



2005-2015

## Recovery, Rebuilding and Renewal

# KATRINA

TEN YEARS AFTER





***“Ten years ago, Hurricane Katrina not only obliterated the Mississippi Gulf Coast, but she also struck a grievous blow far inland, with hurricane force winds reaching 200 miles from the Coast. Despite the utter devastation resulting from the storm, Mississippians hitched up their britches and helped themselves and helped their neighbors. The character and courage of these strong, resilient, self-reliant people shaped the way our state would recover from America’s worst natural disaster. Our people – assisted by nearly a million volunteers, record corporate philanthropy, huge numbers of faith-based and other charitable organizations as well as countless governmental efforts beginning with our own first responders but including the support of 46 sister states and the federal government - have worked together to rebuild the Gulf Coast and South Mississippi bigger and better than before. We have a lot to be proud of, but even more to be thankful for.”***

*Haley Barbour, former Governor of Mississippi*

**O**n Aug. 29, 2005, the Mississippi Gulf Coast was forever changed as Hurricane Katrina made landfall. When the storm surge receded and the winds had passed, our beloved Gulf Coast looked like a catastrophic scene from a movie. In all, 238 Mississippians lost their lives. It was simply unbelievable.

Despite the devastation, Mississippians immediately began doing what Mississippians do best—caring for one another and setting about the work of rebuilding their lives. Neighbors became family through the shared experiences of searching for mementos in the wreckage, gutting and mucking out what was left, opening habitable homes to one another, and just simply embracing one another’s grief and survival stories. Volunteers and first responders arrived from every corner of the world to lend a hand and a prayer.

Now, 10 years later, we stand tall together. We have borne the burden of painstaking recovery, and the fruit of our labors is remarkable. Businesses are reopened. Homes are rebuilt. Roads and bridges connect our Gulf Coast towns once again, and the economy is thriving. We have come so far, and we have come together.

Mississippi was faced with seemingly insurmountable circumstances, but we persevered and, through it all, rewrote the playbook on how to recover from an unprecedented disaster. Local, state, and federal agencies united to prioritize recovery needs and move forward with purpose and courage. This report details Mississippi’s recovery and the countless hours and billions of dollars that have been invested into making the Mississippi Gulf Coast a fully recovered, premier destination for residents, businesses, and visitors alike.

I remember standing amid the debris after the storm had passed and knowing that, despite the ruin, we would overcome. We would not just survive; we would thrive. As Governor, I am so proud of the people of Mississippi and the progress we have made.



Sincerely,

Phil Bryant  
Governor

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*“Mississippi has made remarkable progress since Hurricane Katrina, which is a credit to the hard work by a lot of people. It’s a testament to the magnitude of the storm that we still have work to do, but Mississippians are resilient and our response to Katrina showed that our state is a great place to raise a family and do business.”*

*U.S. Sen. Thad Cochran*





## MOVING FROM LANDFALL TO RENEWAL

In the decade since Hurricane Katrina, Mississippi has rebuilt the vast economic engine that sustains its Gulf Coast. From shipbuilding to tourism and from the historic homes along U.S. 90 to intimate neighborhoods inland, the recovery under the leadership of Governors Phil Bryant and Haley Barbour has redefined how a state can reimagine, and in many cases, reinvent an entire region in the wake one of the costliest and most deadly hurricanes in United States history.

Armed with their own brand of determination, the people of Mississippi vowed to rebuild – bigger, stronger and better than ever. At every turn, the recovery effort has maintained this promise.

Mississippi has rebuilt and restored better than before, and in doing so, Mississippians have rewritten the disaster recovery playbook for others to follow in the wake of massive natural disasters.

Hurricane Katrina began as a tropical depression over the Bahamas. Gaining hurricane status only two hours before grazing the southern tip of Florida, it slipped into the Gulf of Mexico, drawing strength from the late-summer temperatures. On Aug. 29, 2005, just six days after it formed, Katrina made landfall to the Mississippi Gulf Coast with a deadly combination of storm surge, tornadoes, wind and rain.

For many, the assault brought back memories of Hurricane Camille, but on an even larger scale. Katrina's most destructive winds reached nearly 30 miles from the storm's center – three times the radius of Camille's maximum winds in 1969.

Hundreds of thousands of lives were thrown into disarray; long stretches of the coastline were wiped away. Katrina retained its hurricane classification from landfall to Meridian, more than 150 miles north of the coast, and continued as a tropical depression before dissipating Aug. 31 over the eastern Great Lakes. Throughout Mississippi, hundreds of thousands of homes were damaged and 80 percent of the state's citizens lost electricity. Hurricane Katrina took the lives of 238 Mississippians and left unprecedented devastation in its wake. Both the lives and the landscapes in the path of the hurricane were changed forever.

Along the coastline, Katrina's force pounded homes into wind-whipped, rain-soaked piles of rubble. In some areas, the merciless storm surge left only a foundation to mark the locations of previously

occupied businesses and houses. Ultimately, more than 60,000 homes were destroyed and more than 100,000 Mississippians were without homes.

The combination of Katrina's strength and size, coupled with the storm's ability to maintain its power far inland, translated to nearly all of the state and its citizens experiencing severe effects from its wrath.

Mississippians responded to the challenge, none more so than the residents of Hancock, Harrison and Jackson counties. While Katrina raised the bar in terms of devastation, Mississippians set a new standard, not only for reaction, recovery and accountability, but also for character, compassion and perseverance. Conversations following the storm frequently included multiple accounts of storm survivors leaving their own damaged homes to help neighbors and

strangers alike in greater need.

Early rescue and initial cleanup efforts began even before the rains subsided.

By the end of 2016, the majority of the Katrina-related construction is expected to be complete

FEMA, MEMA and CDBG distributed a total of **\$10.7 Billion** for Hurricane Katrina Relief

or nearly complete. By then, Mississippi will have lived through about 4,100 days of recovery from a storm that rocked the state end to end for about 24 hours.

Jobs are the most crucial piece to the Gulf Coast's long-term prosperity. The Port of Gulfport restoration is one of the biggest economic development projects in the state's history, and the port will be a generational economic engine, not just for the coastal region, but the entire state.

Mississippi's success would not be possible without the outpouring of support received from its sister states, corporations and the federal government. A great debt is owed to those nonprofits and volunteers from around the country and world who have donated countless hours and

monies to restore lives after Katrina.

After Katrina, the state has emerged with a better preparedness for the risk of natural disasters and has implemented every recovery program with a mindfulness of the need to rebuild stronger and smarter. The state has significantly upgraded its response capabilities through interoperable communications and an improved disaster response capability at every level of government.

Mississippi and its Coast have achieved a remarkable comeback. In the hours after the storm surge subsided, the winds quieted and the rain passed, this region seized upon the vision of rebuilding bigger and better than ever. Today, the commitment is evident across the post-Katrina coastline.

***“Hurricane Katrina left deep scars when it arrived on our shores a decade ago. The Category 3 storm changed the Gulf Coast like no disaster had done before, destroying people's homes and impacting their livelihoods in ways that are still felt today. We knew it would take time to heal and rebuild. That process continues. The past 10 years have taught us just how strong we are. In adversity, character shines through.”***

*U.S. Sen. Roger Wicker*



## PREPARATION, RESPONSE & VISION FOR RECOVERY

Mississippi's hurricane preparedness set the stage for the state's post-Katrina recovery, saving lives and serving the immediate needs of those affected by the storm. These measures also laid the foundation for a faster and more successful long-term recovery after the hurricane. Actions taken by Mississippi Emergency Management Agency, in concert with other local, state and federal agencies, allowed for the safe evacuation of coastal residents and enabled their return after the storm so they could participate in the rebuilding of their communities.

Mississippi began emergency preparations nearly a week before Katrina came ashore, including the following:

- **Aug. 23, 2005** - MEMA began publishing daily situation reports, detailing important information on the hurricane and response efforts planned and undertaken.
- **Aug. 25** - MEMA conducted an executive planning meeting in preparation for Katrina.
- **Aug. 26** – Then-Gov. Haley Barbour signed a State of Emergency order and an Executive Order authorizing the use of National Guard assets. A briefing was conducted for all state agencies and Federal Emergency Management Agency liaisons. The State Emergency Operations Center was activated and unified command was

established. This was the first successful use of a joint state-federal unified command in a major disaster. MEMA liaisons were deployed to the six coastal counties and National Guard liaisons were

deployed to the three coastal counties. To smooth the flow of evacuations, Mississippi and Louisiana began contra-flow of Interstates 55 and 59. A MEMA representative was sent to the Louisiana Emergency Operations Center to help coordinate evacuations.

- **Aug. 28** - The State Emergency Response Team was deployed to Camp Shelby, approximately 60 miles inland from the Gulf Coast, so it could ride out the storm safely and respond quickly after the storm's passing. More National Guard troops were sent to Camp Shelby in preparation for distribution of food, water and ice to disaster survivors.

On Aug. 29, Hurricane Katrina came ashore as a Category 3 hurricane. Even before the storm had dissipated, crews from the Mississippi Department of

# \$9.2 Million

The **Building/Code Inspectors Grant Program** provided coastal counties grants to assist with the cost of additional permitting & building inspectors due to increased construction post-Katrina.

Transportation were clearing immense amounts of debris from the state's roadways. As a result of the immediacy of the responders, all structurally safe roads were opened to emergency crews within six hours of Katrina's landfall.

Massive search and rescue efforts began without delay. Volunteers at the State Emergency Operations Center staffed a missing persons hotline, taking more than 11,000 calls from 40 countries in three days. Teams from state agencies, as well as from Mississippi State University, the University of Mississippi and Delta State University, converted the missing persons addresses into coordinates on Geographic Information System maps for use by state and national search and rescue teams. More than 5,000 rescues were performed in Mississippi after the storm.

The Mississippi National Guard began handing out food, water and ice at designated distribution points in every county. Because the federal pipeline could not deliver the quantity of supplies needed in the wake of this unprecedented storm, MEMA consistently received only 15 to 20 percent of the daily requested amount. Not until Sept. 9 – almost two

weeks after landfall – did the supply of these valuable commodities meet the daily demand.

Mississippi volunteer agencies coordinated much of the initial relief, but an outpouring of help came from around the country. The incredible volunteer response to the needs of the Gulf Coast helped to pave the way in the recovery effort.

To match incoming donations with existing needs, the Mississippi Commission for Volunteer Services operated a donations hotline staffed by AmeriCorps team members. The Mississippi Department of Finance and Administration, MEMA and the Mississippi Commission for Volunteer Service managed a donations warehouse, processing donated goods coming into the state. Almost 10,000 pallets of goods

were distributed. Donated goods were integrated into the governmental logistical system to ensure residents received the needed commodities.

Through the Emergency Management Assistance Compact and the Statewide Mutual Aid Compact, more than 25,000 people from 46 states and Puerto Rico assisted Mississippi during the recovery process. Several states provided direct assistance to Mississippi, in some cases dispatching disaster medical assistance teams or transporting supplies and commodities straight to response agencies.

The state's Volunteer Agencies Active in Disaster organization coordinated with agencies such as the Red Cross and Salvation Army and worked with the Mississippi Department of Human Services to ensure

***“While we pray to God that we never again experience a major hurricane like Katrina, and we lament the loss of life and property – we fully recognize the long lasting benefits that Katrina brought to the Mississippi Gulf Coast. The opportunity to build and rebuild through volunteerism and with millions of dollars in aid to public and private facilities has been remarkable. Katrina taught us all, young and old, what is truly important in life. Katrina taught us that the stuff we accumulate is not really important. It taught us that relationships and brotherly love are the bedrocks of our existence.”***

*George Schloegel, former Gulfport Mayor*



*Hurricane Katrina reduced many homes and businesses to rubble along the Mississippi Gulf Coast.*

food was available following the storm. Faith-based organizations played a tremendous role in recovery efforts, particularly in feeding hurricane survivors in shelters, where some evacuees resided until October 2005.

FEMA began taking disaster assistance applications immediately after the storm, setting up mobile application centers in addition to its normal call center operations. Nearly 275,000 Mississippi families were approved for federal assistance with nearly \$1.3 billion provided to those residents through the FEMA Individual Assistance program. Those funds were used to cover disaster expenses, such as home repair and replacement, personal property loss, transportation expenses and medical and dental expenses.

Because FEMA had travel trailers in stock, had pre-existing contracts with companies and even purchased travel trailers from local retailers, temporary housing was organized in record time. At the height of this program, more than 500 travel trailers were set up each day. In May of 2006, there were more than 38,000 FEMA housing units occupied in Mississippi, and in the duration of the recovery, more than 45,000 FEMA housing units were utilized. In addition to travel trailers, FEMA satisfied temporary housing needs by providing rental assistance for vacant rental properties, paying for stays in hotels and motels and taking advantage of military facilities and even cruise ships.

## **The Governor's Commission on Recovery, Rebuilding and Renewal**

Seven days after Katrina's landfall, Gov. Barbour established the Governor's Commission on Recovery, Rebuilding and Renewal and tabbed Mississippian and former Netscape CEO Jim Barksdale as its chairman.

The governor's directive to the commission was threefold: solicit the best ideas for recovery, rebuilding and renewal from both public and private sectors; develop a broad vision for a better

Gulf Coast and southern Mississippi; and involve local citizens and elected officials in the process of developing and endorsing these ideas.

Specifically, the commission was asked to provide local leaders with ideas and tools to help them envision what their region could look like decades into the future and to recommend strategies and tools for achieving these goals.

The commission solicited input not only from experts and industry-leaders in housing, planning and other areas, but most importantly from the citizens of the affected counties. Issue committees, comprised of local stakeholders from both the public and private sector, were formed to evaluate challenges and identify opportunities within specific sectors such as infrastructure, finance, agriculture, tourism, education, health and human services and governmental and nongovernmental organizations. In addition, more than 50 town hall meetings across 33 counties were held to receive ideas and opinions on the long-term recovery and renewal of South Mississippi.

In October 2005, the commission, in partnership with the Congress for New Urbanism, held a six-day meeting in which all stakeholders attempted to resolve conflicts and map solutions, called a “charrette.” Dubbed the “Mississippi Renewal Forum,” the event



*Thousands of homes were destroyed in Hurricane Katrina. Today many of those homes have been rebuilt or repaired.*

is believed to be one of the biggest charrettes ever held, as more than 200 professionals from Mississippi and around the world worked to develop plans for more sustainable living patterns at all income levels. Architect and planning teams were formed and assigned to different cities or issue areas. The teams surveyed the damaged cities and then met with city leaders to collaborate on rebuilding ideas. Those teams then produced strategies to rebuild communities with pedestrian-friendly streets, more attractive transit options and a better mix of commercial, office and residential uses.

The designs and plans produced at the meeting were printed in a pattern book and summary report, which were then heavily distributed throughout the Gulf Coast. Many cities have continued working with the

***“We experienced the worst of nature and the best of humanity. It is the human component that has made all the difference in the in the scale and manner in which we have recovered. Much of what was achieved was out of necessity, but willful collaboration and a collective vision made all the difference in recreating vibrant communities where residents thrive, businesses flourish, and visitors flock to. Instead of abandoning a wasteland, we recreated our version of paradise.”***

*Billy Hewes, Gulfport Mayor*

architects and planners from the charrette in the months and years after the commission’s work has concluded.

After thousands of hours of input from committees and intensive research, the commission submitted its final report Dec. 31, 2005. The report, “After Katrina – Building Back Better Than Ever,” offered more than 240 specific recommendations. The recommendations fell into four broad categories:

- Infrastructure, including land use, transportation, public services and housing;
- Economic development, including tourism, small businesses, agriculture, forestry, marine resources and defense and government contracting;
- Human services, including education, health

and human services and nongovernmental organizations; and

- Other special considerations, including finance, long-term policy recommendations and a roadmap to greater accountability.

After presenting its final report, the commission disbanded. The work of the commission was invaluable, but its impact went beyond designs, best practices and recommendations. Perhaps more importantly, the commission jump-started the process of local engagement. Residents no longer focused on what had been; instead, local leaders and citizens focused on what could be and the best ways to reshape their cities and neighborhoods in a thoughtful, comprehensive framework.



## FEDERAL ASSISTANCE

**F**EMA and federal partners joined the state in preparing for the approaching storm prior to the hurricane's landfall, and the partnership between state and federal response teams during the critical hours following Hurricane Katrina had a significant impact on our state's recovery.

While normal disaster frameworks designed by federal lawmakers would provide much needed assistance to Mississippi, the unprecedented destruction caused by Katrina would require an unprecedented amount of federal aid.

The first priority following Katrina was to develop a comprehensive recovery plan, presented to the George W. Bush Administration

and Congress beginning Nov. 1, 2005. Working alongside the state's congressional delegation – including U.S. Sen. Thad Cochran, the chairman of the Senate Appropriations Committee, then-U.S. Sen. Trent Lott and Mississippi's entire Congressional delegation – state officials worked tirelessly to pass Katrina relief legislation.

The unified efforts led to Congress passing a comprehensive package for Katrina relief in a supplemental appropriations bill in late December 2005, followed by additional Katrina assistance by Congress in subsequent supplemental appropriations.

## Stafford Act

The general authority for federal disaster support is outlined in the Robert T. Stafford Disaster Relief and Emergency Assistance Act, known as “the Stafford Act.” Generally, after a disaster strikes, the governor of the affected state assesses the ability of the state to respond to the disaster with its own resources, and, if federal resources are deemed necessary, officially requests a disaster declaration from the president. FEMA, in partnership with the state, conducts damage assessments and evaluates whether thresholds for Stafford Act activation are met. After those preliminary damage assessments are complete, the president makes the determination of what counties may be declared eligible for disaster assistance and for what specific programs.

With Katrina, multiple steps in the process were set aside, as President Bush issued a major disaster declaration for Mississippi on the day Katrina made landfall. The declaration triggered Stafford

Act disaster recovery programs targeted to both individuals and local governments affected by the disaster.

FEMA, in partnership with MEMA and other federal agencies, coordinated the following disaster programs after Katrina:

### **Individuals and Households Program.**

Disaster survivors apply for direct assistance from FEMA through this program, which is divided between Housing Assistance and Other Needs Assistance. The Housing Assistance program provides grants for repair or replacement of damaged homes and also temporary housing for disaster victims, either directly or through financial

means such as rent payments. Katrina resulted in the largest temporary housing operation in FEMA history, as travel trailers and mobile homes were supplied for more than 48,000 Mississippi families.

