock, Arkansas on September 13; and Jackson, Mississippi on September 16. U.S. Department of Homeland Security, Federal Emergency Management Agency, “Federal Concept of Operations Matrix,” September 18, 2005; U.S. Department of Homeland Security, Federal Emergency Management Agency, Region IV Regional Response Coordinating Center, “Situation Report 9,” September 11, 2005; U.S. Department of Health and Human Services, “Secretary’s Operations Center Flash Report #32 – Hurricane Katrina,” September 12, 2005; U.S. Department of Homeland Security, Federal Emergency Management Agency/Arkansas Joint Field Office, “Situation Report 11,” September 13, 2005; U.S. Department of Homeland Security, Federal Emergency Management Agency, “Executive Briefing,” slide presentation, September 17, 2005.

200 Preliminary steps were taken toward establishing the JTF-Forward on September 6, but the facility was not fully established until later on the 7th. U.S. Department of Defense, Office of the Assistant Secretary of Defense for Homeland Defense, “Hurricane Katrina Timeline,” October 16, 2005, 13; and U.S. Department of Health and Human Services, “Secretary’s Operations Center Flash Report #23—Hurricane Katrina,” September 7, 2005. This temporary site was supplanted by the physical facility established on September 12, as referenced above.

201 Regarding the timing of the appointment of VADM Allen, Secretary Chertoff testified that on “Saturday [September 3] I identified Admiral Allen as a person that I wanted to consider putting into place. I spoke to the Commandant over the weekend, made sure that Admiral Allen was free to come down, had him come down with the intention of having him take over at least the Louisiana piece of this in order to make sure we had that under control. And then ultimately on Friday [September 9] I made the determination that I would put Admiral Allen in control of the entire operation.” Michael Chertoff, testimony before a hearing on Hurricane Katrina: The Role of the Department of Homeland Security, on October 19, 2005, House Select Committee to Investigate the Preparation for and Response to Hurricane Katrina, 109th Congress, 1st session.

202 U.S. Department of Homeland Security, “Statement by Homeland Security Secretary Michael Chertoff,” news release, September 9, 2005.

203 The FCO “is appointed to manage Federal resource support activities ... [and] is responsible for coordinating the timely delivery of Federal disaster assistance resources and programs to the affected State and local governments, individual victims, and the private sector.” Whereas the PFO is an invention of HSPD-5 and the NRP, the FCO position was created by the Stafford Act, and empowered with statutory authority to perform assigned responsibilities. U.S. Department of Homeland Security, *National Response Plan* (Washington, D.C., December 2004), 65. VADM Allen’s appointments: 70 Fed. Reg. 56929 (Sep. 29, 2005) (Louisiana); 70 Fed. Reg. 57308 (Sep. 30, 2005) (Alabama); 70 Fed. Reg. 57309 (Sep. 30, 2005) (Mississippi).

204 When Secretary Chertoff designated VADM Allen as the FCO (in addition to his earlier appointment as PFO), Allen gained statutory authority that enabled him to more efficiently coordinate Federal disaster assistance.

205 “The SFLEO is the senior law enforcement official from the agency with primary jurisdictional responsibility as directed by statute, Presidential directive, existing Federal policies, and/or the Attorney General. The SFLEO directs intelligence/investigative law enforcement operations related to the incident and supports the law enforcement component of the Unified Command on-scene. In the event of a terrorist incident, this official will normally be the FBI SAC.” U.S. Department of Homeland Security, *National Response Plan* (Washington, D.C., December 2004), 35.

206 U.S. Department of Justice, Federal Bureau of Investigation, “*FBI Hurricane Timeline*,” October 21, 2005, 3. The LECC is a construct familiar to law enforcement personnel, integrating the Federal, State, and local law enforcement communities, but is not a term currently incorporated into the NRP.

207 The LECC was built on a modified FBI Joint Operations Center construct. It coordinated a plan to answer thousands of 911 calls in New Orleans that had gone unresolved and provided the conduit for coordination between civilian law enforcement and the National Guard and Title 10 U.S. Army forces operating in New Orleans. The LECC not only provided a facility for all Federal law enforcement, but built a separate headquarters for the New Orleans Police adjacent to it since the NOPD's headquarters had been destroyed.

208 U.S. Department of Defense, "CJCS Hurricane Katrina Update," September 12, 2005.

209 New Orleans Mayor's Office of Communications, "Updated Situation Report for New Orleans," September 13, 2005.

210 Search and rescue teams in New Orleans carried out primary and secondary searches. Primary searches were visual, with hailing calls as searchers moved through a certain area. Forced entry into a building was not conducted without probable cause. Secondary searches were conducted door to door in areas where flooding had occurred higher than 5.5 feet above the floor. Damage incurred by access into a building was kept to a minimum and the building was re-secured after the search. New Orleans Police Department officers were on site for all the searches conducted. U.S. Department of Homeland Security, Federal Emergency Management Agency, "Urban Search and Rescue Operations Completed: Hurricane Katrina Urban Search and Rescue Teams are due to Return Home," news release, September 30, 2005.

211 Mike Tamillow, Section Chief, Federal Emergency Management Agency Urban Search and Rescue, to Ed Buikema, Director, Region V, Federal Emergency Management Agency, memorandum on "US&R Section – Hurricane Katrina Update," September 10, 2005. Also see U.S. Department of Homeland Security, Federal Emergency Management Agency, "Urban Search and Rescue Operations Completed: Hurricane Katrina Urban Search and Rescue Teams Are Due to Return Home," news release, September 30, 2005, <http://www.fema.gov/news/newsrelease.fema?id=19320>.

212 U.S. Department of Homeland Security, "Hurricane Katrina DHS SITREP #23," September 6, 2005; and U.S. Department of Homeland Security, "Hurricane Katrina DHS SITREP #29," September 9, 2005.

213 HHS serves as the coordinator of NRP Emergency Support Function #8 ("Public Health and Medical Services"), which includes mortuary affairs. However, FEMA's NDMS has responsibilities for victim identification and mortuary services through its DMORTs. Consequently, HHS must request assistance from FEMA NDMS to deploy Disaster Mortuary Operational Response Teams to an incident site. U.S. Department of Homeland Security, *National Response Plan* (Washington, D.C., December 2004), ESF #8-6.

214 U.S. Department of Homeland Security, "Hurricane Katrina DHS SITREP #18," September 4, 2005; and U.S. Department of Defense, "Hurricane Katrina Update," September 8, 2005, 20.

215 Louisiana requested DMORT and DPMU support on August 29. Mississippi requested a DMORT assessment team on August 30. The first DMORT team was reported as engaged in Louisiana on August 31. By September 4, DMORT 1, DMORT 2, DMORT 4, DMORT 5, and DMORT Family Assistance Center (east), along with one DPMU, were deployed to Gulfport-Biloxi Municipal Airport. DMORT 6, DMORT 7, DMORT 8, DMORT WMD, and DMORT Family Assistance Center (west), along with one DPMU, were deployed to St. Gabriel, Louisiana. U.S. Department of Health and Human Services, "Secretary's Operations Center Flash Report #5—Hurricane Katrina," August 29, 2005, 2; U.S. Department of Health and Human Services, "Secretary's Operations Center: Flash Report # 6—Hurricane Katrina," August 30, 2005, 2; U.S. Department of Health and Human Services, "Secretary's Operations Center: Flash Report #8—Hurricane Katrina," August 31, 2005, 5-7; U.S. Department of Health and Human Services, "Secretary's Operations Center Flash Report #17—Hurricane Katrina," September 4, 2005, 7-9.

216 Kenyon International Management Services, "Hurricane Katrina Update: Kenyon International Activates Emergency Team for Hurricane Katrina Response," news release, <http://www.kenyoninternational.com>; Thomas Fitzgerald and Joyce Tsai, "Louisiana Governor Blasts FEMA Over Recovery of Bodies," Knight Ridder News Service, September 14, 2005; and Mark Hosenball and Keith Naughton, "Cash and 'Cat 5' Chaos," Newsweek, September 26, 2005.

217 As Louisiana Governor Kathleen Blanco described it, "While Kenyon International of Houston has been and still is on the ground, working each day along with DMORT teams, they have not added enough personnel to do the work because of the lack of proper support or a contract." Louisiana Office of the Governor, "Statement by Governor Kathleen Babineaux Blanco on Body Removal Process in Southeast Louisiana," news release, September 13, 2005, <http://www.gov.state.la.us/index.cfm?md=newsroom&tmp=detail&articleID=832>.

218 On September 9, the U.S. Department of Health and Human Services reported: "It is unclear as to the future resources for this mission as we heard the contractor Kenyon International may be in default of their verbal contract." U.S. Department of Defense, "Hurricane Katrina Update," slide presentation, September 8, 2005, 20; and U.S. Department of Homeland Security, "Hurricane Katrina DHS SITREP #37," September 13, 2005, 18.

219 On September 9, White House spokesman Scott McClellan stated: "Mortuary affairs efforts on the ground – the State has the responsibility for overseeing the plan, implementing the plan and the federal government through the military and other ways, we're supporting those efforts with teams in the region, as well." The White House, "Press Briefing by Scott McClellan," news release, September 9, 2005, [/news/releases/2005/09/print/20050909-3.html](http://news.releases/2005/09/print/20050909-3.html).

FEMA spokeswoman Nicol Andrews made the same point in October, arguing that “Body retrieval is a state responsibility.” Renae Merle and Griff Witte, “Lack of Contracts Hampered FEMA: Dealing With Disaster on the Fly Proved Costly,” *Washington Post*, October 10, 2005.

220 Louisiana Office of the Governor, “Statement by Governor Kathleen Babineaux Blanco on Body Removal Process in Southeast Louisiana” news release, September 13, 2005, <http://www.gov.state.la.us/index.cfm?md=newsroom&tmp=detail&articleID=832>.

221 Bush-Clinton Katrina Fund, “Bush-Clinton Katrina Fund Announces Allocations for Louisiana, Mississippi and Alabama,” news release, January 19, 2006, <http://www.bushclintonkatrinafund.org/index.php?src=news&submenu=Media&prid=20&category=Press%20Releases>.

222 The National Book Festival is an annual event organized and sponsored by the Library of Congress and hosted by First Lady Laura Bush. White House website, “Mrs. Bush’s Remarks at the National Book Festival Author’s Breakfast,” September 24, 2005, [/news/releases/2005/09/20050924-2.html](http://news/releases/2005/09/20050924-2.html).

223 “Despite the massive migration of evacuees and their subsequent placement in evacuation centers, only one known outbreak of communicable disease (norovirus) requiring unusual mobilization of public health resources had been reported as of September 23.” U.S. Centers for Disease Control, “Infectious Disease and Dermatologic Conditions in Evacuees and Rescue Workers After Hurricane Katrina – Multiple States, August-September, 2005,” as reprinted in the *Journal of the American Medical Association* 294, no. 17, November 2, 2005, 2159.

