Hurricane Katrina
Long term Recovery

Expert Work Group Meeting
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Response and Recovery

Hurricane Katrina
August 29, 2005

- Most catastrophic natural disaster in United States in the last 80 years
- Claimed more than 1,000 lives, affected more than 2.4 million people and destroyed hundreds of square miles of coastland and thousands of homes.
- Largest displacement of Americans in our nation’s history, forcing more than 270,000 into shelters after landfall
- Affected 90,000 square miles (about the size of Great Britain).
Hurricane Katrina - Population Impact

Hurricane Damage – wind and flooding

Storm surge damage to inland along coast

New Orleans levee breech flooding

January 2010

Hurricane Katrina - August 29, 2005
Hurricane Damage – Wind and Flooding

FEMA
Hurricane Katrina - August 29, 2005

Storm surge damage to 6 miles inland in some areas

Pass Christian City Hall

Hurricane Katrina - August 29, 2005

Levee breech and flooding of New Orleans
How Does FEMA Assist Communities to Recover from Disasters?

In the United States, each state has responsibility for disaster response and recovery. In a major disaster, the federal government provides assistance at the request of the governor of the state.

Hurricane Katrina affected many states, primarily Louisiana, Mississippi and Alabama. Each state works with the local governments and federal government on recovery issues.

- **FEMA Administrator** provides advice to the President and coordinates all Federal efforts to support state governors. The President delegates his authorities and responsibilities (less declaring a disaster) to the Administrator, FEMA.

- **The Stafford Act**, a statute that provides for programs and funding to assist individuals and communities respond to and recover from disasters declared by the President.
How Does FEMA Assist Communities to Recover from Disasters?

In the United States operations guided by

• The Incident Command System
• National Response Framework
• National Disaster Recovery Framework (Draft)

How Does FEMA Assist Communities to Recover from Disasters?

- Public Assistance – emergency work and infrastructure restoration
- Individual Assistance – temporary housing, grants to individuals for other needs including personal property replacement, transportation assistance, health care, and other expenses related to moving and storage.
- Mitigation Grants
- Loans
- Coordination of Federal efforts - support of governors and survivors
- Long term recovery planning support
The First Year: 2006
Focus on Response and Recovery

- Individual Assistance: Temporary Housing, Repairs

- Public Assistance (Infrastructure Restoration): Emergency Measures, Restoring Communications, Utilities and Debris Removal

Assistance to Individuals and Families
One Year after Katrina: 2006

<table>
<thead>
<tr>
<th>Post Landfall</th>
<th>Housing Assistance</th>
<th>Total Housing Assistance Funding</th>
<th>Total Temporary Housing Units Occupied</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 days</td>
<td>326,651</td>
<td>$662,512,784</td>
<td>20</td>
</tr>
<tr>
<td>1 month</td>
<td>774,109</td>
<td>$2,396,138,927</td>
<td>5,000</td>
</tr>
<tr>
<td>6 months</td>
<td>936,146</td>
<td>$3,873,881,700</td>
<td>11,000</td>
</tr>
<tr>
<td>1 year</td>
<td>947,975</td>
<td>$4,221,167,125</td>
<td>119,785</td>
</tr>
</tbody>
</table>

- 420,000 households also received Other Needs Assistance, which provides financial assistance for serious, disaster-related needs. More than $1.9 billion has been distributed through this grant program.
Assistance to Individuals and Families

Three Years After Katrina: 2008

- $7.8 billion to individuals and households through FEMA’s Housing and Other Needs Assistance that includes personal property replacement, transportation assistance, health care, and other expenses related to moving and storage.
- FEMA moved over 127,000 households out of temporary housing units and into long-term housing solutions.

Mississippi
- 518,100 Mississippians registered for assistance
- $1.3 billion distributed to individuals and families
- 176 households occupying a FEMA Temporary Housing Unit

Alabama
- 115,000 Alabamians registered for assistance
- $128 million distributed to individuals and families
- 0 households occupying a FEMA Temporary Housing Unit

Louisiana
- 1,446,927 Louisianans registered for assistance
- $5.8 billion distributed to individuals and families
- 707 households occupying a FEMA Temporary Housing Unit
Current Recovery Status  (as of May 13, 2011)

Individual Assistance

- $4,716,451,802 provided in Housing Assistance
- 949,116 individuals and households received Housing Assistance
- 143,123 households received temporary housing units
- 295 households still residing in temporary housing units

Public Assistance: Infrastructure Restoration

The First Year: 2006

Loans - FEMA approved $975 million in Community Disaster Loans for municipalities in Louisiana and Mississippi to help local authorities maintain essential services such as law enforcement, schools and fire services in the hardest hit communities, including a $120 million loan approved for the City of New Orleans.