### **The Other Needs**

Assistance program – for disaster-related expenses such as replacement of personal property, fuel, moving and storage expenses, medical and dental

GO Zone Grant Programs provided  
**\$341 Million**  
in grants to help local governments that experienced damage or growth due to evacuees.



*Recovery efforts included the removal of more than 46 million cubic yards of debris.*

expenses and funeral and burial costs – received more than \$419 million.

Forty-nine counties were deemed eligible for the Individuals and Households Program; this 49-county area has since become the eligibility standard for many disaster programs. After the storm, applicants were eligible for up to \$26,200 under the Individual and Households Program. Nearly 275,000 Mississippi households were approved for assistance and nearly \$1.3 billion was provided in Individual Assistance from FEMA.

**Public Assistance.** FEMA's Public Assistance program includes both emergency work, such as debris removal and emergency protective measures, and permanent work, such as the repair and rebuilding of public facilities and infrastructure.

FEMA also covers the losses of the contents within public facilities. In addition to local governments and state agencies, certain private non-profits serving governmental functions may qualify for assistance.

Public Assistance and amounts allocated:

- Emergency Work
  - o Debris Removal: \$714 million; more than 46 million cubic yards of debris removed, including nearly 400,000 cubic yards of marine debris
  - o Emergency Protective Measures: \$446 million
- Permanent Work
  - o Road systems and bridges: \$84 million
  - o Water control facilities: \$1 million

- o Buildings, contents and equipment:  
\$662 million
- o Utilities: \$904 million
- o Parks, recreational and other facilities:  
\$187 million
- o State management administration costs: \$202 million

To date, a total of \$3.2 billion has been obligated by FEMA. As an indication of how widespread Katrina's impact was in Mississippi, all 82 counties and the Mississippi Band of Choctaws were deemed eligible for emergency work through the Public Assistance program. All but eight counties qualified for permanent work categories.

**Hazard Mitigation Grant Program.** The Hazard Mitigation Grant Program provides grants to local governments for measures to reduce the risk of loss of life and property from future natural hazards. The federal share of the program equals 7.5 percent of the total funding allocated under the Individuals and Households Program and the Public Assistance program, which amounted to an initial allocation of \$433 million for Mississippi.

All counties in the state were eligible under the program. The state used these funds for a variety of hazard mitigation measures, such as generators,

relocating buildings outside of flood prone areas, building safe rooms and retrofitting safe rooms to shelter codes.

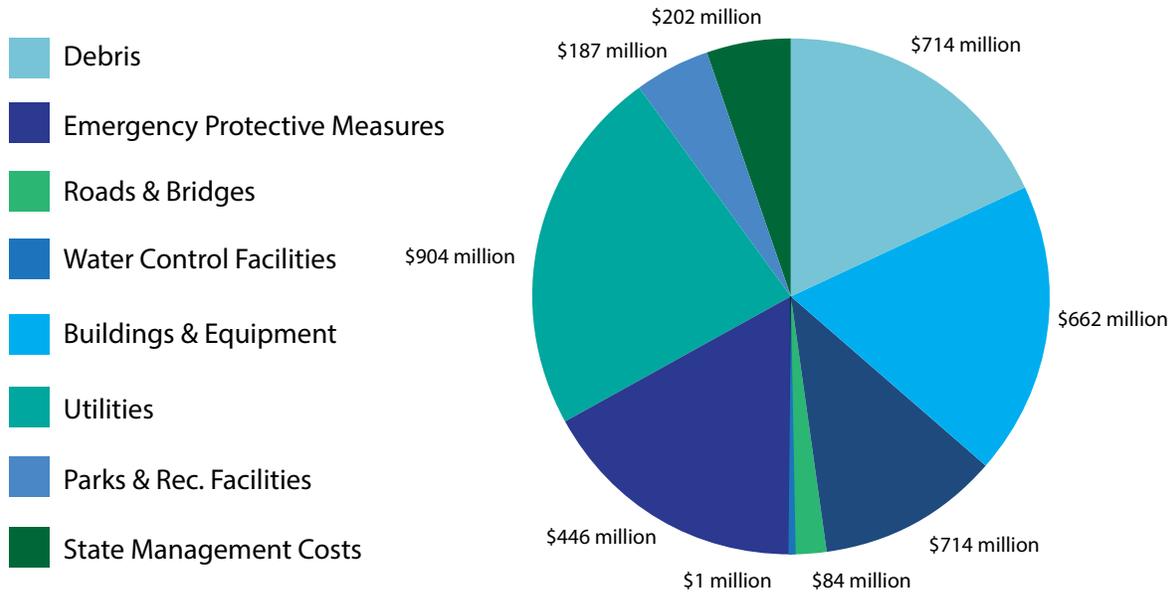
**Small Business Administration Disaster Assistance Program.** Counties declared for the Individuals and Households Program are eligible for disaster assistance from the Small Business Administration. Low interest loans totaling nearly \$3 billion were provided in the following categories:

- Home Physical Disaster Loans – \$2.06 billion to 31,000 applicants for homeowners to repair or replace damaged homes and for homeowners and renters to replace personal property
- Business Physical Disaster Loans – \$545 million to 4,376 applicants for businesses of all sizes and private non-profit organizations to repair or replace damaged property and business assets
- Economic Injury Disaster Loans – \$19 million to 300 applicants for working capital for small businesses to cover normal operating expenses

**Disaster Legal Services.** This program provides disaster legal services to low-income disaster victims to meet their disaster-related legal needs.

**Disaster Unemployment Assistance.** This program provides unemployment benefits and re-

## MEMA Public Assistance Amounts Allocated



employment services to individuals unemployed because of a disaster and who are not eligible for regular unemployment benefits. MDES administered 34,600 claims for Disaster Unemployment Assistance.

**Crisis Counseling Assistance.** This program provides crisis counseling to help relieve grieving, stress, or mental health problems caused by a disaster. Nearly 300,000 individuals received counseling services.

**Non-Federal Match.** Nearly all Stafford Act programs require a cost-share from the state, local governments or other non-federal sources. Typically, a state and the entities within a state must pay for 25 percent of costs, and the amount may be reduced to 10 percent following a major disaster.

Recognizing the catastrophic affect of Katrina on the Gulf Coast region and the enormous cost burden of cost-share for Stafford Act recovery programs, in 2007, Congress waived the non-federal match requirement for all Stafford Act programs except Hazard Mitigation Grant Program.

## Congressional Appropriations

While the Stafford Act met typical post-disaster recovery needs, the enormous magnitude of the storm caused tremendous impacts beyond the act's reach. Congress helped fill those gaps to ensure a full revitalization after Katrina.

These gaps were addressed by the state's comprehensive recovery request to the Bush administration and Congress in November 2005. The state plan detailed recovery needs beyond FEMA assistance covered under the Stafford Act. The state's recovery has remained consistent with the priorities identified in the original 2005 request. An appropriations package passed in December 2005 provided more than \$10 billion in recovery funds that have been the bedrock for the state recovery efforts. The legislation provided help for housing, medical centers, schools and colleges, highways and bridges, employment, law enforcement, human services, coastal restoration and other important needs. Subsequent legislation added more funding and changed program requirements in tailoring to the devastation caused by Katrina.

In the November 2005 plan, Mississippi requested funding through the agencies matching the mission of the projects. For example, \$600 million was requested for water and wastewater infrastructure through the U.S. Army Corps of Engineers, the Environmental Protection Agency and the U.S. Department of Agriculture; \$500 million for the Port of Gulfport restoration was requested through the Department of Transportation; \$300 million was requested for economic development through the Department of Commerce and Housing and through Urban Development Community Development Block Grants; and \$150 million was requested for community facilities repairs through USDA Rural Development Community Facilities Grants.

Instead of spreading funding across multiple agencies and creating new programs, Congress chose to direct funding for many of Mississippi's requests

***“Without assistance from the state of Mississippi, the city of Waveland wouldn't have been able to rebuild after Hurricane Katrina. We're better prepared for the future, because we used mitigation funds to rebuild stronger facilities that can survive the next disaster.”***

*Mike Smith, Waveland Mayor*



*Federal funds have been used on the coast to rebuild and repair infrastructure lost in Katrina.*

through the CDBG program. This option allowed maximum program flexibility and reduced existing bureaucratic structures in each state to manage CDBG funds.

To ensure maximum flexibility for states to implement their priorities for a comprehensive recovery, Congress included specific language requiring the HUD Secretary to waive normal CDBG requirements where necessary, with the exception of requirements related to fair housing, labor standards and the environment.

Congress allocated \$5.4 billion to Mississippi, which the state has used for housing, infrastructure and economic development needs as identified within the governor’s comprehensive recovery plan. The

Mississippi Development Authority is the state agency responsible for administering these funds.

**MISSISSIPPI KATRINA FEDERAL FUNDING** **\$ Amount**

<b>Supplemental Funding</b>	<b>10-year</b>
Community Development Block Grant (MDA)	5,481,221,059
Federal Highway Administration Emergency Funds (MDOT)	1,074,000,000
Medicaid (MDOM)	674,256,701
K-12 Education (MDE)	323,966,913
Alternative Housing Pilot Program (MEMA)	281,318,612
Social Services Block Grant (DHS)	128,398,427
Higher Education (IHL)	114,745,515*
National Emergency Grant (MDES)	95,000,000
Law Enforcement (DPS)	58,250,000*
Historic Preservation (MDAH)	27,500,000*
Housing Choice Vouchers (PHAs)	16,797,191*
	<b>8,275,454,418</b>

**Stafford Act Funding** **10-year**

Public Assistance (FEMA)	3,218,990,471
National Flood Insurance Program (FEMA)	2,600,000,000
Homeowner and renter loans (SBA)	2,066,425,900
Mission Assignments (FEMA)	1,667,853,393*
Individual Assistance (FEMA)	1,296,454,555
Business Loans (SBA)	545,830,900
Hazard Mitigation Grant Program (MEMA)	364,447,276
Comm. Disaster Loans (FEMA)	203,172,184
Interoperable Communications (DHS-HMGP transfer)	140,000,000
Crisis Counseling (MDMH)	22,916,423
Economic Injury Loans (SBA)	19,182,800
	<b>12,145,273,902</b>

**Federal Funds for Federal Activities** 4,406,576,453\*  
 (includes funding for military facilities, coastal restoration, U.S. Army Corps of Engineers, and USDA Rural Development)

**Total Federal Funding** **24,827,304,773**

\*Numbers taken from 5-year Katrina Recovery Report



## HOUSING

The biggest challenge following Hurricane Katrina became the cornerstone of the comprehensive recovery efforts: the restoration of housing in South Mississippi and the Gulf Coast. The massive amount of damage inflicted on homes left thousands of Mississippians without a place to live. With state, federal, nonprofit and private partners, a comprehensive recovery plan was developed to solve the housing crisis, and the plan was put into place almost immediately after the storm.

Ten years later, housing has rebounded remarkably. Since 2009, the number of online housing units has corresponded to the population

of the coastal region. The supply of housing has been sufficient to meet the demand.

A clear indicator of the state's housing progress was evidenced by the low occupancy of FEMA temporary housing in 2010, which became one of the most recognizable symbols of the disaster as more than 100,000 Mississippians called these units home following the hurricane.

In mid-2010, the number of occupied FEMA temporary housing units dwindled to less than 180 statewide, with fewer than 100 on the Coast. All of the FEMA trailers assigned to Mississippi after the storm have since been sold to their occupants or taken out of service.

Achieving such a successful housing recovery has not been easy. The state has used innovative approaches, many of which were first-of-its-kind housing programs. As a result, the state had to create many processes from the ground up, reacting to unforeseen problems and adjusting accordingly. Adding to the complexity was the sheer scale of these programs. Never before had any state had to restore housing stock to this extent.

The Homeowner Assistance Program is an example of the state's innovative approach, which was predicated on the state's initial request to Congress. The unprecedented storm surge from Katrina created the need for this supplemental funding. The state contended some of its residents who experienced flooding had relied on the federal government's determination that their homes did not require flood insurance. Thus, the federal government should compensate these homeowners for the mistake. Congress allocated the funding on the condition the grant program compensate for only flood damage. Additionally, those homes should be mitigated so federal assistance was never again required.

The Homeowner Assistance Program since has become the foundation of the state's housing

recovery plan, providing grants to more than 27,000 homeowners. Furthermore, flood insurance covenants are tied to all properties, ensuring those property owners will never again experience an uncompensated loss due to hurricane damage.

Mitigation has been a major theme throughout all state housing programs. The state has ensured all new housing is built to withstand future storms, going beyond locally adopted building codes and elevation requirements in many instances.

## Housing Damage

Katrina's storm surge and strong winds destroyed tens of thousands of homes in Mississippi and left more than 200,000 with some degree of damage. HUD estimates released in early 2006 provide the most reliable approximation of housing damage. According to HUD, 61,386 housing units – defined to include both owner-occupied and rental dwellings – were severely damaged or destroyed in Mississippi, including 52,512 in the three coastal counties. The report estimated 220,384 housing units received some level of damage throughout the state.

Temporary options such as hotels, apartments and condominiums were obliterated by the storm,

leaving more than 100,000 displaced residents with few options for accommodations while FEMA began organizing temporary housing operations. Many migrated northward in Mississippi and other areas to stay in shelters and hotels or with friends and family. Others stayed in tents near their homes.

The ensuing FEMA temporary housing mission became the largest and fastest deployment of travel trailers and mobile homes in FEMA history. To expedite operations, FEMA utilized in-stock travel trailers as well as built on pre-existing contracts with companies to provide temporary housing units. The massive amount of debris and complicated nature of procuring and transporting units, identifying and inspecting suitable sites and coordinating with survivors in need caused initial deployment to move slowly. Once operations began running at maximum efficiency, more than 500 travel trailers were placed each day.

By Jan. 1, 2006, there were 34,000 units in operation. The number increased to 38,000 in May 2006 before beginning a steady decline as housing stock began to be

replenished. Collectively, more than 45,000 temporary housing units were occupied in Mississippi after Hurricane Katrina.

## Mississippi Alternative Housing Program

Given the severe destruction of housing, it was evident a lengthy period of time would be needed to restore the housing stock, and travel trailers would not provide suitable accommodations in the long term. While the units could be transported and installed quickly, they offered inadequate living conditions, because the trailers were intended to be occupied for months, not years.

Immediately after Hurricane Katrina, Mississippi led the movement to find a more sustainable replacement for travel trailers. The first alternative

housing designs were created at the Mississippi Renewal Forum convened by the Governor's Commission on Recovery, Rebuilding and Renewal. Architects gathered at the Forum designed the first "Katrina Cottage." The Katrina Cottage concept

**The Homeowner Assistance Program** provided Gulf Coast residents with more than **\$2 Billion** in financial assistance through Phase I & Phase II of the program.

would generate substantial interest and media attention from around the country.

The state actively pursued the issue of replacing travel trailers with cottages. In June 2006, Sen. Cochran successfully secured \$400 million for Katrina-ravaged states to support alternative temporary housing solutions. The legislation created the FEMA Alternative Housing Pilot Program, with the goal to design a superior disaster-housing unit to be delivered quickly and inexpensively.

Mississippi was awarded \$281 million after its proposals were ranked the highest in a competition between the five states – Louisiana, Alabama, Florida and Texas. MEMA was given the responsibility of managing the program.

The units came in three models – the one-bedroom Park Model and the two- and three-bedroom Mississippi Cottages. Designed to be safer, more durable, more comfortable and more aesthetically pleasing than FEMA temporary housing, all units offered a front porch and larger bathroom and living areas, and all were designed to reflect traditional Gulf Coast architecture. Built to the highest standards of the International Residential Code and HUD Code, these units have a dual certification allowing them to be set anywhere in the country and moved from place to place.

The first Park Model was occupied in June 2007. FEMA temporary housing occupants in Hancock, Harrison, Jackson and Pearl River



*Mississippi alternative housing units helped thousands of coastal residents in need of post-Katrina shelter.*

counties were eligible to move into the cottages. At the height of the program more than 2,800 units were occupied.

By 2009, MEMA was working with occupants to transition the units from temporary to permanent housing. The state also began donating cottages to private nonprofit groups to create Mississippi Cottage developments to fill a need for those still in need of affordable housing. MEMA sold 1,250 to occupants, 617 were donated to nonprofit groups, 253 were destroyed in Hurricane Gustav in 2008, 907 were sold at public auction, 44 were sold to disaster survivors following the 2010 tornado outbreaks in central Mississippi and two were destroyed by occupants.

Qualified residents were offered a purchase price based upon their income. Cottages were also made available to the general public through three public auctions. All proceeds received from the sale of units were distributed back into the program to help fund additional permanent installations and program management costs. The Mississippi Alternative Housing Program closed in 2011, with the sale of all remaining cottages to qualified applicants.



*Permanently set Mississippi housing units provide affordable housing in south Mississippi.*

## Housing Recovery

The housing study by The Compass Group, LLC and Southern Mississippi Planning and Development District helped the state determine the relationship between its own housing recovery programs and rebuilding occurring through private efforts.

The interrelation was key in housing program policy decisions concerning housing production and targeting unmet housing needs.

The housing study revealed state housing programs, in combination with private and nonprofit rebuilding, would return the Gulf Coast to pre-Katrina housing levels by 2011. When compared to population estimates, it became even clearer the housing supply would be more than adequate to meet demand.

According to the housing stock estimates produced through the study, population recovery outstripped permanent housing recovery through mid-2009, necessitating the prolonged use of temporary housing. In mid-2010, the supply of permanent housing caught up to the population.

Mississippi has designed housing production programs to fill gaps not met by traditional disaster housing recovery resources – such as insurance, FEMA grants and SBA loans.

## Homeowner Programs

### Homeowner Assistance Program – Phase I.

In his initial funding request presented to Congress, Gov. Barbour identified the largest gap not served by disaster resources – flood-damaged homes located outside the federally-delineated flood boundaries. He explained to Congress the truly unprecedented aspect of Katrina was not its wind speeds, which were Category 3 strength at landfall, but the gigantic storm surge measuring nearly 30 feet in some areas and pushed its way miles across the shoreline.