224 U.S. Department of Health and Human Services, “Estimates Show More Than 40% of Hurricane Evacuees Now Receiving HHS Benefits or Services,” news release, September 29, 2005.

225 Expedited Assistance is FEMA’s program to provide \$2,000 in “an initial emergency first installment” of assistance, prior to a completed inspection of a victim’s home, to help pay for food, shelter, clothing, personal necessities and medical needs. Eligible evacuees could also get additional FEMA assistance for a total up to \$26,500 per household. U.S. Department of Homeland Security, Federal Emergency Management Agency, “Emergency Assistance Flowing to Gulf Coast,” news release, September 9, 2005; and U.S. Department of Homeland Security, Federal Emergency Management Agency, “Disaster Assistance Frequently Asked Questions,” <http://www.fema.gov/rrr/dafaq.shtm> (accessed February 3, 2006).

226 U.S. Department of Homeland Security, “Hurricane Katrina DHS SITREP #21,” September 5, 2005; and U.S. Department of Homeland Security, “Hurricane Katrina DHS SITREP #41,” September 15, 2005.

227 U.S. Department of Homeland Security, Federal Emergency Management Agency, “FEMA VIP Briefing,” slide presentation, September 12, 2005, 6:00 pm; U.S. Department of Homeland Security, “Hurricane Katrina DHS SITREP #44,” September 17, 2005; U.S. Department of Homeland Security, Federal Emergency Management Agency, “Nearly \$690 Million in Assistance Helping More Than 330,000 Families Displaced by Katrina,” news release, September 10, 2005.

228 However, the NRP inconsistently describes the role and purpose of DRCs. The NRP states a DRC “is a central facility where individuals affected by a disaster can *obtain information* on disaster recovery assistance programs from various Federal, State, local, tribal, private-sector, and voluntary organizations.” However, the NRP also states the DRC is “[a] facility established in a centralized location within or near the disaster area at which disaster victims (individuals, families, or businesses) *apply for* disaster aid.” NRP, p.64. (Emphasis added).

229 U.S. Department of Homeland Security, Federal Emergency Management Agency, “Disaster Assistance Frequently Asked Questions,” news release, September 13, 2005. FEMA’s “Disaster Assistance Frequently Asked Questions” stated, “You cannot register for assistance at a DRC, you must register by calling 1-800-621-FEMA ... or apply on line at www.FEMA.gov.”

230 U.S. Department of Homeland Security, “Hurricane Katrina DHS SITREP #34,” September 12, 2005, 3. Approximately one-third of Louisiana households were without power or telephone service as of September 12.

231 U.S. Department of Homeland Security, Federal Emergency Management Agency/State of Alabama Joint Field Office, “FEMA-1605-DR-AL-SITREP #08,” September 4, 2005. On September 4, the FEMA/State of Alabama JFO reported, “The Helpline number is currently unavailable. Due to the large number of teleregistration calls, all lines are being made available for registration.” This is an indication that the FEMA phone system lacked the capacity to sustain the demand for service on both the teleregistration line and Helpline, at least at that time for some customers.

232 U.S. Department of Homeland Security, Federal Emergency Management Agency, “FEMA Getting Assistance to Individuals,” news release, September 7, 2005; U.S. Department of Homeland Security, Federal Emergency Management Agency, “FEMA VIP Briefing,” slide presentation, September 7, 2005, 6:00 pm, 7; U.S. Department of Homeland Security, Federal Emergency Management Agency, “FEMA VIP Briefing,” slide presentation, September 9, 2005, 6:00 pm, 2; and U.S. Department of Homeland Security, Federal Emergency Management Agency, “FEMA VIP Briefing,” slide presentation, September 10, 2005, 6:00 am, 3. “Currently, the amount of money being distributed through the expedited assistance program is \$2,000 per household. ... This emergency assistance is provided to help with disaster needs such as transportation, clothing, rental housing, other housing accommodations, and food, and is included in the calculation of total benefits for which victims are eligible.”

233 Government Accountability Office, *Expedited Assistance for Victims of Hurricanes Katrina and Rita: FEMA's Control Weaknesses Exposed the Government to Significant Fraud and Abuse*, GAO-06-403T, February 13, 2006, 18-19, <http://www.gao.gov/new.items/d06403t.pdf>.

234 U.S. Department of Homeland Security, Federal Emergency Management Agency, "FEMA VIP Briefing," slide presentation, September 8, 2005; and Lisa Rein and Christopher Lee, "Debit Card Giveaway Goes Awry in Houston," *Washington Post*, September 9, 2005. FEMA individual assistance programs suffered from other problems. Accounting and verification problems prompted an investigation by the DHS Office of the Inspector General. "In a November 1, 2005, report on expedited assistance overpayment, DHS OIG attempted to identify the events that resulted in a married couple receiving duplicate payments for expedited assistance and determine why internal controls did not prevent the duplicate payment from being issued and why the applicants were not provided adequate information to return the excess funds. It was found that for a short time, the National Emergency Management Information System was not configured with system controls to prevent more than one payment per household. FEMA officials ... have identified more than 5,000 potentially duplicated payments." Executive Council on Integrity and Efficiency, *Oversight of Gulf Coast Hurricane Recovery: A 90-Day Progress Report to Congress* (Washington, D.C., December 2005), 33.

235 U.S. Department of Homeland Security, "Good Story: Harris County, Texas Citizen Corps' Response to Hurricane Katrina," *Lessons Learned Information Sharing (LLIS.gov) database*, November 17, 2005, <http://www.llis.gov>; Harris County Joint Information Center, "Mission Fulfilled, Command stands Down," news release, September 20, 2005, http://www.hcjic.org/news_release.asp?p=62&intRelease_ID=2078&intAcc_ID=62.

236 Harris County Joint Information Center, "Mission Fulfilled, Command stands Down," news release, September 20, 2005, http://www.hcjic.org/news_release.asp?p=62&intRelease_ID=2078&intAcc_ID=62.

237 T. Yarbrough, "Baptists' 10.5 Million Meals shatters Prior Disaster Relief Record," *North American Mission Board*, <http://www.namb.net/site/apps/nl/content2.asp?c=9qKILUOzEpH&b=227361&ct=1568907> (accessed January 13, 2006). For other examples, see Liz Szabo, "Grass-roots groups pitch in to find shelter for evacuees," *USA Today*, September 8, 2005.

238 This despite the NRP Volunteer and Donations Management Support Annex, which describes this process.

239 The NRP Volunteer and Donations Management Support Annex focuses on managing unaffiliated volunteers and unsolicited donated goods. It does not provide guidelines for coordinating private sector and NGO relief efforts. U.S. Department of Homeland Security, *National Response Plan* (Washington, D.C., December 2004), VOL-1.

240 Major Todd Hawks, Public Affairs Secretary for the Salvation Army of America, testimony before a hearing on the Response of Charities to Hurricane Katrina, on December 13, 2005, House Committee on Ways and Means, Subcommittee on Oversight, 109th Congress, 1st session.

241 David Roberson, President and CEO of Cavalier Homes, Inc., testimony before a hearing on Emergency Housing Needs in the Aftermath of Hurricane Katrina, on September 15, 2005, House Committee on Financial Services, Subcommittee on Housing and Community Opportunity, 109th Congress, 1st session. Also see Laura Maggi, "Hotel Rooms Sought For Shelter Occupants; Other Housing Options Appear Slow To Arrive," *New Orleans Times-Picayune*, September 21, 2005; and Shankar Vedantam and Dean Starkman, "Lack of Cohesion Bedevils Recovery," *Washington Post*, September 18, 2005.

242 James N. Russo, Federal Coordinating Officer for Mississippi Recovery Operations, Federal Emergency Management Agency, testimony before a hearing on Housing Options in the Aftermath of Hurricanes Katrina and Rita, on January 14, 2006, House Committee on Financial Services, Subcommittee on Housing and Community Opportunity, 109th Congress, 2nd session; David Roberson, representing the Manufactured Housing Institute and the Manufactured Housing Association for Regulatory Reform, testimony before a hearing on Emergency Housing Needs Following Hurricane Katrina, on September 15, 2005, House Committee on Financial Services, Subcommittee on Housing and Community Opportunity, 109th Congress, 1st session.

243 U.S. Department of Homeland Security, "Hurricane Katrina DHS SITREP #20," September 5, 2005; and U.S. Department of Homeland Security, "Hurricane Katrina DHS SITREP #31," September 10, 2005.

244 U.S. Department of Homeland Security, Federal Emergency Management Agency, "FEMA Executive Briefing," slide presentation, September 14, 2005, 6:00 am.

245 A complicating factor was that as Hurricane Rita approached the Gulf Coast, individuals in shelters from Hurricane Katrina had to be evacuated from their original shelter sites and moved to new ones. U.S. Department of Homeland Security, "Gulf Coast Hurricane Katrina (85) and Rita (37) Response and Recovery DHS SITREP," October 14, 2005.

246 U.S. Department of Homeland Security, "U.S. Government Announces a Comprehensive Transitional Housing Assistance Program for Katrina Evacuees," news release, September 23, 2005; U.S. Department of Homeland Security, "Fact Sheet: Transitional Housing Assistance for Hurricane Katrina Evacuees," September 23, 2005; and U.S. Department of Homeland Security, "Press Briefing by Homeland Security Secretary Michael Chertoff and Secretary of Housing and Urban Development Alphonso Jackson," news release, September 24, 2005.

247 Mr. Powell serves as the primary Federal contact for Congress, State, local and private leaders in supporting “mid and long term recovery and rebuilding plans.” U.S. Department of Homeland Security, “Coordinator Named to Lead Federal Recovery and Rebuilding Activities in the Gulf Coast Region,” news release, November 1, 2005.

248 U.S. Department of Homeland Security, Federal Emergency Management Agency, “Federally Declared Disasters By Calendar Year,” <http://www.fema.gov/library/drcys.shtm>. Forty emergency declarations were issued in the period from January 20, 2001 to Hurricane Katrina.

Chapter Five: Lessons Learned

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1 The White House, “President Discusses Hurricane Relief in Address to the Nation,” news release, September 15, 2005, [/news/releases/2005/09/20050915-8.html](http://news/releases/2005/09/20050915-8.html).

2 The critical challenges described here include and go beyond those identified in other evaluations of the national response to Hurricane Katrina. See, for example, David M. Walker, Comptroller General, *Statement by Comptroller General David M. Walker on GAO’s Preliminary Observations Regarding Preparedness and Response to Hurricanes Katrina and Rita*, prepared for the U.S. Government Accountability Office, GAO-06-365R, (Washington, D.C., February 1, 2006).