Reimbursement - More than $4.8 billion in federal funds was reimbursed to states for mission assignments in Alabama, Louisiana and Mississippi

Debris Removal - More than 100 million cubic meters of debris was removed in Alabama, Louisiana and Mississippi for a total of $3.7 billion to date.
Public Assistance: Infrastructure Restoration
Three Years after Katrina 2008

More than $10 billion obligated in Public Assistance grants to Alabama, Mississippi and Louisiana for emergency work and permanent repairs of infrastructure, including schools, hospitals, criminal justice facilities and utilities.

- Alabama: $116.1 million
  - Alabama has paid out 79% to applicants
- Louisiana: $7.14 billion
  - Louisiana has paid out 51% to applicants
- Mississippi: $2.84 billion
  - Mississippi has paid out 53% to applicants

Public Assistance: Infrastructure Restoration
Five Years after Katrina 2010

- Mississippi
  - $1.14 billion reimbursed to save lives, protect property and remove debris.
  - $1.86 billion obligated to help communities repair and rebuild.
  - $294 million to mitigate against future damages.

- Alabama
  - $3 million reimbursed to save lives, protect property and remove debris.
  - $116 million obligated to help communities repair and rebuild.
  - $45.5 million to mitigate against future damages.

- Louisiana
  - $3.7 billion reimbursed to save lives, protect property and remove debris.
  - $5.2 billion obligated to help communities repair and rebuild.
  - $521.7 million to mitigate against future damages.
### Current Recovery Status
Public Assistance for the State of Louisiana

<table>
<thead>
<tr>
<th>Emergency Work (Category A-B)</th>
<th>Total Obligated*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$3,467,601,256.59</td>
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</table>

<table>
<thead>
<tr>
<th>Permanent Work (Category C-G)</th>
<th>Sector</th>
<th>Total Obligated*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Education</td>
<td>$2,500,052,208.73</td>
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<tr>
<td></td>
<td>Health And Hospitals</td>
<td>$553,864,784.85</td>
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<tr>
<td></td>
<td>Public Works</td>
<td>$495,812,994.21</td>
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<tr>
<td></td>
<td>Historic and Cultural</td>
<td>$718,856,545.86</td>
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<tr>
<td></td>
<td>Public Safety and Criminal Justice</td>
<td>$597,668,940.06</td>
</tr>
</tbody>
</table>

| Total Construction             | $4,486,255,473.71 |
| Total Non-Construction         | $2,270,074,883.95 |

| Total Obligated Permanent Work* | $7,136,330,357.66 |

- 75% of all buildings have completed construction.
- 10% of all buildings have begun construction and are in progress.
- 15% of all buildings are in the planning and design phase.

***Information presented represents the most current on record. Information will change as work is still in progress—totals as of May 13, 2011***

### Current Recovery Status
Public Assistance for the State of Mississippi

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<th>Emergency Work (Category A-B)</th>
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<tbody>
<tr>
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<tbody>
<tr>
<td></td>
<td>Education</td>
<td>$451,600,000</td>
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<tr>
<td></td>
<td>Health And Hospitals</td>
<td>$66,000,000</td>
</tr>
<tr>
<td></td>
<td>Public Works</td>
<td>$1,006,000,000</td>
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<tr>
<td></td>
<td>Historic and Cultural</td>
<td>$100,000,000</td>
</tr>
<tr>
<td></td>
<td>Public Safety and Criminal Justice</td>
<td>$15,000,000</td>
</tr>
</tbody>
</table>

| Total Construction             | $1,738,600,000 |
| Total Non-Construction         | $144,651,629   |

| Total Obligated Permanent Work* | $1,883,251,629 |

- 53% of all projects have completed construction.
- 45% of all projects have begun construction and are in progress.
- 2% of all projects are in the planning and design phase.

***Information presented represents the most current on record. Information will change as work is still in progress—totals as of May 13, 2011***
Lessons Learned

- Whole Nation, Whole Community
  It requires the efforts of the whole community, not government alone, to recover from catastrophic events.

- Unity of Effort
  Close coordination between all levels of government, the private sector, and volunteer organizations during response and recovery.

- Atypical solutions
  Approaches that succeed in smaller events will not meet the requirements of a catastrophic disaster. Innovative solutions must be developed and implemented. Bureaucratic obstacles must be overcome.

Lessons Learned

- Accelerate Permanent Housing Solutions
  - Development and communication of a comprehensive housing strategy (to include massive relocation, if required)
  - Housing solutions must be coordinated by all levels of government. Local representation is vital.
  - Planning for permanent housing must begin with provision of temporary housing (sheltering).
  - Clear debris quickly
  - Build back “greener” and more resiliently through mitigation measures to minimize future losses
  - Consider the disabled, elderly, and children in housing recovery planning.
Lessons Learned

- Keep citizens informed
- Seek public input on recovery decisions
- Consider citizens affected by the disaster as “survivors” not “victims”
- Include provisions for citizens with special needs, disabilities in planning

How can we measure recovery?

- What are benchmarks of recovery?
  - Businesses open, Schools open
  - Tax base
  - Building permits