Most homeowners whose homes flooded did not have flood insurance. They were located

far enough away from the coastline or inland waterways, flood insurance was not recommended by the federal government. In all, approximately 17,000 flood claims totaling \$2.4 billion were paid out in Mississippi from the National Flood Insurance Program. However, more than 20,000 homeowners who maintained wind insurance, but were told they did not require flood insurance, initially were left uncompensated after the storm.

A portion of Mississippi's \$5.4 billion allocation of Community Development Block Grants became the Homeowner Assistance Program, which compensated these homeowners and served as the cornerstone of Mississippi's housing recovery plan.

This compensation program targeted homeowners outside the established flood zones who suffered flood damage to their primary residence from Hurricane Katrina. Its purpose was to provide one-time grant payments up to a maximum of \$150,000. To be eligible, homeowners located outside the 100-year flood plain in the counties of Hancock, Harrison, Jackson, or Pearl River must have owned and occupied their primary residence on Aug. 29, 2005, maintained homeowners insurance on the property and received flood surge damage.

*“We’ve come a long way. Look at what we’ve endured: Katrina, followed three years later by a national recession, and two years by the BP oil spill. Recovery and resilience are part our DNA. There’s interest in Biloxi again. We are very much a work in progress. I see a canvas that is ready to display a beautiful, special place known as Biloxi, where people come for a weekend and stay a lifetime. That’s what I see, and that’s what we’re making happen everyday.”*

*Andrew “FoFo” Gilich, Biloxi Mayor*

To mitigate future risk, each homeowner agreed to place covenants on the property to ensure any necessary rebuilding or repairs would be made in accordance with new building codes and local ordinances. During rebuilding, the home would be elevated in accordance with FEMA advisory base flood elevations, and the homeowner and successors in title would obtain and maintain flood insurance. The latter requirement, tying flood insurance to the property in perpetuity, will significantly decrease the likelihood those homes will need governmental assistance again.

#### **Homeowner Assistance Program – Phase II.**

Immediately after releasing the Homeowner Assistance Program, MDA, with HUD’s assistance, began designing a second phase of the program to assist homeowners not eligible under the first phase. Phase II of the Homeowner Assistance

Program differs from the first phase in three major respects: applicants were not required to have carried homeowners insurance, applicants’ homes could have been located inside or outside the floodplain, and eligibility was limited to those with incomes of 120 percent area median income or below.

Phase II targeted low- to moderate-income homeowners, either in or out of the flood zone, who suffered flood damage from the hurricane and had uncompensated losses due to insufficient insurance. Its purpose was to provide grants up to a maximum of \$100,000, or if combined with Phase I monies, up to a maximum of \$150,000. As in Phase I, to be eligible, homeowners must have owned and occupied their primary residence located in the counties of Hancock, Harrison, Jackson, or Pearl River on Aug. 29, 2005 and received flood surge damage.

The Homeowner Assistance Program was implemented with an unprecedented level of accountability and transparency. The HUD Office of Inspector General has performed audits on the program and has praised the implementation of sound controls by MDA.

**Elevation Grant Program.** The Elevation Grant Program provided supplemental funding to Homeowner Assistance Program grants. This program targeted those homeowners who already had received funds for a Homeowners Assistance Program Phase I or Phase II grant, and it was used for the specific purpose of defraying the added cost of elevating the applicant's primary residence in accordance with higher flood elevations. Eligible applicants had to be located in a flood plain and were required to elevate to a level at or above the current levels required by FEMA. The maximum grant amount was \$30,000, payable upon issuance of the building permit and following successful completion of a multi-step environmental review. This program served 1,002

households disbursing more than \$30 million directly to homeowners.

**Long Term Workforce Housing Program.** The Long Term Workforce Housing Program is designed to incentivize rental and homeowner housing construction for the workforce, defined as households at or below 120 percent area median Income. The program has a diverse set of project types, ranging from homeowner and rental construction to mortgage assistance to homeowner repair. Those projects target varying incomes as well, serving those in the middle class to those with severely low incomes.

In soliciting affordable housing proposals,

**\$ 37.6 Million**

Distributed in \$30,000 grants through the **The Elevation Grant Program** for homeowners to elevate homes to meet FEMA requirements.

Mississippi Development Authority encouraged developers to leverage requested CDBG dollars with other sources of private and public housing financing. As a result, the total investment in Long Term Workforce housing projects is more

than double the amount of CDBG committed by the state. With only one project remaining under construction in 2015, this program has completed 2,805 units to date.

The Long Term Workforce homeowner recovery strategy dealt not only with rehabilitation of existing housing and new construction, but also on making existing market rate homes more affordable for purchase. The cost of new construction and higher insurance rates resulted in prices unaffordable to many homeowners.

To bridge this gap for homeowners and make home buying affordable to renters, the state provided \$78 million for five homebuyer assistance programs through the Long Term Workforce program, most notably the Renaissance Corporation My Home, My Coast and REACH programs. These programs provided low-cost mortgages and down-payment assistance for homebuyers to purchase more than 1,200 completed units on the open market.

**Neighborhood Home Program.** The goal of the Neighborhood Home Program NHP is to repair, rehabilitate and reconstruct Hurricane Katrina-damaged homes owned by low income families (and under some circumstances moderate income families) who have been unable, through other means, to meet their housing repair needs. This outreach effort was carried out within the lower third counties of Mississippi. Eligible households under the



*Many homes along the coast were required to complete elevation upgrades after Katrina.*

“Neighborhood Home Program” may have previously received assistance from other sources which was either inadequate to address and/or was not intended to address housing needs.

Through Community Development Block Grant funds, \$181.7 million have been allocated to this program. An additional \$30 million was funded by MEMA under this program for permanent cottage placement and \$1.29 million was funded by Renaissance Corporation for rental assistance for a total of \$212.97 million in funding for the program. To date, 5,134 units are complete including 627 MEMA cottage placements. The majority of the applicants were elderly and/or disabled. The Program is expected to complete construction by the end of August 2015.

**Mortgage Revenue Bond Program.** The

Mississippi Home Corporation offered the Mortgage Revenue Bond Program before Katrina to provide low-interest mortgages to first-time homebuyers and assistance with closing costs equal to 3 percent of the mortgage amount. The Gulf Opportunity Zone Act, also known as the “GO Zone,” widened eligibility for those in hurricane-affected areas by waiving the first-time buyer requirement and placing higher limits on buyer’s income and the purchase price of the home.

The program has allowed many residents who would not be eligible for a conventional loan to become homeowners. Under this increased flexibility, there were 2,213 homebuyers, representing \$267 million in loan volume, who qualified for the low-interest mortgages. In the lower three counties, 1,331 loans were issued.

**USDA Rural Development.** The U.S.

Department of Agriculture has several rural housing programs addressing single-family housing in towns with a population of 25,000 or less. Congress increased USDA rural development funding capacity in Katrina-affected areas, allowing its grant and loan programs to help displaced families repair their homes or purchase replacement housing. USDA Rural Development directly has loaned more than \$8 million and has guaranteed loans of more than \$100 million for nearly 1,000 families, in addition to providing funds to repair more than 100 homes.

**Social Services Block Grants.** The Mississippi Department of Human Services allocated \$8 million to its Division of Community Services for rebuilding homes. Services rendered included not

***“In the early days after Katrina, there was an immediate, collective resolve among local and state leaders to rebuild our community into one beyond the one lost by all standards. Today, we witness, with great pride and thanksgiving, the realization of that vision and see a city alive with revitalized components of culture and quality living that is achieving unprecedented growth in its economy and population.”***

*Les Fillingame, Bay St. Louis Mayor*

only housing repair, but also septic and water line repairs, replacement of furniture, appliances and personal items, debris removal and short-term rent. More than 1,100 homes were repaired or rebuilt through this program.

**Modular Housing Tax Reduction.** Gov.

Barbour called a Special Session of the Mississippi Legislature in October 2006 to ask lawmakers to reduce the cost of new modular home construction on the Gulf Coast. As a result of the session, the state's tax on modular homes was reduced from 7 percent to 3 percent. The measure saved homeowners \$4,000 to \$6,000 per modular home purchase.

## Rental Programs For Housing

**Public Housing Program.** Rebuilding public housing has been a crucial element in the state's housing plan because of its role in serving the lowest income residents. Coastal Public Housing Authorities sustained major damage to their housing stocks – more than 1,600 of 1,981 public housing units were damaged or destroyed.

The public housing program provided \$101 million to the four coastal public housing authorities – Bay/Waveland, Long Beach, Biloxi and

Mississippi Regional Housing Authority No. VIII – to rebuild their housing stocks.

CDBG Public housing program funds alone account for construction/rehabilitation of more than 1,800 units, of which all are complete. This accounts for a higher number of available inventory than prior to Hurricane Katrina.

**Small Rental Program.** The Small Rental Assistance Program, allocated \$209.8 million, is a forgivable loan program to assist owners of small rental properties in Hancock, Harrison, Jackson and Pearl River counties. Project applicants, including individuals, non-profit groups, corporations and partnerships, receive forgivable loans for restoration or construction of rental properties consisting of less than four units.

In return for forgivable loans up to \$30,000, small rental landlords are required to rent to low- and moderate-income households at affordable rents – 51 percent of units to households with incomes below 80 percent of area median income and the remainder to households at or below 120 percent of area median income. Applicants are required to meet program terms for a period of five years.

A third round of the program, the Neighborhood Rental Restoration Program, was

launched in 2009. This program varied from the regular program by limiting eligible activities to repair and rehabilitation of blighted properties, restricting eligible tenants to very low-income households at or below 50 percent of area median income and requiring a 10-year affordability compliance period. In this way the program served two goals, bringing debilitated housing back into operation and offering deep affordability to very low-income renters.

Through the Neighborhood Rental Restoration Program, almost 600 deeply affordable rental homes have been rehabilitated or rebuilt in existing neighborhoods south of Interstate 10 in Hancock, Harrison and Jackson counties. Applicants received forgivable loans ranging from \$50,000 for one-

bedroom homes to \$70,000 for three-bedroom and more homes. Rental rates range from \$337 to \$557 per month depending upon the number of bedrooms and the location of the home.

In total, the rental assistance program has provided for 3,507 new rental units.

**Long Term Workforce Housing Program.** As mentioned previously, the Long Term Workforce Housing Program funds both homeowner and rental housing projects. In addition to providing a leveraged funding source for 800 new rental units, two senior housing projects provided more than 300 rental units designed for elderly living.

**Low Income Housing Tax Credit Program.** The Low Income Housing Tax Credit program incentivizes the development of high-quality



*The Lodge in Pascagoula is one of several housing complexes built using restoration funds.*

apartments by providing investors with federal income tax credits. In return, units must remain affordable to households at or below 60 percent of Area Median Income. The Gulf Opportunity Zone Act authorized the Mississippi Home Corporation to allocate approximately \$35 million in Low Income Housing Tax Credits annually in 2006, 2007 and 2008. The Mississippi Home Corporation awarded most of the credits to the southernmost six counties and encouraged mixed income developments.

The Mississippi Home Corporation allocated \$106 million in credits to 99 developments throughout the GO Zone representing more than 9,200 housing units. In the three coastal counties, the Low Income Housing Tax Credit Program awards account for 5,000 low-income apartment units.

**Tax Credit Assistance Fund.** As a result of the economic recession and tightening credit markets, the pricing of tax credits changed, causing some Low Income Housing Tax Credit projects to become under-funded. Recognizing this effect on affordable housing, the state budgeted \$17.9 million in CDBG funds to cover project gaps, enabling troubled projects to move forward. All

seven projects, representing 618 units, are now complete.

**Vouchers.** After Katrina, the scarcity of rental housing caused rental rates to rise. Even as rental stock returned, market rents remained higher due to the costs of new construction and the realities of higher insurance costs.

To help very low-income renters afford the higher costs of living, Congress was asked for 5,000 housing vouchers for coastal households with very limited incomes to pay the cost difference between market rents and what the renter could afford.

The request was made in late 2009, and Sen. Cochran and Mississippi's Congressional delegation were successful in adding \$30 million to an existing \$50 million appropriation for Section 8 Housing Choice Vouchers.

As a result of the appropriation, the U.S. Department of Housing and Urban Development allocated 2,930 new vouchers to Mississippi public housing authorities. Households in FEMA temporary housing units and Mississippi Cottages were given first preference for eligibility. The Mississippi Case Management Consortium and MEMA subsequently informed the residents of those units of the availability of vouchers and

helped them apply if they chose to do so. Other low-income households were eligible to apply for the remaining vouchers.

## Insurance

Immediately following the storm and for months thereafter, the fire services arm of the Mississippi Insurance Department diligently responded to assist survivors of the storm.

In the first month following Hurricane Katrina, the insurance department staff worked extended hours, taking more than 11,000 calls and 1,500 complaints. A year after the storm the department was still averaging approximately 1,000 calls a week. The insurance department staffed Disaster Recovery Centers on the Coast to answer insurance questions and distributed nearly 15,000 flyers with additional insurance company contact information.

To assist consumers in facilitating claims and claims payments, the insurance department issued more than a dozen bulletins to insurance companies to

help expedite hurricane response efforts relating to the insurance claims process.

The effects of Hurricane Katrina rippled through the insurance industry and highlighted the need for reform of many of the state's insurance regulations. Changes sought by the insurance department resulted in regulatory insurance reform as well as legislative changes. In the decade following the storm, the Mississippi Legislature passed insurance legislation that has resulted in the creation of a state mitigation program providing grants to homeowners who used funds to make new and existing homes more storm resistant; authorized an alternative dispute resolution for personal lines insurance claims; provided state support for the coastal insurer of last resort, the Wind Pool; led to the establishment, via regulation, of uniform policy language regarding the

applicability of hurricane deductibles; and other legislative initiatives.

The insurance department's Hurricane Katrina Mediation program, which began mediation conferences in 2006, ultimately handled

**Low-Inc. Housing Tax Credit Assistance Fund** served as gap financing for Mississippi Home Corporation projects.

**\$17.9 Million**  
in funds were allocated for projects receiving affordable housing tax credits.



*Many homeowners who rebuilt on the gulf coast faced high insurance rate increases.*

nearly 5,500 cases and maintained a consistent average settlement success rate of more than 80 percent among the thousands who requested mediation through the program. The success of this program resulted in the Mississippi Insurance Department being asked to design a pilot program for hurricane insurance cases to help alleviate court docket backlogs and lengthy delays, which was ultimately implemented in by the federal court. The federally ordered program handled more than 450 cases with a settlement rate in excess of 50 percent.

By October 2006, insurance companies reported approximately 98 percent of their Hurricane Katrina claims were settled, closed or paid. According to final reporting figures, statewide there were 486,913 total claims filed, including those from insurance

companies, Mississippi Residential Property Insurance Underwriting Association, Mississippi Windstorm Underwriting Association and the National Flood Insurance Program. Statewide claim payments totaled almost \$12 billion. Of those claims reported, 263,744 were filed in the six coastal counties of George, Pearl River, Stone, Hancock, Harrison and Jackson with total payments of more than \$8.7 billion.

In addition to those reported claims figures, an early 2007 agreement was reached between the Mississippi Insurance Department and State Farm wherein the insurance company agreed to reopen and re-examine approximately 35,000 Hurricane Katrina claims on the Mississippi Gulf Coast. A similar agreement was reached with Nationwide Insurance in the spring of 2007. These efforts resulted in Mississippi policyholders receiving more than \$110 million in additional claims payments.

In 2008, Insurance Commissioner Mike Chaney established an insurance department office on the Mississippi Gulf Coast to assist coastal residents with insurance issues. In the spring of 2008, the Mississippi Insurance Department hosted a Coastal Insurance Forum to discuss insurance issues continuing to plague the Gulf Region and explore possible solutions. The department has recognized coastal insurance

issues were not confined within Mississippi's borders and solutions would be found by working with states facing similar problems. The Mississippi Department of Insurance later sponsored a larger conference in the summer of 2009 bringing together, among others, the insurance commissioners of four coastal states.

To help offset the large rate increases requested by the Mississippi Windstorm Underwriting Association, the Mississippi Insurance Department and Gov. Barbour collaborated on a plan to use federal grant funds to subsidize the Wind Pool. In 2006, this subsidy plan was approved, and the infusion of \$30 million in CDBG funds allowed the wind pool to reduce a rate increase for homeowners from the proposed 397 percent down to 90 percent.

An additional \$30 million grant was approved by the governor and HUD in 2007 to offset high

commercial wind pool rate increases. This resulted in commercial wind rates increasing to 142 percent instead of more than 200 percent.

This was just the first in a series of funds given to the wind pool to offset rising re-insurance costs. Since 2006 through the beginning of fiscal year 2011, the wind pool received a combined total of nearly \$180 million. The breakdown:

- **2006** – \$30 million from CDBG (the total \$50 million approved was divided into a \$30 million payment in 2006 and \$20 million in 2007)
- **2007** – \$30 million from CDBG for commercial
- **2007** – Additional \$20 million from CDBG
- **2007** – Mississippi Legislature passed HB 1500 which gave the wind pool a total of \$80 million – \$20 million a year for four years, final installment of funds was available effective July 1, 2010
- **2009**– Mississippi Legislature passed HB 32, giving the wind pool \$18 million from the state's Hurricane Disaster Relief Fund following requested budget cuts

The Mississippi Insurance Department guided the Wind Pool Board in a number of preemptive actions, allowing the wind pool to keep premium rates on the Coast constant during the past several years. Wind



*Mississippi's coastal communities rebuilt in both new neighborhoods and in downtown areas.*

pool rates were reduced an average of 11 percent in 2008 and have remained constant since then. In line with an actuarial study, commissioned by the board, the wind pool did implement a 3.2 percent rate increase on residential property in 2013, but no further increases are projected for the foreseeable future.

Working in conjunction with the Governor's Office, the Mississippi Insurance Department was – and remains – a staunch advocate of stronger building codes and mitigation as methods to help lower premium rates and make insurance available and affordable to Coast residents. The insurance department received a \$1 million federal grant for a wind mitigation study. The purpose of the study was to help lay the groundwork for the Mississippi Insurance Department's launch of the Comprehensive Hurricane Damage Mitigation Program by estimating the costs and benefits associated with various residential and commercial construction features which can reduce hurricane wind losses. The study was completed in late 2009, and \$20 million in mitigation grant funds was awarded through the program in mid-2010.