3 Though State and local preparedness is critical to the success of overall National preparedness and response efforts, this Report is not intended to assess State and local efforts.

4 Melvin “Kip” Holden, Mayor-President of Baton Rouge, Louisiana, written statement for a hearing on Recovering from Hurricane Katrina: Responding to the Immediate Needs of Its Victims, on September 28, 2005, submitted to the Senate Homeland Security and Governmental Affairs Committee, 109th Congress, 1st session.

5 The DHS Secretary designates a Principal Federal Official (PFO). See U.S. Department of Homeland Security, *National Response Plan* (Washington, D.C., December 2004), 71. The Federal Coordinating Officer (FCO) “is appointed to manage Federal resource support activities ... [and] is responsible for coordinating the timely delivery of Federal disaster assistance resources and programs to the affected State and local governments, individual victims, and the private sector.” Whereas the PFO derives from HSPD-5 and the NRP, the FCO position was created by the Stafford Act (*Robert T. Stafford Disaster Relief and Emergency Assistance Act* [“Stafford Act”], as amended by Public Law 106-390, October 30, 2000). U.S. Department of Homeland Security, *National Response Plan* (Washington, D.C., December 2004), 65.

6 U.S. Department of Homeland Security, “Hurricane Katrina DHS SITREP #20,” September 5, 2005, 1; U.S. Department of Homeland Security, “Hurricane Katrina DHS SITREP #23,” September 6, 2005, 1; U.S. Department of Homeland Security, Federal Emergency Management Agency, “FEMA Daily Conference Call on Hurricane Katrina,” September 7, 2005, 1; U.S. Department of Homeland Security, “Hurricane Katrina DHS SITREP #27,” September 8, 2005, 1; U.S. Department of Homeland Security, Federal Emergency Management Agency, “Region VI Regional Response Coordinating Center SitRep #15,” September 9, 2005, 1; U.S. Department of Health and Human Services, “Secretary’s Operations Center Flash Report #32—Hurricane Katrina,” September 12, 2005, 2, 3; U.S. Department of Homeland Security, “Emergency Response Issues,” September 11, 2005, 10; Robert B. Stephan, Assistant Secretary for Infrastructure Protection, U.S. Department of Homeland Security, prepared statement for a hearing on “Hurricane Katrina: The Roles of DHS and FEMA Leadership,” on February 10, 2006, submitted to the Senate Committee on Homeland Security and Governmental Affairs, 109th Congress, 2nd session, 7-8.

7 Federal officials recognized the need for a presence in New Orleans to effectively coordinate the efforts to stabilize the City, so a “forward PFO” in New Orleans was eventually established. The JFO remained in Baton Rouge. U.S. Department of Health and Human Services, “Secretary’s Operations Center Flash Report #23,” September 7, 2005; U.S. Department of Homeland Security, Federal Emergency Management Agency, “FEMA Executive Briefing,” slide presentation, September 17, 2005, 6 am.

8 Only eight months had elapsed between the unveiling of the NRP and its implementation for the worst natural disaster in U.S. history. U.S. Department of Homeland Security, *National Response Plan* (Washington, DC: December 2004).

9 The NRP requires all of the supporting Federal Departments and Agencies to modify existing interagency incident management and emergency response plans and protocols to incorporate linkages to and be consistent with NIMS, the NRP and its coordinating mechanisms. The NRP also requires that detailed standard operational procedures be developed for the HSOC, NRCC, IIMG, the JFO and each ESF Annex. These plans are meant to clearly define the functions of each organization and describe how the organization interfaces with the rest of the emergency response effort. See U.S. Department of Homeland Security, *National Response Plan* (Washington, D.C., December 2004), Letter of Instruction, ix.

10 Starting after the 2002 Salt Lake City Olympics, money and resources that were once dedicated to training and exercising the National Emergency Response Teams (ERT-N) have been diverted from the ERT program to other

programs. See William Carwile, Federal Coordinating Officer for Mississippi, Federal Emergency Management Agency, testimony before a hearing on the Preparation for and Response to Hurricane Katrina, on December 8, 2005, Senate Committee on Homeland Security and Governmental Affairs. ERT-N deploys for large-scale, high impact events, to coordinate the plans with other Federal agencies within FEMA regions. See U.S. Department of Homeland Security, *National Response Plan* (Washington, D.C., December 2004), 40. ERT-Ns also provide assistance to the smaller ERT deployed by the FEMA regions. The loss of funding has resulted in ERT-N teams that are not fully equipped nor train or exercise together. William Carwile, Federal Coordinating Officer for Mississippi, Federal Emergency Management Agency, testimony before a hearing on the Preparation for and Response to Hurricane Katrina, on December 8, 2005, Senate Committee on Homeland Security and Governmental Affairs. Scott Wells, the Deputy Federal Coordinating Officer for Louisiana, stated that FEMA lacked “the people, we did not have the expertise; we did not have the operational training folks that we needed to do our missions.” He also stated generally that the staff level in the regional office is “woefully inadequate” to set up a Regional Response Coordination Center (RRCC) required for a disaster, and staff an ERT to go to the scene of a disaster. Wells describes FEMA staffing in disasters as robbing “Peter to pay Paul.” Scott Wells, Deputy Federal Coordinating Officer for Louisiana, testimony before a hearing on Hurricane Katrina: Perspectives of FEMA’s Operation Professionals, on December 8, 2005, Senate Committee on Homeland Security and Governmental Affairs, 109th Congress, 1st session.

¹¹ A DHS request to DOD on September 2 that “DOD provide the support, planning, and execution of the full logistical support to the Katrina disaster in all declared states in coordination with FEMA” was initially denied because the request did not come from the Secretary of DHS to the Secretary of Defense. The Secretary of DHS immediately resubmitted the request to the Secretary of Defense which was then granted. Ultimately, DOD (OSD & Joint Staff) worked with the FEMA Response Division to meet this requirement. The Joint Staff and the Office of the Secretary of Defense (OSD) worked throughout the weekend of September 3-5 to meet this Mission Assignment. U.S. Department of Homeland Security, Federal Emergency Management Agency, “Mission Assignment, Program Code/Event #: 1604DR-MS: HURRICANE KATRINA, Action Request #:1509-32760,” September 3, 2005; U.S. Department of Defense, “Hurricane Katrina/Rita/Ophelia Interim Timeline (August – September 2005),” November 2, 2005, 1, 8, 10-11; and “Hurricane Katrina: Preparedness and Response by the Department of Defense, the Coast Guard, and the National Guard of Louisiana, Mississippi and Alabama, October 27, 2005, hearing before the Select Bipartisan Committee to Investigate the Preparation for and Response to Hurricane Katrina, 109th Congress, 1st session (Congressman Tom Davis, quoting from Ken Burris, email to Mathew Broderick et al., Subject: request, September 2, 2005.)

¹² U.S. Department of Homeland Security, *National Response Plan* (Washington, D.C., December 2004), p. 41. According to the NRP, the Local Chief Executive Officer “Requests State and, if necessary, Federal assistance through the Governor of the State when the jurisdiction’s capabilities have been exceeded or exhausted” and the Governor “Requests Federal assistance when it becomes clear that State or tribal capabilities will be insufficient or have been exceeded or exhausted.” According to the Louisiana *Emergency Operations Plan*, “The initial actions . . . are conducted by local government. Local authorities will exhaust their resources, and then use mutual aid agreements with volunteer groups, the private sector and/or neighboring parishes.” The plan also states that “State assistance will supplement local efforts and Federal assistance will supplement State and local efforts when it is clearly demonstrated that it is beyond local and State capability to cope with the emergency/disaster.” Louisiana Office of Homeland Security and Emergency Preparedness, *Emergency Operations Plan* (Baton Rouge, April 2005).

¹³ U.S. Department of Defense, Joint Center for Operational Analysis, “Incident Command Request Briefing,” November 1, 2005. However, Secretary of Defense Donald Rumsfeld verbally approved some requests. See also Paul McHale, Assistant Secretary of Defense for Homeland Defense, testimony before a hearing on Hurricane Katrina: The Defense Department’s Role in the Response, on February 9, 2006, Senate Homeland Security and Governmental Affairs Committee, 109th Congress, 2nd session.

¹⁴ Melvin “Kip” Holden, Mayor-President of Baton Rouge, Louisiana, noted that requirements for paperwork and form completions hindered immediate action and deployment of people and material to assist in rescue and recovery efforts. Melvin “Kip” Holden, written statement submitted for a hearing on Recovering from Hurricane Katrina: Responding to the Immediate Needs of Its Victims, on September 28, 2005, Senate Homeland Security and Governmental Affairs Committee, 109th Congress, 1st session.

¹⁵ As noted in U.S. Department of Defense, National Guard Bureau (NGB J7), *After Action Review: Hurricane Response September 2005* (December 21, 2005), 146, 168.

¹⁶ U.S. Department of Defense, *Hurricane Katrina Initial Observations and Lessons Learned* (n.d., ca. 2005). These deployments occurred under the EMAC system.

¹⁷ U.S. Department of Defense, National Guard Bureau (NGB J7), *After Action Review: Hurricane Katrina Response September 2005* (December 21, 2005).

¹⁸ If chartered as a joint DOD activity, the NGB would become a member of the Joint Staff, rather than only having a reporting relationship with the Secretary of the Army and the Secretary of the Air Force. Lieutenant General H. Steven Blum, “A Vision for the National Guard,” *Joint Forces Quarterly*, issue 36 (December 2004), 24-29.

¹⁹ U.S. Department of Defense, National Guard Bureau (NGB J5), *Draft Baseline Capabilities for Joint Task Force-State (JTF-State)*, n.d., ca. 2005. The National Guard Bureau can provide overarching situational awareness and an

integrated common, relevant operating picture regarding the employment of Army and Air Guard troops in each of the 54 States, Territories and the District of Columbia. This demonstrates the essential role of the National Guard Bureau as the channel of communications between the several States and the combatant commanders, the Joint Staff and the Departments of Defense, Army and Air Force. Given the current national security environment, the necessity to continue providing this kind of data will continue to grow. Capabilities include Joint Force Joint Operations Centers (JF JOC). This is a network composed of the NGB Joint Operations Center and a Joint Operations Center in each of the States, Territories, and the District of Columbia. Each JF JOC has redundant communications connectivity to include: DOD unclassified (NIPR) and classified (SIPR) computer networks; a High Frequency network with high and low-side voice and data information; and commercial systems. The network provides DOD and interagency connectivity and situational awareness to deliberate planning and to emerging and on-going contingency operations in any State or Territory. The National Guard has successfully established a Joint CONUS Communications Support Environment (JCCSE) nationwide. Each JFHQ has established Homeland Security Information Network (HSIN) linkages. The HSIN is an unsecured collection of Department of Homeland Security systems designed to facilitate information sharing and collaboration.

20 Colonel F. G. Dowden, Regional Liaison, New Orleans Department of Homeland Security and Public Safety, written statement for a hearing on Hurricane Katrina: Managing Law Enforcement and Communications in a Catastrophe, on February 6, 2006, submitted to the Senate Committee on Homeland Security and Governmental Affairs, 109th Congress, 2nd session.

21 Kevin J. Martin, Chairman, Federal Communications Commission, written statement for a hearing on Public Safety Communications from 9/11 to Katrina: Critical Public Policy Lessons, submitted to Subcommittee on Telecommunications and the Internet, House Committee on Energy and Commerce, on September 29, 2005, 109th Congress, 1st session.

22 U.S. Department of Energy, Office of Electricity Delivery and Energy Reliability, "Hurricane Katrina Situation Report #20," September 4, 2005.

23 Communications "operability" refers to whether a basic communications network is functioning at all. Operability will fail when the underlying infrastructure is destroyed or otherwise fails (e.g. through loss of power).

24 Communications "interoperability" refers to the ability to communicate across different, operable communication systems.

25 Congressman Bill Pascrell, Jr., hearing on Government Operability during Catastrophic Events, on October 26, 2005, House Committee on Homeland Security, Subcommittee on Emergency Preparedness, Science and Technology, 109th Congress, 1st session.

26 For example, FEMA had pre-positioned two of their five Mobile Emergency Response Support (MERS) detachments in the Gulf and quickly moved them to the affected areas in Louisiana and Mississippi soon after landfall, but additional MERS support should have been deployed to the Gulf when it became apparent that those pre-positioned were insufficient for an incident of Katrina's magnitude. U.S. Department of Homeland Security, Federal Emergency Management Agency, "FEMA National Situation Report," August 29, 2005, 3; and Michael Brown, former Director of the Federal Emergency Management Agency, testimony before a hearing on Hurricane Katrina: The Role of the Federal Emergency Management Agency, on September 27, 2005, to House Select Bipartisan Committee to Investigate the Preparation for and Response to Hurricane Katrina, 109th Congress, 1st session.

27 Mark Rey, Under Secretary for Natural Resources and Environment, U.S. Department of Agriculture, testimony before a hearing on Ensuring Operability during Catastrophic Events, on October 26, 2005, House Committee on Homeland Security, Subcommittee on Emergency Preparedness, Science and Technology, 109th Congress, 1st session.

28 Dr. David G. Boyd, Director of the Office for Interoperability and Compatibility, Department of Homeland Security, written statement for a hearing on Ensuring Operability during Catastrophic Events, on October 26, 2005, House Committee on Homeland Security, Subcommittee on Emergency Preparedness, Science and Technology, 109th Congress, 1st session. As a first step, as required by the Fiscal Year 2005 and 2006 homeland security grant guidance, States and urban areas are to develop Tactical Interoperable Communication Plans to address means of improving communications operability and interoperability. See U.S. Department of Homeland Security, *Fiscal Year 2006 Homeland Security Grant Program Guidance: Program Guidance and Application Kit* (Washington, D.C., December 2005). Although not an issue during Hurricane Katrina, first responders still require more radio spectrum to effectively communicate during their missions. Public Law 109-171, enacted recently, provides first responders with more radio spectrum in the 700 megahertz band, starting April 7, 2009. The bill calls for auctioning off some of the radio spectrum relinquished by broadcasters. Some of that revenue would pay for upgrades to first responders' equipment. This transition for the 700 megahertz radio spectrum is considered a critical component in improving communications between police, fire, and other emergency agencies.

29 Dr. David G. Boyd, Director of the Office for Interoperability and Compatibility, Department of Homeland Security, written statement for a hearing on Ensuring Operability during Catastrophic Events, on October 26, 2005, to House Committee on Homeland Security, Subcommittee on Emergency Preparedness, Science and Technology, House Homeland Security Committee, 109th Congress, 1st session.

30 Private sector companies manage sophisticated supply and delivery chains using the most efficient means available to handle goods as few times as possible between the supplier and the customer.

31 Vincent Pearce, National Response Program Manager for the Department of Transportation, testimony before a hearing on Hurricane Katrina: Managing the Crisis and Evacuating New Orleans, on February 1, 2006, Senate Homeland Security and Governmental Affairs Committee, 109th Congress, 2nd session.

32 For example, a contractor arrived at an evacuation staging site at Zephyr Field stadium in New Orleans with 37,500 meals, as requested, only to discover that the evacuees had already left.

33 FEMA US&R Task Forces, in conjunction with USCG, DOD, other federal agencies, and State and local first responders, rescued over 6,500 people. See U.S. Department of Homeland Security, Federal Emergency Management Agency, "Urban Search and Rescue Operations Completed: Hurricane Katrina Urban Search and Rescue Teams Are Due to Return Home," news release, September 30, 2005, <http://www.fema.gov/news/newsrelease.fema?id=19320.html>.

34 Donna Miles, "Military Providing Full-Scale Response to Hurricane Relief Effort," American Forces Press Service, August 31, 2005, http://www.defenselink.mil/news/Aug2005/20050831_2576.html.

35 "Some of the problems we encountered were low visibility at night, a lot of downed power lines, a lot of underwater obstructions, vehicles that were underwater, debris that was everywhere, and large numbers of people shouting for help from the house." Louisiana Department of Wildlife and Fisheries, "Department Timelines Chronology 3," *Activity Report on Hurricane Katrina* (Baton Rouge, 2005), 2.

36 East Baton Rouge Parish, *Draft After-Action Report for Hurricanes Katrina and Rita* (Baton Rouge, 2005), 38.

37 Scott Wells, testimony before a hearing on Hurricane Katrina: Perspectives of FEMA's Operations Professionals, on December 8, 2005, Senate Committee on Homeland Security and Governmental Affairs, 109th Congress, 1st session.

38 Massachusetts Urban Search and Rescue Task Force-1, *Hurricane Katrina After-Action Report: August 30, 2005 through September 8, 2005* (Beverly, MA, 2005), 6.

39 East Baton Rouge Parish, *Draft After-Action Report for Hurricanes Katrina and Rita* (Baton Rouge, 2005), 38.

40 Louisiana Office of the Governor, *Response to U.S. Senate Committee on Homeland Security and Governmental Affairs* (Baton Rouge, December 2005), 11. See also Kathleen Babineaux Blanco, testimony before a hearing on Hurricane Katrina: Preparedness and Response by the State of Louisiana, on December 14, 2005, to the House Select Committee to Investigate the Preparation for and Response to Hurricane Katrina, 109th Congress, 1st session, 68. Louisiana Department of Wildlife and Fisheries, "Department Timelines Chronology 3," *Activity Report on Hurricane Katrina* (Baton Rouge, 2005), 7. <http://www.nola.com/katrina/view.ssf.html>; Newsweek, "The Lost City", September 12, 2005.

41 U.S. Department of Homeland Security, *National Response Plan* (Washington, D.C., December 2004), 8, 43; and *National Response Plan ESF #13 Annex*, pg. 13-1.

42 On August 31, most of the New Orleans police force was redirected from search and rescue missions to respond to the looting, detracting from the priority mission of saving lives. Homeland Security Operations Center Spot Report #33, 31 Aug 05, 1123 hrs. (recording that "on August 31, CEO Akerman of Bell South contacted [a DHS official] and requests immediate security assistance, relating that the Bell South Main Central Office was being overrun by mob during attempted evacuation of site and that its employees may be in physical danger"); U.S. Department of Homeland Security, "Hurricane Katrina DHS SITREP #15," September 2, 2005 (reporting that security concerns were prohibiting all operations in many grain industry facilities); U.S. Department of Homeland Security, "Hurricane Katrina DHS SITREP #18," September 4, 2005 (reporting that fuel and security for deliveries are a concern); U.S. Department of Homeland Security, "Hurricane Katrina DHS SITREP #19," September 4, 2005 (reporting that security remained a major concern for agriculture, food processing, distribution, services, and retail; access to service and retail facilities for re-stocking remains restricted in many areas; security for all infrastructures remained a major concern, with employers reluctant to restart businesses; safety of their employees is a priority); U.S. Department of Homeland Security, "Hurricane Katrina DHS SITREP #29," September 9, 2005 (reporting that security remained the top priority for the industry; contract security and other security sources were being coordinated with other Emergency Support Functions).

Both the Department of the Interior and the Department of Commerce reported that their organic law enforcement assets were available for use in the Gulf Coast region and attempted to lend their assistance by contacting the Interagency Incident Management Group in Washington, D.C., but received no response. The Department of the Interior has 4,400 law enforcement officers—including hundreds of officers immediately deployable in the Gulf Coast area—trained to work in harsh environments, conduct search and rescue, emergency medical services, and evacuation, yet these assets were not called upon to assist under the NRP until late September, when DOI contacted the LECC in New Orleans. The Department of Commerce's National Oceanic and Atmospheric Administration (NOAA) Office of Law Enforcement (OLE) also attempted to lend its law enforcement assistance to the Federal response effort, but received no response through the ESF-13 process.

43 For example, the Department of Interior law enforcement personnel had to be sworn in as Deputy U.S. Marshals to give them Federal law enforcement authority beyond their statutory DOI jurisdiction.

44 While some law enforcement officers provided by States under the EMAC readily accepted direction from Louisiana and Federal law enforcement officials, others operated in New Orleans with little coordination or supervision.

45 According to the U.S. Marshals Service, this was “a critical issue” in both New Orleans and Southern Mississippi. The Marshals Service and the DOJ Office of Legal Policy have offered recommendations for more comprehensive monitoring of persons under law enforcement supervision. For additional information on the disarray of the New Orleans criminal justice system in Hurricane Katrina’s aftermath, see Melinda Deslatte, “Prisons in New Orleans empty as temporary booking facility up and running,” Associated Press, September 3, 2005; Ann Woolner, “A Legal System in Chaos: New Orleans Struggles,” *Fulton County Daily Report*, October 4, 2005; and Chuck Crumbo, “Evacuation leaves Louisiana prison system in chaos,” *The State (Columbia, SC)*, October 5, 2005.

46 On September 3, the Associated Press reported that “computer logs still hadn’t been retrieved from the criminal district court in New Orleans...[and] tracking down witnesses, finding court records and trial transcripts and organizing a temporary court” would remain challenges to the reestablishment of the city’s criminal justice system. Melinda Deslatte, “Prisons in New Orleans empty as temporary booking facility up and running,” Associated Press, September 3, 2005; Ann Woolner, “A Legal System in Chaos: New Orleans Struggles,” *Fulton County Daily Report*, October 4, 2005; and Chuck Crumbo, “Evacuation leaves Louisiana prison system in chaos,” *The State (Columbia, SC)*, October 5, 2005.