Perhaps the most significant storm-related measure to pass in the Mississippi Legislature since Katrina was 2014's Senate Bill 2378 – the State Uniform

Construction Code – which adopted certain nationally-recognized codes and standards. It established minimum construction standards for the state with opt-out provisions for municipalities and counties.

Following Katrina, the insurance department observed several significant changes in the insurance market directly related to the impact the storm had on our state's citizens. These include:

- Mississippi ranked in the top five in terms of flood insurance policy growth in the country one year after Katrina. This was the result of a special multi-agency flood insurance campaign created and run by the Mississippi Insurance Department. The framework of the program was recognized by Flood Smart and the National Flood Insurance Program, which began using the campaign as an example when advocating flood insurance in other states.
- In 2013, the department found itself in an intolerable situation concerning devastating rate hikes for the National Flood Insurance Program. In the wake of Hurricane Katrina and Superstorm Sandy, the program found itself in need of financial reform, and federal legislation required massive rate hikes in an effort to make

the program actuarially sound. These rates threatened to bankrupt many Mississippi citizens.

After numerous meetings and discussions with executives from National Flood Insurance Program and other states, Mississippi filed suit against program on the Gulf Coast in an effort to slow down the rate increases until further evaluations called for in the original legislation could be made. Five other states and the Mississippi Windstorm Underwriting Association filed briefs with the court in support of Mississippi Insurance Department's original action.

- The department withdrew its lawsuit against the National Flood Insurance Program in April 2014 on the basis the implementation by FEMA of a new law passed by Congress intended to alleviate some of the drastic rate increases faced by Mississippi homeowners. The lawsuit was withdrawn "without prejudice," meaning it could be filed again at any time should the provisions of the new law or the manner in which FEMA implements it is deemed unsatisfactory. Mississippi Insurance Department attorneys continue to monitor FEMA's implementation of "The Homeowner

Flood Insurance Affordability Act of 2014," passed as House Resolution 3370, to ensure the new law does what is necessary to ease the financial burden on homeowners.

- Since August of 2005, 184 new property and casualty companies and 68 surplus lines companies have started writing business in Mississippi.

The insurance department continues to aid coastal Mississippians in finding available, affordable insurance while keeping companies accountable for the service they provide. The key to helping Mississippians avoid the insurance problems arising from Katrina-level storms is to help them become better prepared through outreach, the advocacy of stronger building codes and such programs as wind mitigation grant programs to assist them in making their homes more capable of withstanding such disasters.



# PUBLIC INFRASTRUCTURE

**M**assive damage was inflicted on roads, bridges, electricity, water and sewer systems, and an equally massive response was required to restore critical infrastructure. Nevertheless, the commitment remained to rebuild bigger and better through all avenues: better aesthetics, more efficiency, more modern capacity, more resilient design and regionalized approaches.

The FEMA Public Assistance Program has been the cornerstone of

restoring public infrastructure. More than \$3 billion was obligated to remove debris, provide emergency services and rebuild community buildings, utilities, roads, parks and other public facilities. Less than 13 percent of funding remains to be spent.

**\$ 576.8 Million**  
The Port of Gulfport Restoration Project provided funds to facilitate the restoration of the Port of Gulfport's public infrastructure and its publicly owned facilities, increase operation capacity, and assist creating & returning jobs.

Mississippi used the CDBG program to supplement FEMA funds. Community Revitalization and Ground Zero programs were created to build buildings and landscapes more aesthetically pleasing and

offer more efficiency and convenience for government operations and to otherwise fill needs not met through FEMA programs. For utilities, CDBG has been used to expand and regionalize the delivery of services to underserved areas and to promote growth through the Regional Water and Wastewater Program.

Transportation recovery is highlighted by the Mississippi Department of Transportation's ability to quickly rebuild Highway 90 as well as the two bridges connecting the Coast. The state also has addressed problems faced by local governments due to revenue shortfalls and the need for better land use planning.

## Public Assistance Program

The FEMA Public Assistance Program is the primary source of funding and support for the repair and restoration of public buildings and infrastructure. More than \$3 billion has been obligated through this program and more than \$2.7 billion has been paid out to communities and eligible private non-profits to restore what was damaged or destroyed by Katrina. The Public Assistance Program is a partnership between FEMA, the state and applicants and is in effect until recovery is completed. Shortly after a disaster, FEMA, the state and eligible applicants meet in a kick-off meeting to assess

the applicant's needs, discuss disaster damages and establish priorities. Initially, the primary emphasis is on debris removal and formulation of projects, which may include both basic and complex items such as repairs to a damaged facility or consolidation or modification of facilities to handle current and future needs.

FEMA reviews and approves the projects. During its review, FEMA also considers special issues such as insurance, floodplain management, hazard mitigation and historical preservation, which can affect the scope of work and funding of a project. Once approved, FEMA obligates the funding to the state for disbursement to the sub-grantee. For smaller projects, the state provides the funding to the applicants right away. For large projects, the state provides incremental payments to the sub-grantee as work is completed on the project. If needed, FEMA provides or funds temporary facilities for the applicant to use while their damaged facilities are being rebuilt.

Once the applicant completes the project, FEMA and the state review all of the cost documentation and conduct a final inspection of the project. Once all of an applicant's projects are complete and eligible costs have been reimbursed, FEMA conducts a final inspection and concludes the closeout process.



*The Federal Aviation Administration provided more than \$83 million for post-Katrina work at the Gulfport-Biloxi International Airport.*

Ten years after Katrina, 87 percent of the Public Assistance Program's \$3.2 billion has been spent.

Utility projects are generally considered longer-term projects on a construction timeline. When a community chooses to modify its infrastructure or utility systems to provide for future conditions, the success of those projects requires careful planning, public consultation and coordination.

While federal funds may be approved and obligated for the projects prior to these deliberative planning processes, actual construction and payment to the applicant is much further down the road. In Mississippi, two large, complex utility replacements in Biloxi and Diamondhead are ongoing, which account for more than \$380 million in public assistance

funds. The time required for citizen participation and deliberate design to meet future conditions is time well spent to ensure the job is done right.

## **Rebuilding Better and Stronger**

During the recovery planning process, Gov. Barbour urged cities and counties not to simply rebuild what was lost, but also to use the disaster as an opportunity to rebuild better and stronger.

Across Mississippi, communities embraced this opportunity, repairing and rebuilding their damaged facilities to better accommodate future needs. This revitalization has come in many forms:

- Greater aesthetics to enhance community development

- Adding modern state-of-the-art capacities to government buildings
- Consolidating services for more efficient operations
- Rebuilding stronger and more resistant to natural hazards, and, in some cases, relocating essential emergency services to safer areas

The FEMA public assistance program provided the flexibility to meet some of these future challenges and conditions through use of its improved and alternate project options. In many instances, the state combined other funding sources to allow public facilities to be rebuilt better and stronger.

To capitalize on the opportunity to build back better and stronger, Mississippi coupled FEMA Public Assistance funds with HUD Community Development Block Grant and FEMA Hazard Mitigation Grant Program funding. Since FEMA public assistance funds repair or replace facilities only as they existed before the disaster, these other programs were needed to rebuild facilities better than they were before Katrina.

CDBG infrastructure programs, including Community Revitalization, Ground Zero and Regional Water and Wastewater, have been used

to enhance buildings and infrastructure beyond eligible costs covered by FEMA public assistance. The CDBG Ground Zero and Community Revitalization programs have funded enhancements to public buildings and facilities, including expansions, as well as new community centers, town greens and harbors. The CDBG Regional Water and Wastewater program provided funds to build new utility infrastructure in underserved areas to accommodate current and future growth and population shifts. FEMA hazard mitigation funds were used to strengthen facilities to better withstand future storms, minimizing potential losses of life and property.

In some cases, communities chose to combine multiple sources of funds into one facility. Gulfport's Municipal Courthouse combined public assistance, CDBG and Hazard Mitigation Grant Program funds to create a state-of-the-art facility that can also serve as a shelter for its first responders in future storms. In other instances, communities used public assistance funds to repair the existing systems and used CDBG funds to build out utilities in new areas of the community to support population shifts and encourage relocation in less vulnerable areas.

The state facilitated this integrated partnership between federal partners and programs so

communities could leverage all available funds to build back better and stronger.

## Public Facilities

**Public Assistance.** FEMA obligated \$650 million to rebuild public facilities. Those public assistance projects, in part, included 330 schools, 134 recreational facilities, 90 municipal buildings, 20 fire stations, 10 medical facilities, four police stations and three court buildings.

Beyond the construction funds, local governments, schools, hospitals and first responders used public assistance funds to replace the equipment, vehicles, uniforms, textbooks and other materials lost in Katrina. While these repairs and construction projects were underway, mobile and temporary facilities were used to carry out essential government services as well as serve as classrooms and police and fire stations.

**Community Revitalization.** This CDBG program includes 92 projects representing \$285 million for the lower six counties and 43 projects representing \$56 million for the other GO Zone counties. Of these projects, 104 are completed. In many cases, program funds leveraged FEMA public assistance funding to rebuild bigger and better.

Local governments developed projects for a broad range of uses including reconstruction and rehabilitation of city halls, fire stations, civic centers, libraries, parks and streetscape improvements. GO Zone projects included the same broad range of uses and included drainage improvements, restoration of public buildings and repairs to water and wastewater treatment facilities.

**Ground Zero.** Hancock County bore the brunt of Hurricane Katrina, as the eye crossed its western side, and the storm's most destructive winds and storm surge pounded the county.

The Hancock County Long-Term Recovery or "Ground Zero" Program was designed to provide special assistance to this county, which suffered the most dramatic damage from Hurricane



*The Hattiesburg Fire Department received public infrastructure grant funding following Katrina.*

Katrina. The program funds locally conceived and prioritized projects designed to rebuild public infrastructure and revitalize the county's economy, particularly recapturing the area's pre-Katrina identity as a destination for regional tourism.

As of March 31, 2015, the Hancock County Long-Term Recovery program has disbursed approximately \$139 million of its \$150.4 million allocation. Of the total Forty-three projects were awarded through the program, including water and sewer facilities, fire protection facilities, public buildings and flood and drainage improvements. Twenty-seven projects are complete and closed out, nine projects are complete and awaiting closeout, six projects are currently under construction, and one is not yet under construction.

## Transportation

Transportation infrastructure was severely damaged by Hurricane Katrina, and the Mississippi Department of Transportation worked quickly to

For local governments to create comprehensive land use and zoning plans, MDA allocated **\$9.5 Million.**

make roads and bridges operational after the storm.

The damaged Interstate 10 bridge was restored within 20 days, and repairs on the northbound lanes of Interstate 110 were completed within one month of the storm.

Hurricane Katrina's powerful winds and storm surge lifted massive four-lane concrete plates and the pilings of both the Bay St. Louis and Biloxi Bay Bridges. With these two bridges connecting communities along the Gulf Coast, the need to repair them became a top priority for the state.

In January 2006, \$1.1 billion in Federal Highway Administration Emergency Relief Funds were made available. One month later, the state's first design-build project started on the Bay St. Louis Bridge. In May 2006, two-way traffic on the bridge was restored.

State transportation crews replaced the Biloxi Bay Bridge with a new high-level structure using the design-build project delivery method, which allowed the designing, engineering, permitting and construction activities to be conducted simultaneously. This method was critical in building

the new bridge faster. In November 2007, the newly constructed bridge opened.

The new bridges are higher, wider and longer than the structures they replaced.

Today, transportation infrastructure continues to be a key facet in rebuilding and reconnecting the Gulf Coast and its growing economy. Katrina-related projects such as are now underway, with some portions complete:

- The Sangani Boulevard Interchange Project and the I-10/I-110 D'Iberville Boulevard Interchange Improvement Project in Harrison County
- The I-10 Reconstruction Project and the Highway 607 Reconstruction and Expansion Project in Hancock County
- The Highway 90/Highway 611/Highway 63 Interchange Project in Jackson County

Additionally, cities and counties were obligated \$91 million in FEMA public assistance for local road and bridge repair.

## Ports and Waterways

Hurricane Katrina washed 54,000 cubic yards of silt into the channel serving Port Bienville in

Hancock County, reducing its usable depth to below eight feet in some places. The Mississippi Department of Transportation provided \$1.2 million to pay for the dredging of the access channel serving Port Bienville and restored the channel depth to a minimum of 12 feet.

The storm destroyed several warehouses at the Mississippi State Port of Gulfport, resulting in the need to construct temporary warehousing in and on existing terminal space. This project consisted of the development and construction of a new six-acre container staging and serving area, along with a 1.25-acre container-stacking site. MDOT provided \$804,000 for long-term container handling capability for the Port of Gulfport.

## Aeronautics

MDOT provided matching funds of more than \$938,000 to the Gulfport-Biloxi International Airport to cover work on the terminal building and other airfield expansions and enhancements. The Federal Aviation Administration's share of this work was in excess of \$83 million, most of which was funded at 100 percent because of recovery funds from the FAA. MDOT also provided matching funds of more

than \$900,000 to the Stennis International Airport to cover work pertaining to a new terminal to replace the one damaged by Hurricane Katrina.

To date, the total cost of improvements to coastal airports including Trent Lott International, Gulfport-Biloxi International, Stennis International, Picayune Municipal and Dean Griffin Memorial in Wiggins is \$123.3 million in FAA funds and \$8.6 million in MDOT funds.

## Rails

In the decade since Hurricane Katrina, the Kansas City Southern Railway Company undertook an extensive track improvement program on its Gulfport Subdivision from Gulfport to Hattiesburg. The project upgrades the railway's current line from 10 mph to 49 mph and from single-stack to double-stack container service improving the economic competitiveness of the Port of Gulfport. MDOT installed flashers and gates at approximately 25 crossings costing \$28,000 per crossing with a future plan including up to 38 crossings. With improved operations and public safety, the track improvement program will enhance economic development opportunities in the region.

In the months following Hurricane Katrina, CSX Corporation completed one of the first major

infrastructure builds in the hardest hit areas. The most notable damage to CSX's network in Mississippi was the destruction of three major bridges: the 2,300-foot Gautier Bridge, the 6,000-foot Biloxi Bay Bridge between Ocean Springs and Biloxi and the 10,000-foot bridge crossing in Bay St. Louis. In addition to the extensive bridge rebuilds, CSX replaced approximately 40 miles of track along the Gulf Coast including five miles of track in Mississippi south of Bay St. Louis. These recovery efforts were completed within five months, giving the devastated Gulf Coast region another much-needed transportation link and a vital tool for recovery.

## Public Transit

Significant public transit projects after Hurricane Katrina involved replacing a portion of the Coast Transit Authority's infrastructure, including a fleet of more than 30 vehicles, numerous bus stops, beachside passenger shelters and transfer locations and facilities. Additionally, the maintenance and administrative center was repaired. MDOT rerouted the entire public transit route network and implemented Coast Commuter Carpool and Vanpool Services for local employers and commuters.

## Public Utilities

In addition to all of the schools, city halls, public safety facilities, parks and other recovery projects visible across Mississippi, an unprecedented amount of infrastructure improvements have happened below ground. The repair or replacement of utility systems, including water, sewer and gas, accounts for the largest portion of FEMA public assistance funding, representing \$904 million.

More than 700 utility projects have been completed or are underway, allowing communities to not only provide utility services to its citizens, but also use the opportunity to improve aging infrastructure and achieve efficiencies in their systems. More than three quarters of the remaining public assistance funds are associated with ongoing utility projects, due to the complexity and scale of those efforts.

**Ratepayer Mitigation.** After Katrina, state residents faced large increases in utility rates due to the hundreds of millions of dollars spent by companies to repair and replace downed power lines and other electric utility infrastructure. To prevent large increases in electric bills, Congress allocated \$360 million for a ratepayer mitigation plan.

### **Gulf Region Water and Wastewater Plan.**

As part of the Gulf Coast Regional Infrastructure program, the Mississippi Department of Environmental Quality was directed to develop the Gulf Region Water and Wastewater Plan to determine the needs for water, wastewater and storm water infrastructure in the six coastal counties. The plan's objective was to prioritize the water, wastewater and storm water infrastructure needs in the region for CDBG funding.

A draft of the plan was developed in October 2006 after significant local stakeholder involvement. After public comment, the plan was modified and a final draft was developed in December 2006. HUD approved \$665 million in CDBG for the Regional Water and Wastewater Program in April 2007.

By August 2007, the Mississippi Department of Environmental Quality had made grant awards for all 67 projects to the five county utility authorities located in Pearl River, Hancock, Harrison, Jackson and Stone counties and the cities of Gautier, Ocean Springs, Pascagoula and Moss Point. The county utility authorities, which were created by the Mississippi Gulf Coast Region Utility Act in

April 2006, have adopted rules and regulations as required by the act and are responsible for the implementation of these projects with the exception of those grants made to the referenced cities.

These are not minor projects. These projects represent major backbone infrastructure benefitting growth patterns and economic development, improving quality of life and ensuring functioning water/sewer services during future natural disasters in the Gulf Coast region for decades to come.

As of mid-2015, all projects are under construction or complete, with 54 projects having completed construction and most of the remaining 13 projects should be construction complete by December 2015.

When the infrastructure program is complete, the Gulf Coast Region will have a significant amount of new water and wastewater facilities, including:

- More than 620 miles of new water and sewer lines
- 31 new water tanks
- 32 new water wells
- 59 new wastewater pumping stations
- 17 new wastewater treatment facilities

The state strives to be a good steward of these funds and continues to ensure the infrastructure program is implemented consistent with federal

regulations and requirements. The state has received excellent reports from HUD on its most recent overview of the CDBG infrastructure program.

## Public Services

After Hurricane Katrina, city and county governments in the most heavily affected areas suffered financially during a time of increased need for public services. The widespread destruction of homes and businesses decimated the property tax revenues. Although many cities benefited from increased sales tax collections due to disaster-related spending, those communities closest to the point of Katrina's landfall experienced significant financial shortfalls.

A number of measures were used to keep government operations afloat and to provide enhanced services to deal with increased needs.

### **Special Community Disaster Loan Program.**

The Community Disaster Loan Program provides loans to offset revenue losses after a disaster, so affected jurisdictions can maintain government services.