47 Both State and Federal courts closed their doors. Supreme Court of Louisiana, Order by Justice Catherine D. Kimball, September 2, 2005, Baton Rouge, Louisiana; Supreme Court of Mississippi, Order by Justice James W. Smith, Jr., September 7, 2005; U.S. District Court for the Eastern District of Louisiana, Order by Chief Judge Helen G. Berrigan, September 4, 2005, accessed from http://katrinalaw.org/dokuphp?id=louisiana_eastern_district_court on February 17, 2006; U.S. Bankruptcy Court for the Eastern District of Louisiana, September 2, 2005, accessed from http://katrinalaw.org/dokuphp?id=louisiana_eastern_bankruptcy_court on February 17, 2006; Fourth Circuit Court of Appeal, State of Louisiana, Order by Justice Max N. Tobias, Jr., September 2, 2005, accessed from http://katrinalaw.org/dokuphp?id=fourth_circuit_court_of_appeal on February 17, 2006; Fifth Circuit Court of Appeal, State of Louisiana, Order by Justice Walter J. Rothschild, September 2, 2005, accessed from: http://katrinalaw.org/dokuphp?id=fifth_circuit_court_of_appeal, accessed on February 17, 2006; Civil District Court, Parish of Orleans, State of Louisiana, Order by Chief Justice Robin M. Giarrusso, September 2, 2005, accessed from http://katrinalaw.org/dokuphp?id=orleans_parish_civil_district_court, accessed on February 17, 2006.

48 The DOJ’s Bureau of Prisons moved, or facilitated movement of, a large number of prisoners incarcerated in Louisiana facilities during the first week of the disaster. Though there were no major difficulties or issues encountered during the actual transport of the prisoners, there were flaws in the decision making process and a general failure on the part of State and local prison authorities to be proactive in evacuating their incarcerated populations.

49 United Health Foundation, *America’s Health Rankings--2005 Edition* (St. Paul, MN: Arundel Street Consulting, Inc., 2005), <http://www.unitedhealthfoundation.org/shr2005/survey.asp> (accessed January 25, 2006), 13

50 “The public health and health care delivery infrastructures have been either completely destroyed or have sustained significant damage across the affected Gulf Coast. Existing facilities that are operational are under extreme stress as they assume even greater responsibilities to fill the gaps created by the loss of so many facilities. Physician offices, cancer, imaging, dialysis and rehabilitation centers, hospitals, clinics, long-term care facilities, pharmacies, laboratories, etc., need to be rebuilt or repaired, not to mention re-supplied, with information technology systems, equipment and inventory.” Dr. Ardis D. Hoven, Member of the American Medical Association Board of Trustees, written statement for a hearing on Assessing Public Health and the Delivery of Care in the Wake of Hurricane Katrina, on September 22, 2005, submitted to the House Committee on Energy and Commerce, Subcommittees on Health and Oversight and Investigations, 109th Congress, 1st session.

51 Sarah A. Lister, *Hurricane Katrina: The Public Health and Medical Response*, Congressional Research Service Report for Congress RL33096, (Washington, D.C., September 21, 2005), Summary, CRS 1, CRS 6-7, CRS 11.

52 “Our situations are urgent. Unless we find financial relief within the next seven to ten days, we will be forced to make some very tough decisions. We are committed to our patients, our hospital staff and our community. However, we can’t continue to care for our patients and community – many of whom hopefully will return soon from the evacuation – unless we have immediate financial assistance. ... The Centers for Medicare & Medicaid Services already has eased some of its regulations governing Medicare and Medicaid. There are, however, additional measures that can be taken. The AHA suggests immediate federal coverage for the uninsured people affected by the hurricane. So that access can be granted as quickly as possible, additional relief from Medicare and Medicaid red tape is needed. ... The AHA also asks that [FEMA] funds be available for all types of community hospitals affected by the storm.” Dr. Mark Peters, President & CEO, East Jefferson Memorial Hospital, Metairie, Louisiana, on behalf of the American Hospital Association, written statement for a hearing on Assessing Public Health and the Delivery of Care in the Wake of Katrina, on September 22, 2005, submitted to the House Committee on Energy and Commerce, Subcommittees on Health and Oversight and Investigations, 109th Congress, 1st session.

53 In several instances, HHS had pre-positioned medical, public health and pharmaceutical assets in Louisiana and had them ready to deploy where needed as soon as they received a go-ahead from State decision-makers. In some cases, security and logistics may have been issues, but delays in 'on the ground' decision-making by local and State officials resulted in delays in the delivery of assets and services when and where they were needed.

54 One key example: "Dr. Laurence Grummer-Strawn, a Centers for Disease Control and Prevention researcher and an HHS Public Health Service member, was deployed to central Louisiana with a team of 125 medical personnel to construct a temporary 1,000-bed hospital. The plan, Grummer-Strawn understood, was for that facility to treat 'overflow patients' transferred from hospitals in the southern part of the state. Arriving Saturday, Sept. 3, six days after Katrina hit, his team spent two days setting up the hospital before they were told they weren't needed there. The team left Alexandria, La., Wednesday - it took a day to pack up the beds and equipment - and fanned out to conduct needs assessments at shelters across the state." Justin Rood, "Medical Catastrophe," *Government Executive Magazine*, November 1, 2005, <http://www.govexec.com/features/1105-01/1105-01s1.htm>.

55 "Almost 34,000 volunteer health professionals registered through HHS's toll-free telephone number or through the website established for this purpose. Of these, only 1,400 were deployed, based on the tasking requirements from FEMA. By the end of the first week following Katrina's landfall, it became clear that the majority of the volunteers would not be urgently needed in the Gulf Coast. Though HHS announced this fact, this message did not reach many volunteers, who expressed frustration that their services were not being accepted or efficiently utilized. [M]any well-intentioned clinicians and health care organizations simply self-deployed and traveled to Louisiana, where their arrival compounded the overall disorganization of the effort to provide health care ... Lacking an assigned role within a properly planned framework, many found themselves sitting on their hands, doing nothing for which they had been trained." Hilarie H. Cranmer, "Hurricane Katrina: Volunteer Work – Logistics First," *New England Journal of Medicine* 353(15), no. (October 13, 2005).

56 Irwin Redlener, Dennis Johnson, David A. Berman and Roy Grant, "Follow-Up 2005: Where the American Public Stands on Terrorism and Preparedness after Hurricanes Katrina and Rita," <http://www.ncdp.mailman.columbia.edu/research.htm> (accessed January 25, 2006).

57 Sarah A. Lister, *Hurricane Katrina: The Public Health and Medical Response*, Congressional Research Service for Congress RL33096, (Washington, D.C., September 21, 2005), 22.

58 As of September 11, 2005, 14 days after Katrina made landfall, FEMA had received 699,207 Louisiana, Alabama and Mississippi household registrations for assistance under the Individuals and Households Program (IHP); 393,294 had been approved for assistance; 366,370 households had been funded; and \$818,939,600 in assistance had been released. U.S. Department of Homeland Security, "Hurricane Katrina DHS SITREP #35," September 12, 2005, 11. By late September, "an estimated more than 20 percent of all those affected by the storms and who have filed for FEMA assistance are now receiving HHS benefits and services. Furthermore, 41 percent of the 857,000 evacuees living in a different zip code from the damaged areas are receiving help from HHS." U.S. Department of Health and Human Services, "Estimates Show More Than 40 Percent of Hurricane Evacuees Now Receiving HHS Benefits or Services," news release, September 29, 2005.

59 Examples include: health insurance for elderly and disabled Americans (Medicare) and health insurance for low-income people (Medicaid); financial assistance for low-income families; pre-school education and services (Head Start); Social Security benefits; veterans benefits; and unemployment benefits.

60 U.S. Department of Homeland Security, *National Response Plan* (Washington, D.C., December 2004), ESF #6-1.

61 U.S. Department of Homeland Security, *National Response Plan* (Washington, D.C., December 2004), ESF #6-5. "Mass care" includes overall coordination of the shelter, feeding and other activities to support the emergency needs of victims.

62 U.S. Department of Homeland Security, *National Response Plan* (Washington, D.C., December 2004), ESF #6-3. "Human services" refer to the provision of resources, the processing of new Federal benefit claims, compensation claims and other supportive services.

63 U.S. Department of Homeland Security, *National Response Plan* (Washington, D.C., December 2004), ESF #6-2.

64 Based on the locations reported by those who applied for FEMA assistance as a result of the impact of Hurricanes Katrina and Rita. U.S. Department of Homeland Security, Federal Emergency Management Agency, "Reported Locations of Katrina/Rita Applicants," January 20, 2006, http://www.fema.gov/pdf/press/katrina_after/metro_stats.pdf (accessed January 25, 2006).

65 Michael Chertoff, Secretary of the Department of Homeland Security, written statement for a hearing on Hurricane Katrina: The Homeland Security Department's Preparation and Response, on February 15, 2006, submitted to the Senate Homeland Security and Governmental Affairs Committee, 109th Congress, 2nd session.

Governor Kathleen Blanco estimates that 8 percent of the New Orleans population stayed behind. Governor Kathleen Babineaux Blanco, written statement for a hearing on Hurricane Katrina: Preparedness and Response by the State of Louisiana, on December 14, 2005, submitted to the U.S. House Select Committee to Investigate the Preparation for and Response to Hurricane Katrina, 109th Congress, 1st session.

Mayor Nagin testified to Congress that “thousands of residents” did not leave, even after he issued the mandatory evacuation order. Ray Nagin, Mayor of New Orleans, written statement for a hearing on Hurricane Katrina: Preparedness and Response by the State of Louisiana, on December 14, 2005, submitted to the House Select Bipartisan Committee to Investigate the Preparation for and Response to Hurricane Katrina, 109th Congress, 1st session.

66 Ronald D. Utt, “After Weeks of Confusion, the Right Course for Evacuee Housing Assistance,” *WebMemo #866*, prepared for The Heritage Foundation, September 28, 2005.

67 “Had HUD staff been more closely involved in FEMA planning, the cost and delay of relearning 50 years of lessons could have been avoided.” Ronald D. Utt, “After Weeks of Confusion, the Right Course for Evacuee Housing Assistance,” *WebMemo #866*, prepared for The Heritage Foundation, September 28, 2005. HUD played a key role facilitating the identification of available housing resources and placement of Katrina evacuees in housing.

68 National Oceanic and Atmospheric Administration, National Weather Service, “NOAA Weather Radio All Hazards,” January 31, 2006, <http://www.weather.gov/nwr/>. The Federal Communication Commission’s EAS Primary Entry Point (PEP) station in New Orleans (station WWL) was one of the few radio stations in the area to provide continuous service to the New Orleans area. The NOAA Weather Radio (NWR) is a national network of radio stations that continuously broadcast weather and hazard information from local Weather Service offices. Operating in close conjunction with EAS, NOAA Weather Radio comprises an “all hazards” radio network that acts as a “single source for comprehensive weather and emergency information.” National Oceanic and Atmospheric Administration, National Weather Service, “NOAA Weather Radio All Hazards,” January 31, 2006, <http://www.weather.gov/nwr/>.

69 The Emergency Alert System (EAS) is a mechanism for public officials—Federal, State, and local—to communicate disaster information and instructions rapidly and widely. The system aims to reach the broadest possible audience by disseminating emergency updates on existing radio and television stations, including via digital and satellite networks. Federal Communications Commission, *FCC Consumer Facts: The Emergency Alert System* (Washington, DC, 2005), 1. See also State of California, “What Is EAS?,” <http://eas.oes.ca.gov/Pages/whatseas.htm>. The new EAS system is the direct descendant of the Emergency Broadcast System (EBS), the Nation’s alert system from 1963 until the advent of EAS. EAS was officially launched on January 1, 1997 (for radio stations) and December 31, 1998 (for television). Federal Emergency Management Agency, “Background on the Emergency Alert System,” October 23, 2004, <http://www.fema.gov/rrr/rep/easrep.shtm>. While EAS fulfills the same function as EBS, it differs in that it takes advantage of digital technology to permit automation of transmission. Federal Emergency Management Agency, “Background on the Emergency Alert System,” October 23, 2004, <http://www.fema.gov/rrr/rep/easrep.shtm>. The Emergency Broadcast System and its EAS successor were originally designed for the President to speak to the Nation during an emergency, particularly following catastrophic nuclear attacks. But the system was made available to State and local officials in 1963, and since then has been used primarily for weather emergencies. “There are two contexts in which the EAS will be used—Presidentially-initiated alerts and messages and those initiated by State and local governments in concert with the broadcast industry.” Federal Emergency Management Agency, “Background on the Emergency Alert System,” October 23, 2004, <http://www.fema.gov/rrr/rep/easrep.shtm>. See also, Federal Communications Commission, *FCC Consumer Facts: The Emergency Alert System* (Washington, DC, 2005), 2. The document states: “a state emergency manager may use the system to send out a public warning by broadcasting that warning from one or more major radio stations in a particular state.” EAS was not activated prior to landfall aside from NOAA hurricane warnings and advisories. “The Emergency Alert System was never activated by the White House or by State or local governments during Katrina.” Ken Kerschbaumer, “Broadcasters Seek Better Emergency Alert System,” *Broadcasting and Cable*, September 12, 2005.

70 “The Big Disconnect on New Orleans,” *CNN.com*, September 2, 2005, <http://www.cnn.com/2005/US/09/02/katrina.response>.

71 In testimony before the House Select Bipartisan Committee to Investigate the Preparation and Response to Hurricane Katrina, Mr. Phil Parr, Deputy Federal Coordinating Officer, FEMA, and Mr. Terry Ebert, Director of the Louisiana Office of Homeland Security, of the City of New Orleans, both testified that exaggerated media reports impeded rescue efforts (December 14, 2005).

72 The Nation relies on interdependent systems known as “critical infrastructure” to maintain its defense, continuity of government, economic prosperity, and quality of life. The term critical infrastructure means “systems and assets, whether physical or virtual, so vital to the United States that the incapacity or destruction of such systems and assets would have a debilitating impact on security, national economic security, national public health or safety, or any combination of those matters.” See, e.g., *USA Patriot Act of 2001*, Section 1016(e), Public Law 107-56, 107th Congress, 1st session (October 26, 2001), 115 Stat. 401; *Critical Infrastructure Protection Act of 2001*, 42 U.S.C. § 5195c(e).

Transportation, electricity, banking, telecommunications, food supply, and clean water are examples of critical infrastructure services that have become basic aspects of our daily lives. These services are often only noticed when they are disrupted, and the American public expects speedy restoration of them. Private sector companies own and operate 85 percent of our Nation’s critical infrastructure and are responsible for protecting their facilities and restoring operations following an incident. U.S. Department of Homeland Security, *Interim National Infrastructure Protection Plan* (Washington, DC). Response planning must also recognize the unique Federal responsibility to

support private sector efforts and assist in the restoration of critical infrastructures imperative to the National economy or integral to larger cascading systems or supply chains.

73 U.S. Department of Energy, Energy Information Administration, *Hurricane Katrina's Impact on the U.S. Oil and Natural Gas Markets*, September 6, 2005.

74 Samuel Bodman, Secretary of the Department of Energy, written statement for a hearing on Hurricane Recovery Efforts, on October 27, 2005, submitted to the Senate Committee on Energy and Natural Resources, 109th Congress, 1st session.

75 U.S. Department of Energy, Office of Electricity Delivery and Energy Reliability, "Hurricane Katrina Situation Report #10," August 30, 2005.

76 U.S. Department of Homeland Security, *National Response Plan* (Washington, D.C., December 2004), 12.

77 Sectors include: Agriculture and Food, Banking and Finance, Chemical, Commercial Facilities, Dams, Defense Industrial Base, Emergency Services, Energy, Government Facilities, Information Technology, National Monuments and Icons, Nuclear Reactors, Material and Waste, Postal and Shipping, Public Health and Healthcare, Telecommunications, Transportation, Water. The White House, *The National Strategy for the Physical Protection of Critical Infrastructures and Key Assets* (Washington, D.C., February 2003), 9.

78 Industries with critical infrastructure contacted various Federal departments and agencies and requested assistance to protect or to restore their facilities. These requests were inconsistently coordinated across sectors and responded to in an ad hoc fashion.

79 "The Regional Response Coordination Center (RRCC) initially deploys a DHS/Emergency Preparedness & Response (EPR)/FEMA-led Emergency Response Team Advance (ERT-A), including rapid needs assessment personnel and appropriate ESF representatives, to State operating facilities and incident sites to assess the impact of the situation, collect damage information, gauge immediate Federal support requirements, and make preliminary arrangements to set up Federal field facilities." U.S. Department of Homeland Security, *National Response Plan* (Washington, D.C. December 2004), 51. "Infrastructure Specialist (representing ESF #3)-assesses the status of transportation." In addition, they did not have expertise in the critical infrastructure in the region. U.S. Department of Homeland Security, Federal Emergency Management Agency, "FEMA Rapid Needs Assessment Form," April 2001, http://www.fema.gov/preparedness/resources/em_mgt/rapid_needs_assessment_team.htm (accessed on January 17, 2005).

80 U.S. Department of Homeland Security, *Interim National Infrastructure Protection Plan* (Washington, D.C.).

81 A Superfund site is a hazardous waste site that is part of the U.S. Environmental Protection Agency's (EPA's) Superfund Program. Years ago, before people became aware of the public health and environmental dangers of dumping chemical wastes, thousands of properties became uncontrolled or abandoned hazardous waste sites. Examples include abandoned warehouses or landfills. Concern about this problem led Congress to establish in 1980 the Superfund Program to locate, investigate and clean up the worst sites nationwide. The EPA administers the Superfund Program in cooperation with individual states and tribal governments. EPA, "About Superfund," <http://www.epa.gov/superfund/about.htm>, accessed February 15, 2006.

82 *Gulf Coast Hurricane Emergency Environmental Protection Act of 2005*, HR 4139, 109th Congress, 1st session, (October 25, 2005), 3.

83 U.S. Environmental Protection Agency, "Environmental Assessment Summary," December 6, 2005, http://www.epa.gov/katrina/testresults/katrina_env_assessment_summary.htm, (accessed January 18, 2006).

84 "As of Oct. 4, 22 multi-agency environmental assessment and recovery teams had: conducted shoreline and waterway assessments throughout Mississippi and Alabama; resolved 2,315 of 2,380 cases reported to the Coast Guard and EPA; assessed a total of 504 vessels grounded or deposited inland along coastal areas for potential oil discharges; collected more than 10,000 hazardous materials such as drums, tanks, cylinders, containers and batteries throughout the Mississippi counties of Hancock, Harrison and Jackson as well as the Alabama counties of Baldwin and Mobile; recovered about 43,000 gallons of fuel; and assessed more than 200 facilities." U.S. Department of Homeland Security, Coast Guard, "Coast Guard Response to Hurricane Katrina," U.S. Coast Guard Fact File, September 11, 2005, http://www.uscg.mil/hq/g-cp/comrel/factfile/Factcards/Hurricane_Katrina.htm.

85 The graph shown on the referenced website displays the estimated volume and surface area of the flood waters at one foot increments. Note that the volume and area estimates are only for the areas shown as inundated on the above graphic. The depths are relative to the water surface as of the afternoon of Friday, September 2, 2005. U.S. Geological Survey, "Hurricane Katrina: Science," <http://eros.usgs.gov/katrina/science.html> (accessed January 23, 2006). "The affected area was home to 2.3 million people, (0.8 percent of the U.S. population), and covers 90,000 square miles, (2.5 percent of the U.S. surface area). At the time Katrina hit, New Orleans was the 35th largest U.S. city by population." See House Committee on Ways and Means, "Economic Update: Hurricane Katrina," news release, September 8, 2005, <http://waysandmeans.house.gov/media/pdf/taxdocs/090805katrina.pdf>.

86 Even after assessments were conducted, a number of Federal agencies reported that their personnel did not receive information or warnings concerning environmental hazards.

87 *Stafford Act*, 42 U.S.C. § 5173.

88 Michael Chertoff, Secretary of the Department of Homeland Security, written statement for a hearing on “Hurricane Katrina: The Homeland Security Department’s Preparation and Response,” on February 15, 2006, submitted to the Senate Homeland Security and Governmental Affairs Committee, 109th Congress, 2nd session.

89 Debris on private property can only be removed with the owner’s consent or with a State or local government request to the Federal government that must meet several conditions. This was a difficult process because many owners had evacuated the area and could not be located. U.S. Department of Homeland Security, Federal Emergency Management Agency; and Eric Cramer, “Waveland: A Case Study in Community Restoration,” *Mississippi Valley Division News*, <http://www.mvd.usace.army.mil/hurricane/mvk/news/waveland.pdf>.