In 2007, Congress amended the law to provide Special Community Disaster loans for jurisdictions



*Congress appropriated more than \$58 million to help reestablish state and local law enforcement agencies to pre-Katrina service capabilities.*

affected by Hurricane Katrina. Forty loans, totaling more than \$203.1 million, were provided to Mississippi applicants. Congress later amended the law to allow these loans to be cancelled based on an assessment of the community's financial condition after Katrina. As a result, \$197.4 million – or 97 percent of loan principal, plus \$10.9 million in accrued interest – has been forgiven.

**Public Safety Grants.** Public safety entities across Mississippi suffered unique problems as a result of the storm. On the Gulf Coast, law enforcement agencies had much of their equipment and facilities damaged or completely destroyed. North of the coastal counties, law enforcement agencies had to deal with problems associated with

increased populations due to the influx of hurricane evacuees.

In the December 2005 supplemental bill, Congress appropriated \$58.25 million to aid local and state law enforcement entities with reestablishing their agencies to a pre-Katrina level of public safety.

Police and sheriff departments across south Mississippi received grants to supplement their staff funding. Approximately \$6 million of these funds were used to fund a highway patrol training school. Another \$1.5 million was used to provide urgent updates to the Automated Fingerprint Identification System.

## Planning

The Governor's Commission on Recovery, Rebuilding and Renewal emphasized the importance of zoning and planning and gave communities tools to evaluate their land use plans. MDA allocated \$9.5 million for local governments to create comprehensive land use and zoning plans. These funds allowed coastal jurisdictions to continue the planning process started by the Governor's Commission and incorporate their revitalization visions into rebuilding their cities.



## ECONOMY

While the temporary housing crisis and the major loss of public infrastructure caused significant problems, the most important component to the long-term recovery of the Gulf Coast was the return of businesses and jobs. This is true not merely for the Gulf Coast, but also the entire state, as the coastal economy represents a major portion of the state's economic vitality. Coupled with the onset of the economic downturn in 2008, job creation initiatives are even more significant.

Disaster relief programs administered through Mississippi Development Authority and the Mississippi Department of Employment Security have provided the resources to restore business and bring jobs back to the Coast. Beyond initial recovery

from the disaster, the state focused economic recovery efforts to build a solid foundation to create and sustain jobs for years to come.

The biggest piece of this foundation will be the restoration of the Port of

Mississippi Development Authority's  
Disaster Recovery Division allocated  
**\$980 Million**  
in CDBG Program funds for  
**Economic Development.**

Gulfport, one of the largest economic development projects in Mississippi's history. A restoration plan is being implemented to expand and maximize the use and efficiency of the port. Once the plan is completed, the port will serve as an economic engine for the entire state.

## Business Disaster Assistance

**Small Business Administration.** As designated by the Stafford Act, the U.S. Small Business Administration provides low-interest, long-term loans to businesses of all sizes and private, non-profit organizations after a disaster. SBA offers Physical Disaster Business Loans to cover the costs of repairing or rebuilding damaged business structures and to replace machinery, equipment, inventory and other business assets damaged by a disaster. SBA Economic Injury Disaster Loans provide working capital for small businesses, small farms and certain private non-profits, while they recover to normal business operations after a disaster.

In Mississippi, SBA approved nearly \$3 billion in physical disaster loans to homeowners and businesses and \$19 million in economic injury loans after the storm.

## Mississippi Development Authority

In the months after Katrina, Mississippi Development Authority operated Small Business Assistance Centers in each of the most heavily damaged counties to provide a one-stop recovery resource for businesses. These centers connected businessmen and businesswomen with counselors from SBA, planning and development districts, chambers of commerce and volunteers from Service Corps of Retired Executives. MDA also provided free computer usage and internet access to help businesses regain communications with customers and suppliers. In less affected areas, MDA held Disaster Recovery Workshops to help business people navigate the array of disaster recovery resources available to them.

Less than a month after Katrina struck, the Mississippi Legislature authorized a no-interest bridge loan program for small businesses. These bridge loans provided quick, affordable financing to get businesses back in operation. Working with local banks, the state loaned \$13.25 million to 537 businesses, an average loan of \$24,674.

**Gulf Opportunity Zone.** The Gulf Opportunity Zone Act of 2005 was passed by Congress and

signed into law by President Bush in December 2005. The 49 counties eligible for individual assistance were designated as the “GO Zone,” and economic development activities within those jurisdictions were eligible for the incentives created by the legislation. Among the incentives for qualifying businesses were:

- 50 percent bonus-depreciation of eligible personal assets and real estate during the first year of service for property placed in service before Dec. 31, 2010
- \$4.9 billion in tax-exempt private activity bonds
- \$106 million in Low Income Housing Tax Credits

GO Zone tax-exempt private activity bonds allowed business owners and corporations to borrow capital at interest rates lower than would otherwise be available. For the GO Zone, the \$4.9 billion allocated by Congress for the five-year period from 2006 to 2010 was a sizeable increase from the normal statewide allocation, which would have been approximately \$1.3 billion for the same time period. Prohibitions against financing hotels and retail facilities were also lifted.

## Economic Development

**Port of Gulfport.** To restore the port facilities, as well as address the damage in the surrounding community resulting from surge-displaced Port of Gulfport container cargo, \$570 million in CDBG was allocated to the Mississippi State Port Authority at Gulfport. The funds are to facilitate restoration of public infrastructure and publicly owned facilities damaged or destroyed during Katrina and to better protect the Port and surrounding community during future storms.

Design work is nearing completion while construction work is ongoing and continues to progress for the restoration program. The port is also continuing its planning and environmental review processes for potential future expansion activities. To date, approximately \$213 million has been spent and an additional \$181 million is under contract for restoration activities.

The Port of Gulfport’s West Pier fill is complete with more than 7.4 million cubic yards of fill having been deposited. This work has elevated the West Pier facilities to 14 feet above sea level; which, along with a robust evacuation plan will help provide the port, its tenants and the community with enhanced protection



*To date, approximately \$213 million has been spent and an additional \$181 million is under contract for restoration activities at the Port of Gulfport.*

against future storm surges. New infrastructure and facility construction continues to progress. To date, more than 1,200 concrete piles have been installed to support more than 3,500 linear feet of upgraded wharf to accommodate three new rail mounted ship-to-shore gantry cranes. Additionally, new tenant facilities are under construction to include a transit shed, freezer and maintenance facilities.

The restoration program is important to strengthening and growing the region's job base and to filling a national need for more port capacity. With the expected completion of the Panama Canal expansion in 2016, ports in the Gulf and Southeast must increase their operations to handle the nation's imports and exports. Restoration will help ensure

the port can service increased traffic resulting from improvements to the Panama Canal. A viable port is crucial for handling these cargoes. In order to remain competitive in today's economic climate, the port recently contributed \$8 million of its own funding to supplement an allocation from the US Army Corps of Engineers for maintenance dredging of the harbor and navigation channel to its maximum authorized depth of 36 feet for the first time in recent years. Furthering this effort, the port is evaluating the possibility of additional channel deepening to accommodate anticipated increased throughput demand resulting from the expanded Panama Canal.

The port continues to actively pursue business development opportunities well ahead of the

projected construction completion date. Since January 2014, Gulf Coast Shipyard Group, McDermott, Inc. and Topship, LLC, have been announced as the latest additions to the port's maritime operations. These new tenants, along with developments by existing tenants Chemours, formerly DuPont, and Island View Casino, represent in excess of \$150 million in private investment being leveraged with the federally-funded restoration project to create additional economic and job creation opportunities.

The port is a major driver of both jobs and business activity and is a vital part of the comprehensive recovery of the Gulf Coast. The state is not only rebuilding this facility in a way to better protect the port area, but also working toward building a long-term and sustainable port that supports international shipping and growth trends.

Thousands of jobs are directly or indirectly related to state port activity, and the Port is expected to not only boost the coastal economy but also to have a job-producing ripple effect statewide.

## Economic Development Program

The \$383.6 million Katrina CDBG Economic Development Program is creating new jobs by funding public infrastructure improvements or eligible training activities to benefit private, for-profit businesses. All counties in the GO Zone are eligible for this CDBG program. Grants and loans flow through the local units of government or non-profit entities, and projects are funded on an as-needed basis.

Approximately \$367 million has been committed, and subgrant agreements have been issued for 58 projects projected to create 6,512 new jobs and retain

***“Ten years after the devastating storm, we still see the remnants of that natural disaster. With assistance from the U.S. Department of Housing and Urban Development, we continue our restoration efforts, allowing the port to diversify its tenant base and provide good paying jobs for Mississippi residents. Our comprehensive restoration program benefits the port today, while developing a path for significant business opportunities in the future.”***

*Jonathan Daniels, Port of Gulfport Executive Director*



*VT Halter Marine is one of the companies receiving Katrina CDBG Economic Program funding.*

721 existing jobs. Subgrant agreements are pending for two projects expected to create an additional 173 jobs, for a total of 6,685 new jobs to be created by the program. To date, 48 projects are construction complete and work is underway on eight more, accounting for the creation of 5,544 jobs and the retention of 721 jobs.

More than 71 percent of funding has been committed to the most affected counties – Hancock, Harrison, Jackson and Pearl River. The Promenade Retail Development at D'Iberville, Rolls-Royce in Hancock County, the Mississippi Gulf Coast Coliseum and Convention Center, the Gulfport-Biloxi Regional Airport, the Pass Christian Harbor, Trinity Yachts, VT Halter Marine and Northrop Grumman/Ingalls are just

a few of the beneficiaries of Katrina CDBG Economic Development Program funding.

## Employment

The major damage to businesses left many Gulf Coast residents without a job, at least temporarily. Unemployment levels spiked to nearly 25 percent in September 2005.

As provided in the Stafford Act, Disaster Unemployment Assistance was made available to disaster survivors who lost or had their jobs interrupted as a result of Katrina and who would not otherwise be eligible for unemployment insurance benefits.

The Mississippi Department of Employment Security handled 34,600 claims for Disaster Unemployment Assistance. MDES also received \$85 million from the Department of Labor for unemployment benefits.

These funds were placed in the Mississippi Unemployment Trust Fund, enabling the Fund to maintain a healthy balance despite the filing of an additional 55,264 Katrina-related unemployment insurance claims. MDES also assisted with more than 50,000 job placements in the three months after Katrina.

Unemployment rates steadily receded and had reached pre-Katrina levels by fall 2006. Since returning to

normal levels, coastal county unemployment rates have consistently ranked among the lowest in Mississippi.

The state's efforts have focused beyond those initial temporary unemployment benefits and toward meeting the long-term employment needs of the Coast. MDES has concentrated heavily on job placement and training, utilizing National Emergency Grant funds, tax credits and the state's WIN Job Centers. These programs have matched residents with jobs and developed a more highly skilled workforce.

**National Emergency Grant.** The Mississippi Department of Employment Security administered a \$95 million National Emergency Grant to aid in the recovery efforts on reemployment and job training. National Emergency Grant programs focused on temporary job placement and support and long-term goals of job training, filling workforce needs in the manufacturing, shipbuilding, health care, supportive services, construction, information technology and hospitality services sectors. The Mississippi Department of Employment Security administered the following National Emergency Grant programs:

- Temporary Recovery Jobs – Provided temporary employment through public sector and non-profit employers to more than 2,500 individuals. Participants were eligible to be employed for up to 18 months or

paid up to \$36,000. Many of these temporary jobs led to permanent employment.

- Training – Provided funds for on-the-job training while earning wages on a permanent job, classroom training through public and private training providers that led directly to employment and job search services. More than 6,500 residents were served.

- Supportive Services – Provided support payments to individuals enrolled in training to enable them to attend and succeed in training. Payments covered costs such as transportation and childcare. More than 1,300 participants were served.

- Working Your Way Back Home Program – Helped Mississippians who evacuated 151 miles or more from home get the assistance they needed to find a job. Eligible costs included reimbursement for travel and relocation expenses. More than 1,500 residents participated.

- Pathways to Construction Training – Provided training through area community and junior colleges to meet construction industry needs, which grew significantly as South Mississippi rebuilt after Katrina. More than 6,000 construction workers received training.

- The Arts Recovery Project – A unique partnership between Mississippi Department of Employment

Security, the Twin Districts local workforce area and the Mississippi Arts Commission to address the needs of the many coastal artists and craftsmen severely affected by Hurricane Katrina. As individual artisans who created and sold original works of art, they constituted small businesses. Collectively, they represented a significant industry serving as a cornerstone to other economic sectors such as tourism.

- Maritime Trades Training Facility – A unique component of the Katrina CDBG Economic Development program is the Maritime Trades Training Facility. This program provides unskilled, under-employed and unemployed low-to moderate-income individuals with additional training and ultimately the opportunity to compete for the top wage jobs available as a result of the recovery of the ship building and metal-related industries. The facility began offering training classes in the maritime and metalworking trades in 2014 and is approximately 80,000 square feet in size.

MEMA is distributing FEMA funds of

**\$3.2 Billion**

to assist with restoration of disaster-damaged, publicly owned facilities, parks, utilities, roads & bridges and other public assistance projects.

A separate Katrina CDBG Economic Development grant is providing funding for the construction of an annex to the facility to be used for large group meetings and training sessions such as soft skills training.

In addition to the National Emergency Grant funds, Mississippi Department of Employment Security received \$8 million in workforce development funds from the Department of Labor. These funds have been used by the state's community and junior colleges to provide training and employment in high-growth and high-demand fields. Specifically, \$5 million has been focused on construction related job training, with the remaining targeted for other high-demand jobs.

**Mississippi WIN Job Centers.** The Workforce Investment Network in Mississippi is an innovative strategy designed to provide convenient, one-stop employment and training services to job seekers and businesses. MDES partners with four local workforce areas, which includes 53 WIN Job Centers throughout the state and several part-time offices. Within two weeks of Hurricane Katrina, all WIN Job Centers were open with extended hours to provide employment services and



*Despite the devastation from Katrina followed by an economic slump and the BP Horizon Gulf oil spill, Mississippi tourism still managed to grow 9 percent from 2004 to 2014.*

process applications for unemployment benefits.

Four WIN Job Centers on the Gulf Coast – Biloxi, Gulfport, Pascagoula and Picayune – were significantly damaged and the office in Bay St. Louis was completely destroyed. By Sept. 12, 2005, Mobile WIN Job Centers were transported in to handle unemployment claims. A Claims Call Center was created and operated 7 a.m. to 6:30 p.m. seven days a week, and the other non-Coast WIN Job Centers throughout the state were open 7:30 a.m. to 6 p.m. for at least a month.

The WIN Centers were committed to providing people services tailored to their individual needs. MDES ran television, radio and newspaper announcements throughout the state, encouraging people to visit their local WIN Job Center to look for jobs and reminding employers to list their jobs with the Mississippi

Department of Employment Security in order to take full advantage of the resources available to them.

## Tourism

The tourism industry on Mississippi's Gulf Coast has made a strong comeback since 2010, despite being hampered in recent years by circumstances unrelated to Hurricane Katrina.

A national economic downturn slowed the pace of tourists to the Coast, and the 2010 BP Deepwater Horizon oil spill had a serious negative effect on tourism. Even so, the three coastal counties alone accounted for nearly 29 percent of all travel and tourism expenditures in Mississippi in 2014. Overall, travel and tourism expenditures in Mississippi grew 9 percent from 2004 to 2014.



*Travelers tour the 24,000 square-foot Biloxi Visitors Center, which opened in July 2011. The city constructed the \$11 million facility with federal and state funds and insurance proceeds.*

Casino revenues on the Mississippi Gulf Coast in 2014 totaled more than \$1.54 billion, reaching higher levels than ever before. After a considerable decrease in revenues following Hurricane Katrina, 2007 and 2008 saw considerable increases in Gulf Coast casino revenues, coming in at a record \$1.3 billion and \$1.26 billion, respectively. Although the nation's earlier economic crisis caused the Gulf Coast's gaming profits to decrease since 2009, 2014 data show marked improvement from late 2009 revenues.

The state used CDBG grants to help attract tourists. Mississippi Development Authority created the \$5 million Tourism Industry Restoration Grant Program to fund extensive advertising and events marketing campaigns to attract travelers and to bolster the area's economy.

Grants covered 28 tourism entities in the six southernmost counties plus Forrest County and are fully disbursed and complete.

Gov. Bryant's GoCoast 2020 report recommended a regional tourism commission to jointly promote the Gulf Coast. The push for a Coast-wide effort began in 2005 following Hurricane Katrina, and the Gulf Coast Business Council and other Coast leaders have supported effort.

In 2013, Gov. Bryant enacted and signed a bill creating a unified, Coast-wide tourism partnership. House Bill 1716 establishes the Mississippi Gulf Coast Regional Convention and Visitors Bureau to serve as the official tourism agency for the Gulf Coast region. The bureau, operating as Visit Mississippi Gulf Coast, promotes the three Gulf Coast counties to potential visitors.



## EDUCATION

**H**urricane Katrina caused unprecedented destruction of educational facilities and disrupted the educational process, but Mississippi's aggressive response by state leaders and education officials got results.

The state had re-opened all of its disaster impacted K-12 public schools before the city of New Orleans re-opened any one of its schools. This achievement highlighted the efficiency of the state's coordinated response shared among state and educational leaders at all levels: K-12, community colleges and universities.

Mississippi's success in meeting the educational needs of disaster affected citizens was aided in

large part by unique federal funding opportunities, which provided monies, not only for construction rehabilitation and repair, but also to encourage teacher retention and innovation in a post-Katrina educational environment.

Higher education, including both the community college and university systems, continues to experience a resurgence of enrollees at Mississippi institutions, with the southernmost campuses offered by the University of Southern Mississippi and Mississippi Gulf Coast Community College benefiting from the completion of post-Katrina construction projects.

**“With the eternal help of our fellow Americans, our state, and federal government, following our darkest hour on Aug. 29, 2005, the City of Pass Christian is now back to being a productive resort community. With our new buildings, harbor, and infrastructure, our future is brighter than ever, and we look forward to the twenty first century with new and profound enthusiasm.”**

*Chipper McDermott, Pass Christian Mayor*

## K-12

The state's schools had begun a new academic year just days before the hurricane made landfall. Students were forced to evacuate just as they were settling in their new schools. The damage was widespread across the state:

- 263 schools in 79 school districts received damage
- 16 schools were destroyed and 24 severely damaged
- Of the state's 152 school districts, only 14 did not miss any days due to the storm
- Nearly 80,000 children were out of school in Mississippi immediately after Katrina

Mississippi's public school leaders worked tirelessly to quickly reopen schools because they understood the critical role schools would play in rebuilding their area. Schools had to be operating for families to return to their homes, for academic progress to continue for students and for children to feel a sense of normalcy again in their lives.