90 The Department of State lists 151 countries, political entities and international organizations that offered assistance. Two additional countries offered assistance but wished no public recognition, for a total of 153. Of those, 139 were countries and the balance (14) was either political entities or international organizations. Note that of the fourteen, five different United Nations organizations are included. Pledges totaled \$854 million. Of the \$854 million pledged, \$400 million was in commodity for cash assistance (oil to be sold and then cash value considered). Of the remaining \$454 million, \$126.4 million has been received so far. The other \$328 million plus the \$400 million in oil, has not been received, for a total of \$728 million. (As of October 12, the foreign countries had pledged \$854 million in financial contributions, and of this amount the USG had received \$118.9 million (the latter figure had increased to \$126.4 million by January 9). On October 20, 2005, after interagency consensus, \$66 million of the foreign funds received by the U.S. was transferred to FEMA for a case management program. The Federal government expects the balance of the foreign funds received to be allocated shortly. This accounts for all \$854 million pledged.

91 A German company offering a \$3 million integrated satellite and cellular telephone system capable of handling 5,000 calls at once waited five days for a written deployment order from USNORTHCOM.

92 Joel Brinkley and Craig S. Smith, “Score of nations offer their help,” *International Herald Tribune*, September 8, 2005; and Sean McCormack, “Daily Press Briefing,” US Department of State, September 7, 2005.

93 The State Department made contact with all New Orleans-based consulates, facilitated visits by various consular officials, as well as monitored the arrival and distribution of in-kind assistance and held regular press briefings. There is no tracking of Green Card holders or tourists.

94 U.S. Department of Homeland Security, “Emergencies and Disasters,” <http://www.dhs.gov/interweb/assetlibrary/katrina.html> (accessed January 13, 2006).

95 U.S. Citizen Corps, “Citizen Corps Support for Hurricane Katrina Response & Recovery Efforts,” http://www.citizencorps.gov/doc/cc_Support_Katrina_1005.doc (accessed January 13, 2006).

96 Long before Hurricane Katrina ever made landfall, the Harris County Citizen Corps laid the groundwork for success with its pre-incident organization and its partnerships with local volunteer groups and area businesses. These two factors allowed the Harris County Citizen Corps to mobilize and organize its resources quickly and efficiently to serve the thousands of evacuees sheltered in Houston-area sites. According to emergency responders on the scene, Citizen Corps members previously trained in the National Incident Management System (NIMS) and the Incident Command System (ICS) were of great value to the hurricane response. Due to their pre-incident training, many Citizen Corps volunteers were already familiar with NIMS/ICS terminology (e.g., Joint Information Center, Joint Operations Center, IC, etc.) and understood the responsibilities of emergency responders at the incident site. Information available at U.S. Department of Homeland Security, *Lessons Learned Information Sharing (LLIS.gov) website*, https://www.llis.dhs.gov/member/secure/detail.cfm?content_id=14990.

97 Tim Yarbrough, “Baptists’ 10.5 Million Meals shatters Prior Disaster Relief Record,” *North American Mission Board*, <http://www.namb.net/site/apps/nl/content2.asp?c=9qKILUOzEpH&b=227361&ct=1568907> (accessed January 13, 2006).

98 The White House, Office of National Drug Control Policy, “Director Walters visits Baton Rouge, LA,” September 30, 2005, <http://www.pushingback.com/archives/05sep.html> (accessed January 13, 2006). See also, Set Free Indeed Ministry, “Hurricane Katrina: Set Free Indeed Offering Recovery & Relief,” <http://www.setfreeindeedministry.com/katrina.html> (accessed February 15, 2005).

99 Melvin “Kip” Holden, Mayor of Baton Rouge, interview by Wolf Blitzer, *CNN Late Edition with Wolf Blitzer*, September 11, 2005, <http://transcripts.cnn.com/TRANSCRIPTS/0509/11/le.01.html>.

Chapter Six: Transforming National Preparedness

« **Return to Document**

¹ The National Security Act of 1947 mandated a major reorganization of the foreign policy and military establishments of the U.S. Government. The act created many of the institutions that Presidents found useful when formulating and implementing foreign policy, including the National Security Council (NSC). The Council itself included the President, Vice President, Secretary of State, Secretary of Defense, and other members (such as the Director of Central Intelligence), who met at the White House to discuss both long-term problems and more immediate national security crises. A small NSC staff was hired to coordinate foreign policy materials from other agencies for the President. Beginning in 1953, the President's Assistant for National Security Affairs directed this staff.

The act also established the Central Intelligence Agency (CIA), which grew out of World War II era Office of Strategic Services and small post-war intelligence organizations. The CIA served as the primary civilian intelligence-gathering organization in the government. Later, the Defense Intelligence Agency became the main military intelligence body. The 1947 law also caused far-reaching changes in the military establishment. The War Department and Navy Department merged into a single Department of Defense under the Secretary of Defense, who also directed the newly created Department of the Air Force. However, each of the three branches maintained their own service secretaries. In 1949 the act was amended to give the Secretary of Defense more power over the individual services and their secretaries.

See generally *National Security Act of 1947*, 61 Stat. 495, codified at 50 U.S.C. §§ 401—403-3 (2005).

² The White House, *The National Security Strategy of the United States of America* (Washington, DC, September 2002); The White House, Office of Homeland Security, *National Strategy for Homeland Security* (Washington, DC, July 2002); and The White House, *National Strategy for Combating Terrorism* (Washington, DC, February 2003).

³ See U.S. Department of Homeland Security, *National Response Plan* (Washington, DC, December 2004); U.S. Department of Homeland Security, *National Incident Management System* (Washington, DC, March 1, 2004); U.S. Department of Homeland Security, *Interim National Preparedness Goal* (Washington, DC, March 31, 2005); and U.S. Department of Homeland Security, *Interim National Infrastructure Protection Plan* (Washington, DC, February 2005).

⁴ *Interim National Preparedness Goal*, 3.

⁵ Homeland Security Presidential Directive-8 (HSPD-8) establishes policy that all Federal departments and agencies will cooperate to issue relevant State and local financial assistance, program announcements, solicitations, application instructions, and other guidance documents in a manner that is consistent with the National Preparedness Goal. The White House, *Homeland Security Presidential Directive-8: National Preparedness* ["HSPD-8"] (Washington, DC, December 17, 2003).

⁶ Congress requires the Secretary of Defense to conduct a comprehensive examination every four years (known as the "Quadrennial Defense Review") of the national defense strategy, force structure, force modernization plans, infrastructure, budget plan, and other elements of the defense program and policies of the United States with a view toward determining and expressing the defense strategy of the United States and establishing a defense program for the next twenty years. See 10 U.S.C. § 118 (2005).

⁷ See note 2.

⁸ Among other reforms, the *Goldwater-Nichols* legislation clarified the chain of command from the President to the Secretary of Defense to the Combatant Commander. It also elevated the Chairman of the Joint Chiefs of Staff to be the President's principal military adviser and strengthened the Joint Staff as a truly "Joint" organization that works for the Chairman, not the armed services. *Goldwater-Nichols Act of 1986*, Public Law 99-433, 99th Congress, 2nd session, 101 Stat. 992 (October 1, 1986).

⁹ Eligibility to receive State Homeland Security Grant Program funding is dependent upon DHS approval of statewide, territory, or regional homeland security strategies that adopt capability-based planning and a prioritization of assets based on risks and need in conformance with the National Preparedness Goal. The Urban Area Security Initiative is a subset of the State Homeland Security Grant Program, providing funds to address the unique planning, equipment, training, and exercise needs of high threat, high-density urban areas, and assist them in building an enhanced and sustainable capacity to prevent, protect against, respond to, and recover from acts of terrorism. U.S. Department of Homeland Security, FY 2006 Homeland Security Grant Program (Washington, DC, December 2005).

¹⁰ HSPD-8, § 1.

¹¹ See generally *Interim National Preparedness Goal*.

¹² In particular, DHS would benefit from sufficient funds to permit the Department to deploy additional assets and resources upon warning of a catastrophic event. Furthermore, we as a Nation must not penalize DHS and other Federal responders when they undertake anticipatory actions for false alarms. To use medical terms, a *false negative* is unacceptable while we should be willing to accept some *false positives*.

¹³ As described in the *National Incident Management System*, the command function may be exercised in two general ways: 1) through a "Single Command" structure led by an Incident Commander (IC), or through a "Unified Command." In a Single Command structure, the IC is solely responsible for establishing incident management objectives and strategies and for ensuring that all functional area activities are directed toward accomplishment of the

strategy. In a Unified Command structure, the individuals designated by their jurisdictional authorities jointly determine objectives, strategies, plans, and priorities and work together to execute integrated incident operations and maximize the use of assigned resources. *National Incident Management System*, 12-16.

¹⁴ The White House, *Homeland Security Presidential Directive-5: Management of Domestic Incidents* (Washington, DC, February 28, 2003). See also *Homeland Security Act of 2002* ["*Homeland Security Act*"], Public Law 296, 107th Congress, 2nd session (November 22, 2005), § 101, codified at 6 U.S.C. § 111 (2002).

¹⁵ HSPD-5, § 14.

¹⁶ There is no reason to eliminate the FCO role in the Stafford Act as there is a wide-range of incidents that are not nationally significant—such as most wildfires—where an FCO is essential to coordinate the Federal response, but a PFO is not necessary.

¹⁷ HSPD-5, § 5.

¹⁸ First issued in 1992, the *Federal Response Plan* (FRP) outlined how the Federal Government implemented the Stafford Act to assist State and local governments when a major disaster or emergency overwhelmed their ability to respond effectively to save lives; protect public health, safety, and property; and restore communities. The FRP outlined policies, planning assumptions, concept of operations, response and recovery actions, and responsibilities of twenty-five Federal departments and agencies and the American Red Cross, that guided Federal operations following a Presidential declaration of a major disaster or emergency. An interim edition of the FRP was released in 2003 to reflect the passage of the Homeland Security Act of 2002 and the establishment of DHS. *Federal Response Plan (Interim)*, January 2003.

¹⁹ See generally *National Response Plan*, pg. ESF-i et seq. Under current arrangements, the *NRP* Emergency Support Functions (ESF) do not cleanly connect to the ICS structure required by *NIMS*, thus causing at time dueling systems or organizations to be created—one based on the ESF structure and one based on the ICS system. The Incident Command System (ICS) adopted by *NIMS* has five major sections (Command, Operations, Planning, Logistics, and Finance/Administration), each with their own subordinate groups that are modular and scalable to account for situations of various size and nature. See *National Incident Management System*, 7.

²⁰ An eligibility requirement for States, territories, and regions to receive State Homeland Security Grant Program and Urban Areas Security Initiative grant funds is compliance with the phased implementation of *NIMS*. U.S. Department of Homeland Security, *FY 2006 Homeland Security Grant Program* ["*FY 2006 Homeland Security Grant Program*"] (Washington, DC, December 2005). The implementation of the *National Incident Management System* is also one of seven priorities for spending Federal homeland security assistance as outlined in the NPG. *Interim National Preparedness Goal*, 10.

²¹ The National Defense University, located at Fort McNair in Washington, DC, prepares military and civilian leaders from the United States and other countries to address national and international security challenges, through multi-disciplinary educational programs, research, professional exchanges, and outreach. For additional information, see www.ndu.edu.

²² See *Goldwater-Nichols Act of 1986*, Public Law 99-433, 99th Congress, 2nd session (October 1, 1986), § 401-406.

²³ HSPD-8 directs the Secretary of Homeland Security to establish a national program and a multi-year planning system to conduct homeland security preparedness-related exercises in coordination with other appropriate Federal departments and agencies. See generally *HSPD-8*.

²⁴ The *National Strategy for Homeland Security* directed the establishment of a National Exercise Strategy. *HSPD-8* directed Secretary Tom Ridge to establish a "National Exercise Program" (NEP). Secretary Ridge charged the DHS Office of Domestic Preparedness to develop a program that identifies and integrates national level exercise activities to ensure those activities serve the broadest community of learning. In addition to full scale, integrated National level exercises—the NEP provides for tailored exercise activities that serve as the Department's primary vehicle for training national leaders and staff. The NEP enhances the collaboration among partners at all levels of government for assigned homeland security missions. National-level exercises provide the means to conduct "full-scale, full system tests" of collective preparedness, interoperability, and collaboration across all levels of government and the private sector. The program also incorporates elements to allow us to identify the implications of changes to homeland security strategies, plans, technologies, policies, and procedures. The cornerstone of national performance-based exercises is the Top Officials (TOPOFF), biennial exercise series. TOPOFF included a functional exercise in 2000 (TOPOFF I) and a full-scale exercise in 2003 (TOPOFF II). For additional information, see <http://www.ojp.usdoj.gov/odp>. The "Homeland Security Exercise and Evaluation Program" (HSEEP) is both doctrine and policy for designing, developing, conducting and evaluating exercises. HSEEP is a threat- and performance-based exercise program that includes a cycle, mix and range of exercise activities of varying degrees of complexity and interaction.

HSEEP includes a series of four reference manuals to help states and local jurisdictions establish exercise programs and design, develop, conduct, and evaluate exercises. For additional information, see <http://www.ojp.usdoj.gov/odp/docs/hseep.htm>. <http://www.hseep.dhs.gov>

²⁵ Office of Management and Budget, *The President's Management Agenda* (Washington, DC, 2001). See also *FY 2006 Homeland Security Grant Program*.

²⁶ U.S. Commission on the Intelligence Capabilities of the United States Regarding Weapons of Mass Destruction, *Report to the President of the United States* ["WMD Report"] (Washington, DC, March 31, 2005), 337-341; National Commission on Terrorist Attacks Upon the United States, *The 9/11 Commission Report: Final Report of the National Commission on Terrorist Attacks Upon the United States* ["9/11 Report"] (New York: WW Norton and Company, July 22, 2004), 420-421.

²⁷ Prior to the 109th Congress, the Department was subject to the oversight of eighty-eight different Congressional committees and sub-committees. See 9/11 Public Discourse project, "Fact Sheet on Congressional Reform" (Washington, DC, July 11, 2005), http://www.9-11pdp.org/ua/2005-07-11_factsheet.pdf. Subsequently, the committee structure has been changed to attempt a consolidation of homeland security oversight through the formation of a Senate Committee on Homeland Security and Government Affairs and a House Committee on Homeland Security.

²⁸ For example, using a risk-based formula, the Urban Area Security Initiative is funded for FY06 at \$765 million. This compares to the \$950 million of FY06 funding allocated in both equal distributions and risk-based justifications across the States and territories through the State Homeland Security Grant Program and the Law Enforcement Terrorism Prevention Program. Moreover, when other "all-hazards" grant programs (e.g., Firefighter Assistance Grants and Emergency Management Performance Grants) are added to the equation, risk-based grants account for less than 30 percent of homeland security grants for preparedness and other responder needs. *Department of Homeland Security Appropriations Act of 2006*, Public Law 90, 109th Congress, 1st session (October 18, 2005). See also Shawn Reese, "Risk-Based Funding in Homeland Security Grant Legislation: Analysis of Issues for the 109th Congress," CRS Report # 33050, August 29, 2005.

²⁹ The *Interim National Preparedness Goal* defines capabilities-based planning as "planning, under uncertainty, to provide capabilities suitable for a wide range of threats and hazards while working within an economic framework that necessitates prioritization and choice." *Interim National Preparedness Goal*, 4.

³⁰ U.S. Department of Homeland Security, *National Planning Scenarios, Draft Version 20.1* ["National Planning Scenarios"] (Washington, DC, April 2005).

³¹ Figure 2 duplicates Figure 1.1 in the previous "Katrina in Perspective" chapter, with the addition of the September 11th terrorist attacks and National Planning Scenarios 1, 3, and 9. For sources for these additions, see *9/11 Report*, Executive Summary, 1-2; Robert Looney, "Economic Costs to the United States Stemming From the 9/11 Attacks," *Strategic Insights* 1, no. 6 (Monterey, CA, August 2002), <http://www.ccc.nps.navy.mil/si/aug02/homeland.asp>; and *National Planning Scenarios*. Table 4, below, contains the data used in Figure 2.

Table 1. Worst Natural Disasters in the United States, 1900-2005, with September 11th Terrorist Attacks and Selected National Planning Scenarios
Damage in Third Quarter 2005 dollars

Top Disasters	Estimated deaths	Estimated damage
Galveston Hurricane (1900)	8,000	< \$1 billion
San Francisco Earthquake and Fire (1906)	5,000	\$6 billion
Atlantic-Gulf Hurricane (1919)	600	< \$1 billion
Mississippi Floods (1927)	246	\$2 billion
Hurricane San Felipe and the Okeechobee Flood (1928)	2,750	< \$1 billion
New England Hurricane (1938)	600	\$4 billion
Northeast Hurricane (1944)	390	< \$1 billion
Hurricane Diane (1955)	184	\$5 billion
Hurricane Audrey (1957)	390	< \$1 billion

Hurricane Betsy (1965)	75	\$7 billion
Hurricane Camille (1969)	335	\$6 billion
Hurricane Agnes (1972)	122	\$8 billion
Hurricane Hugo (1989)	86	\$11 billion
Hurricane Andrew (1992)	61	\$33 billion
East Coast Blizzard (1993)	270	\$4 billion
September 11, 2001	2981	\$18 billion
Major 2004 Hurricanes (Charley, Frances, Ivan, Jeanne)	167	\$46 billion
Hurricane Katrina (2005)	1,330	\$96 billion
National Planning Scenarios		
#1. 10-kt Improvised Nuclear Device	Hundreds of thousands	Hundreds of billions of dollars
#3. Pandemic Influenza	87,000	\$87 billion (low estimate)
#9. Major Earthquake	1,400	Hundreds of billions of dollars

³² Governor Kathleen Blanco estimates that 8 percent of the New Orleans population stayed behind: “Hurricane Ivan threatened us last year. Our evacuation looked like Houston’s—not very pretty. Before Katrina came, I developed a new evacuation plan that includes contra-flow, where both sides of the interstates are used for outbound traffic. I am proud that we rapidly moved over 1.2 million people—some 92% of the population—to safety without gridlock or undue delay prior to Katrina.” Governor Kathleen Babineaux Blanco, written statement for a hearing on Hurricane Katrina: Preparedness and Response by the State of Louisiana, on December 14, 2005, submitted to the U.S. House Select Committee to Investigate the Preparation for and Response to Hurricane Katrina, 109th Congress, 1st session.

³³ *9/11 Report*, 336 (quoting then-Deputy Secretary of Defense Paul Wolfowitz).

³⁴ “1984: Tory Cabinet in Brighton bomb blast,” *BBC.co.uk*, October 12, 1984, http://newssearch.bbc.co.uk/onthisday/hi/dates/stories/october/12/newsid_2531000/2531583.stm.

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³⁶ *National Response Plan*, 5.

³⁷ See also Frances Fragos Townsend, Remarks at the National Emergency Management Association’s 2006 Mid-Year Conference, February 13, 2006, available at www.lexis.com.

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³⁹ U.S. Department of Homeland Security, “Good Story: Harris County, Texas Citizen Corps’ Response to Hurricane Katrina,” *Lessons Learned Information Sharing (LLIS.gov) database*, November 17, 2005, <http://www.llis.gov>.

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41 “The Ad Council has declared *Ready* one of the most successful campaigns in its more than 60-year history. Since its launch the *Ready* campaign has generated more than \$466 million in donated media support and its website has received more than 1.9 billion hits and 22 million unique visitors. The U.S. Department of Homeland Security promotes individual emergency preparedness through the *Ready* campaign and Citizen Corps as part of a broader national effort conducted by the Department’s Preparedness Directorate. *Ready* is a national public service advertising campaign produced by The Advertising Council in partnership with Homeland Security. The *Ready* campaign is designed to educate and empower Americans to prepare for and respond to emergencies, including natural disasters and potential terrorist attacks.” U.S. Department of Homeland Security, “Homeland Security and the Advertising Council Provide Parents and Teachers with Resources to Educate Children about Emergency Preparedness,” news release, February 2, 2006, http://www.dhs.gov/dhspublic/interapp/press_release/press_release_0848.xml. See also www.ready.gov.

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45 For example, the development of the *Interim National Infrastructure Protection Plan* has developed upon a close partnership between governments at all levels and the private sector owners of the Nation’s Critical Infrastructure and Key Resources. Our national efforts to improve air transportation security, furthermore, have depended upon unprecedented partnership between DHS’s Transportation Security Administration and the airline industry. See generally, *Interim National Infrastructure Protection Plan* (Washington, DC, February 2005).

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47 For information on BRT, see Business Round Table letter to President George W. Bush, January 31, 2006, and <http://www.businessroundtable.org/>. For information on BENS, see www.bens.org. The BENS “Business Force” project partnerships of regional, State, and local officials, together with businesses and NGOs, have been successful in emergency response planning and using private sector resources and volunteers to fill gaps in preparedness and response capabilities.

48 “A basic premise of the *NRP* is that incidents are generally handled at the lowest jurisdictional level possible. Police, fire, public health and medical, emergency management, and other personnel are responsible for incident management at the local level . . . In the vast majority of incidents, State and local resources and interstate mutual aid normally provide the first line of emergency response and incident management support. When an incident or potential incident is of such severity, magnitude, and/or complexity that it is considered an Incident of National Significance according to the criteria established in this plan, the Secretary of Homeland Security, in coordination with other Federal departments and agencies, initiates actions to prevent, prepare for, respond to, and recover from the incident.” *National Response Plan*, 15.

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