Mississippi's strong response efforts resulted in children not staying out of school very long. Local school districts and FEMA made repairs to minimally damaged schools and set up portable classrooms where schools were more heavily damaged. Two weeks after the storm, most Mississippi schools were open again while, a mere six weeks after the storm, all but one Gulf Coast school – Bay St. Louis-Waveland – was back open. Because of a shortage of portable classrooms and the inability

to adequately repair the infrastructure on the school grounds to put these classrooms in place, Bay-Waveland had to wait until Nov. 7 to open again.

**Hurricane Education Recovery Act.** While the FEMA Public Assistance Program financed the reconstruction of school facilities, the Stafford Act could not account for the enormous difficulties Mississippi school districts would face. In late 2005, Congress passed the Hurricane Education Recovery Act to help K-12 schools deal with immediate post-Katrina challenges. The Mississippi Department of Education has administered the \$323 million distributed to Mississippi from the legislation:

- \$222 million: RESTART – Immediate Aid to Restart School Operations. This program was designed to compensate for the loss of property tax revenue, covering expenses such as salaries, classroom materials, supplies and furniture.

- \$93 million: Emergency Impact Aid for Displaced Students. Funds were designated for school districts across Mississippi, which were educating an estimated 20,000 Katrina-displaced students.

- \$687,000: Homeless Education. Many Coast school children met the federal homeless student

definition, and these funds were appropriated by Congress to help educate these children.

- \$7 million: Hurricane Educator Assistance Program. This program was designed to attract and keep quality educators at Coast schools. Funds were provided to recruit, retain and compensate new and current teachers and administrators who commit to work for at least three years in school-based positions in public elementary and secondary schools. Incentives include salary supplements, housing subsidies, signing bonuses, relocation costs and loan forgiveness. Most school districts are using these funds to retain teachers.

**Educational Performance.** The expediency of Mississippi reopening its schools is merely the beginning of the educational success story. Because of the uncertain conditions in which the students, teachers and administrators lived, it would not have been surprising to see test scores affected by these circumstances. However, the students' post-Katrina test scores show they excelled despite the personal struggles they faced.

Even the turbulent 2005-2006 academic school year on the Mississippi Gulf Coast proved academic achievement would remain a top priority, as demonstrated by the results on state assessments.

The former accountability model ranked schools' academic performance from Levels 1 to 5, with Level 5 being superior. In the years immediately following Katrina, all coastal districts ranked Level 3 or higher.

In 2008, the Mississippi Board of Education voted to increase the rigor of the curriculum and assessments so students will be better prepared to transition into a college or university and, more importantly, to compete in a global economy. A new assessment model was developed to measure student achievement. Of the 16 school districts in the six southernmost counties, 13 were rated as "successful" or higher; none received a "failing" rating.

## Higher Education

Hurricane Katrina's effects on colleges and universities in Mississippi were substantial. Not only were South Mississippi campuses left with extensive damage, but also Mississippi schools accepted thousands of transfers from New Orleans colleges and universities, which were, at the time, closed indefinitely.

The **Hancock Co LTR/Ground Zero Program** assisted local governments in Hancock County affected by Hurricane Katrina to address their long-term recovery efforts by providing **\$150 Million.**

Coastal students in colleges around the state faced financial uncertainty as their families struggled at home. To meet this need, Congress appropriated \$95 million in financial aid for coastal residents enrolled in Mississippi colleges

and universities. These funds were expended in the 2005-2006 and 2006-2007 school years. Mississippi universities also received \$20 million, including \$4.3 million from the Hurricane Katrina Foreign Contributions fund, to defray the effects of lost revenues and cover disaster-related expenses. Repairs and reconstruction to coastal college campuses, as described below, were funded through the FEMA Public Assistance Program.

### **The University of Southern Mississippi.**

Southern Miss suffered more than \$200 million in damages to facilities on the Gulf Coast and in Hattiesburg. Damages to facilities in Hattiesburg, which included repairs to the iconic Aubrey K. Lucas Administration Building, were completed in 2010, while the Gulf Park campus in Long Beach embodies the university system's biggest success story.

Since Katrina, USM's Gulf Park campus, which was decimated by the storm, has repaired 270,000 square feet of classroom and office space lost during the storm. In fall 2014, the Gulf Park campus continued to grow, reporting 2,880 students enrolled, up by more than 3 percent from 2,789 in fall 2013. The number of student credit hours produced by faculty based on the Gulf Park campus increased more than 2 percent from Fall 2013 to Fall 2014.

The Holloway Complex and the Fleming Education Center reopened in 2007. The Fleming Education Center – previously named the Advanced Education Center – contains a 500-seat auditorium, 19 classrooms, two interactive video classrooms and three computer laboratories.

The Gulf Park Library, which was flooded by storm water, reopened in spring 2008. The library housed The Katrina Research Center until 2014, which served as an interdisciplinary center and a public clearinghouse to facilitate the gathering of historical and current information related to the natural, physical, social, political, economic and spiritual aspects of recovery from Hurricane Katrina and other disasters. The library also offers tutoring and educational services through the Learning Commons, Think Center and Learning Enhancement Center.

The Institute for Disability Studies at the Gulf Park campus – formerly the Toy Library and Technology Learning Center – is a community-based, university-directed, non-profit organization dedicated to enhancing education, independence and quality of life for persons with disabilities. The institute serves children and adults with disabilities, their families, teachers and other special education professionals through specialized training and loan of assistive technology and recreational opportunities.

The institute's building project was completed in October 2009. An adjacent Adaptive Playground allows children with special needs an opportunity to interact in a "user-friendly" playground. The playground was completed in April 2009.

During the 2011-12 academic year, a new Science Building construction project began, and an existing building was converted to house the College of Nursing, both located on the northwest corner of campus. In spring 2013, the Science and Nursing Buildings opened, and historic restoration projects for Hardy Hall and Lloyd Hall were completed.

The Science Building features nine teaching laboratories, research space, approximately 20 faculty and administrative offices and an 80-seat instructional classroom. The Nursing Building was a



*Officials broke ground on Mississippi Gulf Coast Community College's new Nursing and Simulation Center in April 2015. Funding for the center includes \$12 million in Katrina Community Development Block Grant funds.*

renovation project of an old gymnasium and features two laboratories, faculty offices and student learning and study areas.

Work on Hardy Hall included renovations to the entire facility, as well as new construction for a Barnes and Noble Bookstore and an adjacent parking lot. The three-story building houses dining services, the colleges of education and psychology, administrative offices, admissions and student services. Lloyd Hall provided 10 renovated classrooms for students.

Elizabeth Hall, which houses the College of Arts and Letters, was completed in fall 2013, and in May 2014, demolition was completed on the Administration Building and a new Administration Building Plaza was opened. In late fall 2014, USM completed renovations on three houses along the

east side of the Gulf Park campus which were washed through during Katrina, providing space for a new Fitness Center, Health Center and School of Social Work.

Construction is underway to complete the second floor of the college of nursing building, which will provide added classroom space. This project is scheduled to be completed for the fall 2016 semester.

In April 2015, USM announced the approval of legislative funding to replace the Holloway Complex, currently comprised of a series of modular structures washed through during Hurricane Katrina. The new facility will house the colleges of business and health. This two-story building will provide added academic and programmatic space for students, faculty and staff. Estimated completion of the new facility is fall 2017.

**USM Gulf Coast Research Laboratory.** The University of Southern Mississippi's Gulf Coast Research Laboratory in Ocean Springs is Mississippi's designated marine laboratory, focusing on scientific research of the coastal and marine environment and education of future scientists.

Although the number of graduate students enrolled in marine science dropped the year after Katrina, spring 2015 enrollment numbers are the same as pre-Katrina. The Department of Marine Science has since added an undergraduate program with a current enrollment of 15 students.

Hurricane Katrina destroyed more than 60,000 square feet of buildings at the research laboratory. Since 2005, the Gulf Coast Research Laboratory has replaced 13,227 square feet, with plans to begin work on an additional 30,000 square feet in the near future. The physical plant maintenance shop and Summer Field Program teaching classrooms located adjacent to the research laboratory harbor were rebuilt at the Cedar Point site and at a higher elevation on the Halstead Road

site, respectively. The Marine Education Center and Toxicology replacement buildings are under contract and plan to be completed by 2017 with FEMA funding. Not replaced was the Anadromous Fisheries building, which supported Mississippi's striped bass stocking program.

At the time of Katrina, the sea trout stock enhancement program was just beginning. Broodstock were being held on the Halstead Road site on a cycle to spawn in August or September. Hatchery, larval rearing and grow-out facilities had been built at the Halstead Road site and rearing protocols had been developed. A test run of the protocol using sea trout larvae shipped in from Texas was underway when the storm struck. All facilities and animals were lost. The program relocated to Cedar Point, rebuilt and achieved the first small-scale release of sea trout in the fall of 2006.

The Thad Cochran Center for Aquaculture at Cedar Point received little damage during the storm. It supported recovery of the Gulf Islands National Seashore in Ocean Springs allowing them to set up their recovery headquarters at Cedar Point.

Since 2006, the **Gulf Coast Community Design Studio**, part of the MSU College of Architecture, Art & Design has completed more than 300 new houses & 120 home rehabilitations — a benefit of **\$36 Million.**

The Center for Fisheries Research and Development, located primarily in the Research Building, which received 18 inches of storm water, was mostly able to continue its grant-funded sampling within a few weeks after Katrina. The center is now back to full operational capacity.

During Katrina, the Gulf Coast Research Lab lost the 36,000-square-foot J.L. Scott Marine Education Center in Biloxi. Since then, the education center has been operating out of the 3,600-square-foot director's home on the research laboratory Halstead site. The education center uses three modular units housing five classrooms to help support its educational programs. Of those programs, the summer-based undergraduate program, the Summer Field Program, has grown from 42 students representing 12 states, to 160 students from 30 states and 60 institutions. In the 10 years since the storm, the J.L. Scott Marine Education Center has successfully rebounded and grown the undergraduate program to a nationally recognized leader in field-based marine biology course, while maintaining and expanding its successful K-12 camps and educational programs. A new 30,000-square-foot building is under contract to be built at the Cedar Point site to replace the building destroyed by Katrina.

**USM at Stennis Space Center.** At the time of Hurricane Katrina, USM's Department of Marine Science had its operations in two buildings, the George A. Knauer Marine Science Building and the office/administration building.

The department also had a number of research assets deployed in the field. A weather station was deployed on the eastern shore of the Bay of St. Louis, which was completely lost during the storm. Funds from FEMA were used to replace it. Most of the facilities and instruments damaged by the storm have been repaired or replaced.

Classes resumed at Stennis in fall 2005. For a short period of time, the marine science building housed a number of National Guard troops deployed to Mississippi to help in hurricane recovery. The troops were relocated when USM resumed classes.

#### **Mississippi Gulf Coast Community College.**

With campuses in Harrison, Jackson, Stone and George counties, Mississippi Gulf Coast Community College was the largest community college in Mississippi before Katrina. However, in the fall 2005 semester following the hurricane, the community college's enrollment dropped to nearly 75 percent of its pre-Katrina numbers. Today, Mississippi Gulf Coast Community College's enrollment continues to grow and surpass enrollment since the hurricane.

Prior to Hurricane Katrina, the college engaged in a \$34 million district bond project. Those district bond projects are now completed. The community college worked with FEMA and has renovated, repaired and restored all buildings at its nine locations. Several new buildings have been built to meet the needs of business, industry and the citizens of the college's service district.

**Pearl River Community College.** During the 2014-2015 school year, Pearl River Community College moved into its last Katrina-rebuild project, White Coliseum. The silver lining in the storm's devastation is found in the beautiful new facilities built on the Poplarville campus and the transformation these new facilities have made in the development of this campus.

Additionally, credit enrollment at the college has increased by almost 800 students since the storm.

**Katrina Research and Assistance.** The Mississippi Institutions of Higher Learning and several of Mississippi's public four-year universities continue to assist in recovery through meaningful research and volunteerism activities.

The Gulf Coast Community Design Studio, located in Biloxi, is a professional research and service program that is part of the Mississippi

State University College of Architecture, Art and Design. Its most innovative aspect is the degree of collaboration and integration with the community. The design studio is embedded in a local community organization, the East Biloxi Coordination and Relief Center. The 15 architects, landscape architects, planners and interns in the design studio work directly with the people who need housing and with the various organizations building the housing. Since 2006 the design studio has completed more than 300 new houses and 120 of home rehabilitations. The estimated economic benefit of the house projects is more than \$36 million.

The Gulf Coast Community Design Studio's community redevelopment planning work transformed from a focus on hurricane recovery to long-term economic development. House projects occur along the entire Gulf Coast, and the design studio's planning work is focused on three low-income communities: East Biloxi, Gulfport's Soria City neighborhood and the City of Moss Point.

## HEALTH & SOCIAL SERVICES

The Mississippi Department of Human Services was instrumental in restoring basic human services and helping to rebuild lives across Mississippi's Gulf Coast.

Katrina did not spare anyone from its wrath, including some of Mississippi's most needy citizens who depend on state health and social services facilities. The crisis in this sector was compounded by the fact the storm had created an increased need for those

services, particularly in the mental health and economic counseling fields.

The immediate aftermath was an especially stressful and troubling time for individuals and families, many who were facing the reality that

all they owned had been destroyed. In addition, many persons could not go back to work for months and needed help paying normal expenses.

The department quickly established programs for essential items and services.

For long-term recovery of health & human services sectors, the **Department of Human Services** received **\$128 Million** in Social Services Block Grants.

**“Never in the history of our country has there been such a devastating natural disaster – followed by such an inspiring, man-made success. We saw the tremendous outpouring from individuals, religious and civic groups, and cities and towns from across the country, and even from around the globe. We’ve seen so many communities build back more resilient than ever with the help of our federal partners and volunteers. We are indeed blessed.”**

*A.J. Holloway, former Biloxi Mayor*

More than 1 million individuals received food stamps and assistance for everyday expenses. Those programs were the foundation for providing immediate relief to those with the most needs to get them through the difficult first few months.

To help alleviate stress and depression, the Department of Human Services used disaster funds to provide counseling services for nearly 300,000 individuals.

For long-term recovery of health and human services sectors, the Department of Human Services used \$128 million in Social Services Block Grants. A myriad of health, mental health and human services programs were funded to restore facilities and services in this vital area.

All told, the immediate response and long-term recovery programs have helped Mississippi families

move on with their lives and have restored critical health and human services infrastructure.

Additionally, shelter capacity, which falls under the department’s purview, has increased to:

- 208 general population shelters with American Red Cross agreements for a pre-incident capacity of 36,625 and a post-incident capacity of 31,148.
- 66 county shelters with a pre-incident capacity of 5,481 and a post-incident capacity of 14,058.
- 69 Independent shelters with a pre-incident capacity of 2,470 and a post-incident capacity of 8,127.

## **Individual And Family Assistance**

After Katrina, the Department of Human Services received \$128 million in Social Services Block Grants.

This program has been instrumental in restoring operations and facilities in the areas of health, mental health and human services.

**Disaster Assistance.** The Department of Human Services provided immediate and long-term support to persons and families in the aftermath of Katrina. Through its various divisions, the Department of Human Services assisted families in covering necessary expenses, such as food and utility bills, at a time when households were temporarily out of work.

The department's Division of Economic Assistance managed several programs focusing on immediate relief to families. The Disaster Food Stamp Program, which ran from Sept. 13 to Oct. 9, 2005, assisted 521,679 individuals representing 186,765 households, with benefits of more than \$110 million. Additionally, the Supplemental/Replacement Program for ongoing food stamp recipients provided more than \$24 million to 572,408 individuals representing 224,165 households.

The Expanded Evacuee Food Stamp Policy allowed for a month's allotment of food stamp benefits to be issued without regard to income and resources if the household was an evacuee from the federally declared disaster areas. This program issued more than \$6 million in benefits to 18,700 individuals

from Mississippi, Louisiana and Alabama.

The department's Division of Community Services was allocated \$11.75 million in Social Services Block Grants to help families pay for utility deposits and bills, emergency repairs, emergency shelters, meter boxes and appliance replacements. This program assisted more than 31,000 households. The Department of Human Services assisted more than 29,000 households with nearly \$12 million of supplemental Low-Income Home Energy Assistance funds to help pay energy bills.

**Senior Services.** The Department of Human Services' Division of Aging and Adult Services assessed the needs of senior citizens after Katrina. The division partnered with local area agencies on aging to restore, rebuild or repair senior center services to the Gulf Coast using \$13 million in Social Services Block Grant funds. Out of these funds, Southwest AAA provided \$230,000 to seniors for repairs or modifications to approximately 50 homes.

**Child Support.** The department's Division of Child Support Enforcement used \$4 million in Social Services Block Grant funds to hire additional child support enforcement officers to work through the backlog of cases representing lost files on the Gulf Coast and replace computer equipment in Katrina-affected areas.

**Child Care.** The Department of Human Services' Office for Children and Youth played a major role in the restoration of the age-appropriate playground infrastructures at licensed and unlicensed child care facilities in 18 of Mississippi's hardest hit counties. The Office for Children and Youth installed more than 200 age-appropriate playgrounds and delivered educational materials to more than 100 licensed centers. Additionally, the Office for Children and Youth provided training, educational materials and miscellaneous repairs and equipment to these centers.

**Community Services.** The Department of Human Services' Division of Community Services was awarded \$8 million in Social Services Block Grant funds to assist in the rebuilding of homes. Services include home repairs, septic tanks, water line repairs, furniture, appliances, bedding, debris removal, short-term rent, personal items, food, clothing, shelter, health/mental health care, medication and medical equipment. More than 400 homes were rebuilt through the program.

## Non-Governmental Organizations

Social Services Block Grant funds were given to non-governmental institutions such as the United Way of South Mississippi, International Relief Organization,

N.E.E.D.S., Gulf Coast Women's Center for Nonviolence, Progressive Outreach with Energetic Resolution, Manna Ministries and YOUTHBUILD AmeriCorps.

Services provided by these groups include economic assistance, case management and referral, repairing and rebuilding homes, distribution of food and clothing and other unmet needs.

## Health Care

More than 30 percent of Mississippi's hospitals suffered significant damage from the storm. Nevertheless, hospitals statewide were ready to care for their communities. For weeks after Katrina ravaged Mississippi, hospitals were the last-standing symbol of pre-hurricane life and hope because they provided many critical, life-saving services to thousands of Mississippi's Katrina survivors. Even Hancock Medical Center in Bay St. Louis, which was inundated by storm surge, kept its doors open to serve the community until a Disaster Medical Assistance Team hospital could be put in place. Mississippi's coastal hospitals are fully operational after Katrina. Currently there are 14 hospitals – including two federal hospitals – in the region, and the Gulf Coast Medical Center now focuses solely on providing psychological care services.

The Department of Medicaid received more than \$160 million from the federal government for medical care reimbursements, including \$92 million in Katrina Provider Stabilization Grants.

The Gulf Coast medical labor force has also worked

to recover from the hurricane. Mississippi State Medical Association's Foundation awarded \$613,000 in the form of 151 Physician Relief Grants to provide housing and help rebuild homes for Gulf Coast-area physicians. The grants were awarded to MSMA member physicians as well as non-member physicians in need of immediate shelter and for those seeking to rebuild homes lost in the storm. The grants not only provided physicians and their families with replacement homes, but also made sure residents would not lose access to healthcare.

## Mental Health

Hurricane Katrina caused much strain and grief in Mississippians' lives. The Mississippi Department of Mental Health immediately came on the scene after Katrina to help many citizens cope with the distress

The Department of Medicaid received more than **\$160 Million** from the federal government for medical care reimbursements.

from their losses. Although the public mental health system has struggled to rebuild to meet the demand for services, it has recovered well and is still being pushed to deal with the emotional healing that will take years.

### **Project Recovery.** As

soon as communications with the affected areas could be established, staff from the Mississippi Department of Mental Health began to assess the Mississippi Gulf Coast's mental health needs, and the Department of Mental Health was diligent in its efforts. The department first requested grant funding for the Crisis Counseling Project, known as Project Recovery. The Department of Mental Health then created a Division for Project Recovery and used existing department staff until Project Recovery staff could be hired. Department staff worked during the initial start-up of the project and continued to provide support and to serve on committees for quality management and program evaluation for the duration of Project Recovery.

Crisis counselors for Project Recovery were contracted through the local community mental health

centers, providing jobs to more than 500 people, many of whom were survivors of the storm.

Although Project Recovery was established in the 49 counties declared eligible for individual assistance, it soon became apparent services should be concentrated in the most highly affected counties, including Pearl River, Stone, George, Hancock, Harrison and Jackson counties. As the Regular Services Program neared its scheduled end, November 2006, Project Recovery received a six-month extension to provide services until May 2007. At the time, Project Recovery leadership redistributed staff and deployed them to the areas of greatest need, primarily the southern portion of the state.

Project Recovery enabled staff to meet the needs of the Gulf Coast's residents through resources provided to those in need, through a toll-free helpline and through Specialized Crisis Counseling Services. It also allowed for data collection about the number of residents to whom the Project Recovery staff provided aid. It recorded 291,224 first time individual encounters. Of all the risk factors evaluated, 8.5 percent of persons encountered experienced personal loss, such as injuries, missing family or friends, or separation from family, 44 percent lost or had damage to material possessions, including homes, cars, jobs

and financial losses, and 2.6 percent assisted with rescue/recovery.

### **Youth Suicide Prevention and Early**

**Intervention Grant.** The Mississippi Hurricane Katrina-Related Youth Suicide Prevention and Intervention Project aimed to reduce the number of youth suicide attempts by providing an awareness, training and prevention campaign focused in the six counties most heavily affected by Katrina: Hancock, Harrison, Jackson, George, Stone and Pearl River counties. The training program targeted 16 school districts covering 137 schools, as well as Mississippi Gulf Coast Community College and Pearl River Community College, for suicide-awareness and gatekeeper training.

**Social Services Block Grants.** The Mississippi Department of Mental Health received \$10 million in Social Services Block Grant funding to restore day treatment and other services for children and adults, building repairs, patient transportation, staff retention supplements and to bridge budget shortfalls.

Gulfport Memorial Hospital was allocated \$10 million to restore a rehabilitation unit for mental health treatment. Project Relief received Social Services Block Grant funds to provide licensed mental health professionals for healthy coping skills and self-sufficiency of coastal families.



## ENVIRONMENTAL & MARINE RESTORATION

Mississippi's coastal environment took a battering from Katrina's storm surge and winds. Beaches were washed away, barrier islands were breached and eroded and wetlands were destroyed. Those whose livelihoods depended on a healthy coastal environment – fishermen, shrimpers and others – were directly affected, in the short- and long-term.

Mississippi's barrier islands were particularly devastated. The footprint of these islands was

reduced an estimated 25 percent. In many instances, island elevations were eroded to near sea level and at least 50 percent of their vegetative cover was lost. These islands provide unique environmental habitats to a vast array of plant and animal species and also

serve to guard the state against oncoming hurricanes. Post-Katrina, these islands were poorly equipped to serve either function.

One of the state's major achievements following the storm included securing \$439 million for restoration of the

One of the state's major achievements included securing

**\$439 Million**

for the restoration of the barrier islands.



*Mississippi secured \$439 million for the restoration of the barrier islands, which serve as habitats for a wide range of animal and plant life and guard against incoming hurricanes.*

barrier islands. The environmental and mitigation benefits of this massive undertaking will be reaped by present and future generations.

The Mississippi Department of Marine Resources and Mississippi Department of Environmental Quality have driven coastal restoration and environmental efforts for the state. Their efforts, including removing environmental hazards and rehabilitating marine habitats, are ongoing and continue to positively enhance, preserve and restore the environment of the Mississippi Gulf Coast.

## **Barrier Islands And Coastal Restoration**

The barrier islands are the state's first line of defense against oncoming storms. As a hurricane

approaches, the islands' forests help block and slow hurricane winds. Barrier islands are also wetlands, which mitigate flooding by slowing and absorbing incoming water in the form of waves and storm surge. The marshlands and wetlands along the coastline serve as natural buffers in a similar manner.

In the November 2005 recovery plan, the state requested restoration funding for Mississippi's barrier islands and coastal environment. In the December 2005 legislation, Congress did not provide funding but instead directed the U.S. Army Corps of Engineers to prepare two reports identifying projects for coastal restoration and hurricane protection, one for interim measures and one identifying long-term initiatives.

The Corps and the Department of Marine Resources collaborated on the interim report

detailing actions in the near-term to restore and renew coastal Mississippi. In May 2007, Congress approved \$107 million to implement these interim projects, which included beach restoration, rebuilding and repairing seawalls and constructing flood control measures. Five of the 15 interim projects have been completed, including projects to strengthen the existing seawall on Beach Boulevard in Hancock County, repair and restore flows to the 980-acre Jackson Marsh system and Mississippi Sound and repair the damaged approaches to Shearwater Bridge in Ocean Springs.

Remaining near-term initiatives to restore and repair marsh and wetlands, beaches, drainage and canal systems, and seawalls are at various stages of completion.

For long-term measures, the Corps designed a \$1 billion plan that included actions to restore barrier islands, coastal marshlands and beaches and convert flood-prone areas to open space. In June 2009, Congress approved \$439 million for barrier island restoration projects identified in the plan. Other initiatives detailed by the Corps have not yet been funded.

Building the barrier islands back to their 1917 footprint will provide invaluable protection for the

Coast. Models indicate that as storms move across coastal wetlands, their surges are reduced by about one foot per every acre of wetland. Without the buffer of barrier islands, wave and ocean storm surge heights could reach eight to twelve feet higher on the shoreline.

The barrier islands project focused on studies and restoration of West Ship Island, Cat Island and Deer Island. In the 10 years since Katrina hit, the Corps has completed restoration of 239 acres on Deer Island and 77 acres on the north shore of Ship Island. The larger barrier island restoration project – filling Camille Cut on Ship Island and putting millions of cubic yards of sand back into the barrier islands' sediment transport system – is currently in the final steps of the engineering and design phase. This project will encompass 1,500 acres of restoration and is expected to begin construction in the next few months.

## Marine Habitats

Hundreds of acres of coastal marshes and water bottoms were covered with storm debris after Katrina hit the Gulf Coast, which prevented these areas from functioning as essential habitats for important



*Mississippi's seafood industry suffered major losses in the hurricane. Because oysters are a long-term crop, total recovery may take years.*

commercial and recreational species – shrimp, crabs and finfish. The Department of Marine Resources reports all of these areas now have been cleared of debris and have been restored to pristine conditions.

**Oyster Habitat.** Oyster reefs in the Mississippi Sound were beginning to rebound from Hurricane Katrina, but took added hits from the Deepwater Horizon oil spill in 2010 and the opening of the Bonnet Carre Spillway in 2011. Because oysters are a long-term crop, total recovery from Hurricane Katrina and the other disasters may take years. The Department of Marine Resources continues to monitor oyster habitats in an effort to gather evidence relating to the current state of the shellfish population along the Mississippi Gulf Coast.

Gov. Bryant signed an executive order on Feb. 2, 2015, forming the Governor's Oyster Council on Restoration and Resiliency. The council's three committees met regularly to come up with short- and long-term solutions to the declining oyster harvest. The council presented Gov. Bryant with its final report on June 23, 2015. The Mississippi Department of Marine Resources is committed to increasing the number of oysters harvested each year to reach the goal of 1 million sacks per year by 2025.

The department's Shellfish Bureau is continually monitoring and assessing the oyster reefs damaged by Hurricane Katrina and other disasters. By identifying and mapping the oyster reefs using side scan sonar and poling techniques with Global Positioning Systems, the areas are analyzed to determine which sites are best suited for cultivation, cultch planting and the relaying of oysters.

From January 2010 through January 2015, the Department of Marine Resources' Shellfish Bureau has organized efforts to rebuild the oyster reefs:

- Deposited 276,861 cubic yards of No. 57 limestone and oyster shells to refurbish 2,778 acres of public oyster reefs at an estimated cost of \$279,398.

- Placed smaller transplants along the various public fishing reefs and piers to enhance production in those areas.

**Shrimp and Crab.** The shrimp and crab marine resources of Mississippi are recovering well from the impacts of Hurricane Katrina. Shrimp landings have increased steadily since 2010, with nearly 14 million pounds sold in 2012. Shrimp landings were down some in 2013 and 2014, but Department of Marine Resources staff members believe the industry will rebound.

Loss of and/or damage to gear and vessels, high fuel costs and lack of fisheries infrastructure plagued this culturally and economically important coastal industry, but since 2012 all of the harbors in Coast cities have reopened, including new harbors in Pass Christian and Bay St. Louis. However, fishermen still need dealer and processor outlets through which shrimp and crab harvests can be sold.

The Hurricane Katrina Recovery Grant provided an economic boost to the industry. Through the grant, commercial shrimp and crab fishermen were contracted to assist marine resource managers in monitoring the fisheries' recovery:

- Employed 400 Mississippi resident historical commercial fishermen (330 shrimp fishermen and 65 crab fishermen).
- Enabled fishermen to make 29,337 individual trip monitoring tickets, outlining valuable information such as fishing locations, gear utilization and harvest information.
- Brought in \$8.6 million to pay workers.

After the storm, more than 12,224 derelict crab traps were removed and recycled from coastal Mississippi marine habitats by contracted commercial crab and shrimp fishermen as part of the Mississippi Derelict Trap Recycling Program.

**Artificial Reef Restoration.** Hurricane Katrina resulted in the scouring and/or burying of 90 percent of Mississippi's offshore reefs and about 85 percent of nearshore reefs, preventing the reefs from effectively functioning as habitat. The Department of Marine Resources has been continuously working to recover the lost habitat. The department restored 100 percent of reef habitat within nine years of the storm by using Hurricane Katrina disaster funds, the National Fish and Wildlife Foundation and Tidelands Trust Fund, as well as money from BP. Forty-two inshore reefs have been restored since 2010.



*Recovery efforts to enhance shoreline access sites and monitor fisheries through charter boat excursions and commercial fishermen are ongoing.*

Deployments completed with Katrina Recovery funds since September 1, 2006:

- Added three deployments of steel hull vessels on Mississippi's offshore reefs for a total of 93 deployments in reef areas affected by Hurricane Katrina, restoring approximately 65 percent of the offshore deployments lost in Hurricane Katrina.
- Deployed 230 goliath reef balls. The 540 bay reef balls constructed during the previous period were located at the Gulfport staging site, and deployed during 2010.
- Deployed 22 concrete culverts.

There have been 183 inshore deployments with a total of 71,000 cubic yards of crushed concrete and limestone.

## Fisheries Recovery

Katrina funds have been used to enhance 12 shoreline access sites by restoring surrounding lost low-profile reef habitat. Recovery efforts to enhance the shoreline access sites and monitor fisheries through resident charter boat and commercial fishermen are also ongoing.

As part of the Hurricane Katrina Recovery Grant, charter boat captains and commercial finfish fishermen have been contracted to assist marine resource managers in monitoring the fisheries recovery and have been paid nearly \$1.2 million. Program participants include 57 Mississippi resident charter boat captains and 44 commercial finfish fishermen. Reports have been submitted by the fishermen outlining valuable

information such as fishing locations, gear utilization, bycatch information and harvest information.

## Environmental Quality

Of the \$5 billion Mississippi obtained from the federal government for long-term recovery assistance, about \$650 million was devoted to building and upgrading water and wastewater systems on the Coast. The Mississippi Department of Environmental Quality was assigned the responsibility for carrying out this task through Mississippi Development Authority and with the approval of the U.S. Department of Housing and Urban Development.

The Mississippi Department of Environmental Quality adopted the following principles to guide its work:

- New water and wastewater infrastructure would be built in areas less vulnerable to damage from future hurricanes in order to encourage growth to these areas.
- This new infrastructure would be built in such a way it could recover quickly from a major hurricane and facilitate the rapid recovery of water and wastewater systems in high impact areas.
- Focus on the Gulf Coast region, rather than

individual units of government; encourage centralization and consolidation to save money, increase efficiencies, eliminate duplication and foster cooperation.

- Creation of economic development opportunities would be a chief criterion in the selection of projects.
- Projects would be identified and prioritized within the framework of a comprehensive regional plan.

These principles led the agency to finance a “backbone” network of regional water and sewer systems submitted by local governments – treatment facilities, pump stations, elevated water tanks, water supply wells and the interconnecting pipelines – allowing municipalities and developers to connect to these networks at a fraction of the cost of constructing stand-alone systems. In addition, this new infrastructure fostered development away from the coastline and created water and wastewater systems less vulnerable to future hurricanes. The plan, developed in consultation with local officials and hundreds of concerned citizens funded 67 projects across five counties. Despite the crippling economic and housing recession, the plan is under budget, nearly complete and achieving its goals.

In the weeks and months after Hurricane Katrina, the Department of Environmental Quality, along with its state and federal partners, worked hard to evaluate environmental conditions along the coast. This monitoring included sampling of the Mississippi Sound, the connected bays and bayous and the freshwater inflows into the bays. It encompassed air, water, soil sediment, fish, shrimp and crabs. The results of multiple monitoring studies indicated very limited chemical contamination as a result of the storm. In fact, the 30-foot storm surge seemed to have a temporary cleansing or flushing effect on some systems. Final reports for most of this work are available via the Department of Environmental Quality's website, [www.deq.state.ms.us](http://www.deq.state.ms.us).

The department continues to lead in the monitoring of coastal Mississippi:

- Safe beaches are a major attraction to the Mississippi Gulf Coast, and the Department of Environmental Quality has an important role in ensuring the safety of the public. The coastal counties have made improvements to Mississippi's beaches. Beach re-nourishment, planting of vegetation and improvements to infrastructure has benefited water quality. The counties contracted with the U.S. Army Corps of Engineers to replace sand lost due to storm erosion.

- Federal funding for the Environmental Protection Agency's National Coastal Assessment Program ended in 2006. This water quality-monitoring program was crucial to evaluating the quality of Mississippi's coastal waters. The Department of Environmental Quality has partnered with the Gulf Coast Research Laboratory and the Department of Marine Resources to continue this important program.

**Disaster Debris Management.** Hurricane Katrina created more than 46 million cubic yards of storm debris across the state, with approximately 24 million cubic yards in the three coastal counties alone. The Department of Environmental Quality has monitored debris removal and disposal, and has ensured the proper closure and restoration of the more than 340 debris management sites throughout the state.

The Department of Marine Resources worked with the U.S. Coast Guard and FEMA to organize removal of marine debris beginning south of Interstate 10 and extending out four miles into the Mississippi Sound. Marine debris removal was completed in June 2008.

Nearly 400,000 cubic yards of marine debris were removed from the three coastal counties. In addition, more than 330 derelict vessels were pulled out of Mississippi waterways.



## DISASTER PREPAREDNESS

**Interoperable Communications.** The establishment of a survivable, interoperable communications system is a top priority for improving the state's disaster response capabilities. Katrina inflicted so much damage to communications infrastructure, local, state and federal emergency responders were unable to communicate with one another. Further, those working systems were incompatible with systems in other jurisdictions.

The state requested Congress reprogram a portion of Mississippi's \$433 million hazard mitigation allocation for the Mississippi Wireless Interoperability Network, a request Congress granted by redirecting \$140 million for interoperable communications.

This funding allowed Mississippi to build a statewide survivable interoperable communications system, which provides a major upgrade for the state's disaster response capacity for years to come. The Wireless Communications Commission manages the network. The project is complete with 97 percent mobile coverage. Its users are 37 state agencies, 16 federal agencies and more than 400 local agencies. More than 20,000 devices are equipped to operate on the system. The system has the capacity to support 128,000 users. Each year, more jurisdictions opt in to the system. A responder in Southaven can use the radio system to talk with emergency responders in Gulfport.

The project already has paid dividends for Mississippi. The communication assets were critical in supporting emergency operations in 2010. A Site-on-Wheels was operational in Yazoo County within three hours

of the devastating tornado in April 2010. The Site-on-Wheels and 120 portable radios from the Wireless Communications Commission's cache provided interoperable communications among federal, state and local first responders during the first weeks of the recovery effort.

During the BP Deepwater Horizon Oil Spill response, the Wireless Communications Commission extended the coverage of MSWIN into the Gulf of Mexico by adding a tower site on Horn Island and on a platform site 30 miles south of Biloxi. The Wireless Communications Commission provided 250 radios to the National Guard, Coast Guard and others to enable interoperable communications among all levels of government. The network was also linked with Louisiana's system and the Orange Beach, Ala., fire radio system to complete coverage across the entire northern Gulf.

The state provided  
**\$30 Million**  
for 6,000 individual  
and continuity of  
government safe rooms.

## MEMA Upgrades

MEMA performed its duties aggressively both before and after Katrina, but the storm allowed the agency to evaluate operational weaknesses. Preparedness always begins at the local

level, and MEMA has worked hard to enhance and support county emergency operations. In 2000, only 43 counties in Mississippi had a full or part-time emergency management program. Now all 82 counties and the Mississippi Band of Choctaw Indians have either a full-time or part-time emergency management director.

Ninety FEMA safe rooms are completed or under construction, increasing shelter capacity in the state by more than 73,000. These safe rooms are built at a more stringent standard than local codes require, with back-up systems for power, water and sewer. Additionally, these safe rooms can withstand winds of more than 200 mph.

MEMA has also expanded emergency response assets and commodities to include:

- 80,640 bottles of water stored at MEMA warehouse in Pearl

- 32,832 Meals Ready to Eat at MEMA warehouse, plus 67,824 more stored in Evansville Indiana under vendor managed inventory.
- 385,000 sand bags.
- 7,000 tarps.
- 16 140-kilowatt generators
- Two 20-kilowatt generators staged in Pearl
- Seven portable generator powered light sets
- A fully operational 24/7 Mobile Operations Command Unit
- Two mobile communications trailers
- One Western Shelter all season tent

**Pre-Disaster Contracts.** Because of the shortfalls in federal supplies and commodities following Katrina, the state now has stand-by contracts to rapidly supply the state and the needs of its citizens. Stand-by contracts include:

- Temporary staffing for a disaster
- Drinking water
- Ice
- Fuel and equipment (managed by Department of Finance & Administration)
- Base camps (tents to provide working space and lodging)
- Transportation (to move equipment)

## Mitigation

**Barrier Islands.** Restoring Mississippi's barrier islands to their early 1900's footprint is a vital piece of limiting the damage from future hurricanes. At the governor's request, Congress has approved \$439 million for barrier island restoration projects identified by the U.S. Army Corps of Engineers. These islands are the state's first defense against oncoming storms and help block storm surge. This restoration will save untold lives and property for years to come.

**Hazard Mitigation Grant Program.** While the FEMA Public Assistance program helps communities rebuild what was lost, the FEMA Hazard Mitigation Grant Program helps ensure those losses do not happen again. FEMA estimates for every dollar spent on mitigation, four dollars are saved in the future.

The state has used \$369 million in Hazard Mitigation Grant Program funds on a variety of long-lasting mitigation measures:

- \$26 million to retrofit critical facilities and infrastructure to Category 5 hurricane standards and wind speeds in excess of 200 miles per hour

**“The communities along the Mississippi Gulf Coast rebuilt smarter and stronger after Hurricane Katrina devastated the Mississippi Gulf. Although the recovery and rebuilding efforts have been difficult and slow at times, the Gulf Coast is more disaster resistant and better prepared to withstand the effects of future hurricanes ultimately reducing recovery times and costs and saving lives.”**

*Robert Latham, MEMA Executive Director*

- \$200 million for 90 shelter facilities – located in the coastal region and along major evacuation routes – able to accommodate more than 73,000 Mississippians
- \$12.7 million for 12 projects to relocate, acquire or elevate homes in flood prone areas
- \$30 million for 6,000 individual and continuity of government safe rooms
- \$8 million for 80 alert and warning systems
- \$28.1 million to install backup power generators at 341 sites and to purchase 223 trailer-mounted generators

**Stronger Building Codes, Higher Elevations, More Flood Policies.** Local jurisdictions in the counties most affected by Katrina have reduced

the risks in their communities by adopting more stringent building codes and elevation requirements. In addition, about 30,000 more properties are protected by flood insurance now than before Katrina.

After Katrina, it was evident a stronger common building standard should be enforced throughout coastal areas. In April 2006, the Mississippi Legislature passed House Bill 1406 mandating International Code Council standards for Hancock, Harrison, Jackson, Pearl River and Stone counties. The state provided \$9 million in CDBG monies to fund additional building code officials to enforce the new requirements.

The hurricane also exposed the inaccuracy of federal flood maps. The storm surge pushed beyond the boundaries and heights set by the existing Flood



*The state now has stand-by contracts to supply staple materials immediately after a storm.*

Insurance Rate Maps. Flood Insurance Rate Maps indicate flood plains and required building elevations for acceptance in the National Flood Insurance Program and are based on the 100-year flood level.

In November 2005, FEMA published the Advisory Base Flood Elevation maps. The Advisory Base Flood Elevation maps were developed as a best estimate of elevation levels while FEMA updated the maps, a process taking two years. Some communities adopted the Advisory Base Flood Elevation maps in the interim, and other jurisdictions mandated higher elevations at least four feet higher than previous requirements. FEMA released the digital Flood Insurance Rate Maps in November 2007, and those are now in effect across the Coast.

The National Flood Insurance Program serves as the cornerstone of flood hazard mitigation programs. A community must be a compliant member of the program to participate in the five federal/state administered hazard mitigation assistance programs and to fully participate in other federal/state disaster assistance programs.

Since Katrina, the number of National Flood Insurance Flood Program policies in effect in Hancock, Harrison, Jackson and Pearl River counties has risen from 21,000 to nearly 46,000, an increase close to 120 percent.

This drastic increase in flood insurance coverage can be attributed to MEMA outreach efforts and state mandates through its housing programs. The Homeowner Assistance Program required grant recipients to accept a flood insurance covenant on their property.

In fact, all housing programs were designed with mitigation as a top priority. All rebuilding and new construction was required to comply with the International Building Codes and higher elevations regardless of the elevations adopted by the jurisdiction at the time.



## NONPROFITS, VOLUNTERISM & HISTORIC PRESERVATION

In the response efforts following Hurricane Katrina, nonprofit and faith-based organizations provided essential help not only to our citizens, but also to our federal and state responders. The “no strings attached” funding provided by these groups enables them to reach the lowest income households before government programs can assist and provide an invaluable lifeline to those families.

After Katrina, nonprofit organizations were helping to rebuild lives while simultaneously rebuilding their own offices and operations. These organizations embodied the spirit of Mississippians, as they helped others before helping themselves. Even though the storm did not spare nonprofit and

faith-based facilities and infrastructure, these groups did not allow destruction to impede their efforts to respond. The story of nonprofit rebuilding is marked not only by repairing damaged communities, but also by repairing the destruction wrought upon the nonprofit community as well.

Historic preservation touches on many of the important parts of what makes communities – sense of place, culture, tourism and affordable housing. Mississippi was able to secure funding for historic preservation efforts, and the Mississippi Department of Archives and History has made great strides in restoring the historic and cultural identity of the Gulf Coast.

## The Mississippi Commission for Volunteer Service

National service and volunteer sectors continually provided extensive housing and other services to those struggling from the storm. More than 956,000 volunteers were a part of rebuilding Mississippi by contributing more than 9.5 million hours of work totaling more than \$143 million in service to Mississippi communities and residents. Many volunteers spent weeks, months and even years to help rebuild our state. Some came as volunteers and now call Mississippi home.

The Mississippi Commission for Volunteer Service partnered with nonprofit and faith-based organizations and local and state governments to connect unaffiliated volunteers with needs and rebuilding projects across Mississippi.

The Mississippi Commission for Volunteer Services' nonprofit and faith-based organization partners:

- American Red Cross
- AmeriCorps National Service Members
- Assemblies of God Disaster Response Mississippi
- Catholic Charities
- City Team Ministry
- God's Pit Crew

- Gulf Coast Community Foundation
- Habitat for Humanity
- Hancock Resource Center
- Hands On Mississippi
- International Relief and Development
- Lutheran Episcopal Services in Mississippi
- Mississippi Baptist Disaster Relief
- Mississippi Coast IDTF
- Mississippi United Methodist Disaster Relief
- Recover Rebuild Restore Southeast Mississippi
- The Salvation Army
- United Way

## National Service in Mississippi

AmeriCorps National Civilian Community Corps is a full-time, team-based residential program for men and women ages 18-24. AmeriCorps National Civilian Community Corps members are assigned to one of five campuses and organized into teams of 10-12 members. The program serves every state, responding to pressing local needs that are identified by organizations in the community. One of the nation's five campuses is located in Vicksburg, which had its grand opening in Sept. 2009.

Through an inter-agency agreement with FEMA and arrangements with the American Red

Cross, AmeriCorps NCCC members have responded to every national disaster since the program was established. Since September 2005, AmeriCorps NCCC members from all campuses have served more than 2.7 million hours in the Gulf Coast on more than 1,040 relief and recovery projects.

AmeriCorps NCCC highlights and accomplishments include a service value estimated at \$54 million. Its members assisted approximately 3 million people and leveraged more than 262,000 volunteers to refurbish more than 10,500 homes and construct more than 2,000 new homes, completed nearly 55,800 damage assessments, supported approximately 870 emergency response centers, distributed more than 6,000 tons of food and served 1.6 million meals. AmeriCorps NCCC members refurbished 450 schoolrooms. More than 750 alumni have engaged in service in the Gulf Coast.

## Mississippi Center for Nonprofits

At least 75 percent of the community and faith based organizations doing mission work on the Gulf Coast lost buildings, equipment, computers, furnishings and files for operations.

Mississippi Center for Nonprofits is the state's only management service center whose purpose

is to strengthen the capacity of nonprofits. In the wake of Katrina, its mission was even more relevant and vital. The center participated in the Non-Governmental Organizations Committee of the Governor's Commission.

## Mississippi Department of Archives and History

Hurricane Katrina not only inflicted the greatest natural disaster America had ever witnessed, but it also produced the greatest cultural disaster in American history. The winds and tidal surge dealt an almost instant lethal blow to more than 300 of Mississippi's buildings listed in the National Register of Historic Places, forever changing the cultural landscape of the Mississippi Gulf Coast.

Among the Mississippi Gulf Coast's well-known historic landmarks that were completely destroyed were the circa-1800 French and Spanish Creole mansions known as Elmwood Manor and the Old Spanish Custom House, the mid-nineteenth-century Greek Revival mansions Grass Lawn and Tullis-Toledano Manor, the late-Victorian cottages known as the Brielmaier House and the Fisherman's Cottage, much of the early twentieth-century artist compound Shearwater Pottery, atelier of the renowned

Anderson family; and much of the Scenic Drive Historic District in Pass Christian, often referred to as the “Newport of the South” for its once magnificent collection of vacation “cottages” of wealthy Southern families. These great houses that lined Mississippi’s Gulf Coast were works of architectural art. Seldom have structures more harmoniously or successfully blended architectural aesthetics with practical climatic needs as was illustrated in these buildings.

Museums and libraries were also hard hit. Only the chimney remained of the once charming Pleasant Reed House Museum, the restored 1880s cottage of Biloxi carpenter and African-American leader Pleasant Reed. Only the roof and a few scant sections of walls survived from the Mission-Style former Coast Guard cadet barracks that for many years housed Biloxi’s popular Maritime and Seafood Industry Museum. Scarcely a trace remained of Pass Christian’s old public library, a virtual time capsule from the turn of the 20th century, which was under restoration when Katrina hit.

Although many of the best-known historic buildings were destroyed, many more survived, even if damaged. Beauvoir, the retirement estate of former Confederate President Jefferson Davis, is



*Numerous significant landmarks have been restored since Katrina struck the Gulf Coast.*

a National Historic Landmark and the single most significant historic structure severely damaged by Katrina. Beauvoir’s distinctive design and sturdy construction permitted it to withstand a tidal surge of more than twenty feet that swept through the site. Although the house sustained extensive damage from the impact of such an enormous storm surge, its “raised cottage” construction technique allowed the main body of the building to survive in relatively sound condition, with portraits still on the walls of the interior where the Davis family had hung them more than a century ago.

It was not only the Gulf Coast that was hit hard by Katrina. The hurricane was still at Category 1 status when it roared through central Mississippi.

Historic downtowns and residential neighborhoods in cities like Hattiesburg, Columbia, Picayune, Laurel, Meridian and Jackson suffered extensive damage. The damage was so extensive to Mississippi's Old Capitol building, a National Historic Landmark and home of the state's historical museum, that the museum was closed until early 2009 while efforts were underway to restore the structure and conserve damaged artifact collections.

Within days of Katrina, the Mississippi Department of Archives and History fielded teams to document the extent of damage to historic buildings and to help local governments, libraries and museums salvage their documents and collections. Within a month, the Historic Preservation Division had documented more than 1,200 damaged, but surviving, historic properties scattered across 80 miles of coastline.

At the same time, the state Department of Archives and History partnered with the Mississippi Heritage Trust, the National Trust for Historic Preservation, the Heritage Emergency National Task Force, the Association for Preservation Technology, the National Conference of State Historic Preservation Officers and the World Monuments

Fund to recruit volunteer architects, engineers and preservation specialists to assess damaged historic properties to see if rehabilitation were feasible. By May 2006, volunteer teams, working out of a rented 1920 Bungalow in downtown Biloxi, had completed detailed reports on hundreds of damaged historic structures. The reports provided property owners with accurate evaluations of the condition of their historic buildings and guidance on how or whether to proceed with rehabilitation. The reports saved many historic structures from demolition, since many property owners had previously thought their damaged buildings were not salvageable.

The most significant boost to preservation came in June 2006, when Congress appropriated \$40 million for rehabilitation of hurricane-damaged historic properties in Alabama, Louisiana and Mississippi and an additional \$3 million to assist the states with the added administrative workload in processing Section 106, National Historic Preservation Act reviews necessitated by the various Katrina recovery programs.

Mississippi Department of Archives and History was allocated \$24.7 million and established the Mississippi Hurricane Relief Grant for Historic Preservation to assist citizens and communities

committed to preserving and rehabilitating hurricane damaged historic buildings and sites significant in defining the unique character and heritage of those communities. Archives and history has expended most of the grant funds to rehabilitate owner-occupied houses listed on or eligible for the National Register of Historic Places, and the program has generated hundreds of affordable housing units.

The program also has been used to preserve and restore public and institutional landmarks that are icons of a community's history. Program funds have been leveraged with FEMA, CDBG and other private and public sources to rehabilitate and rebuild historic places.

The Mississippi Department of Archives and History's Hurricane Relief Grant Program for

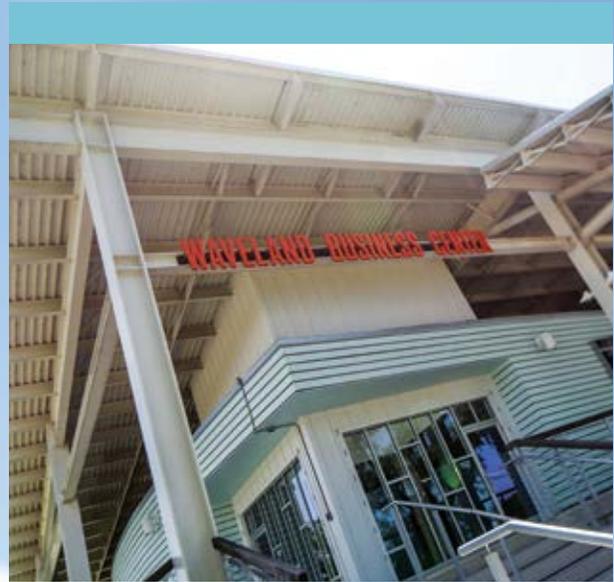
Historic Preservation has helped south Mississippi communities preserve their local landmarks and special sense of place that gives the region its unique cultural identity.

The distinctive sense of place manifested in Mississippi's towns is a very important aspect of the state's heritage tourism industry. Studies show that Mississippi's history and unique culture is the state's primary attraction for out-of-state visitors. Hurricane Katrina and the ensuing clean up efforts damaged coastal Mississippi's historic environment. The restoration of that sense of place, for residents and visitors alike, is a primary benefit of the archives and history program.

***“Hurricane Katrina was the worst and the best in a number of ways. The worst of the storm of course was the lose of lives and properties, historically and personally. The abundant blessing received by our community was the outpouring of volunteer help that converged on the coast. We came to realize what true caring meant.”***

*Billy Skellie, Long Beach Mayor*





## CDBG Program Allocations and Disbursements *(through 6/30/15)*

PROGRAM	TOTAL CDBG \$	% DISBURSED	PROGRAM DESCRIPTION
Homeowner's Assistance Program	\$2,032,306,633	100%	Phase I of the Homeowner Assistance Program is designed to provide financial assistance to those homeowners located outside the flood plain whose homeowner's insurance did not cover structural flood damage. Phase II of the Homeowner Assistance Program is a housing needs program to provide compensation and advisory services to homeowners who suffered storm surge damage to their primary residence.
Elevation Grant Program	\$37,663,042	100%	The Homeowner Elevation Grant Program provides grants of \$30,000 to approved applicants of the Homeowner Assistance Program in Hancock, Harrison, Jackson, and Pearl River counties. This grant program helps these homeowners defray the cost of elevating their homes to the most recent FEMA elevation requirements.
Public Housing Program	\$101,278,139	100%	Working in conjunction with local housing authorities in Harrison, Hancock and Jackson counties, the State of Mississippi allocated funding to restore public housing stock which was damaged or destroyed by Hurricane Katrina.
Small Rental Assistance Program	\$209,790,012	97%	The Small Rental Assistance Program provides loans to owners of small rental properties on the Mississippi Gulf Coast in order to assure these property owners provide affordable rental housing in the counties most affected by Hurricane Katrina.
Long Term Workforce\ Housing Program	\$230,310,811	99%	The Long Term Workforce Housing Program provides grants and loans to local units of government, non-profits and for-profit organizations to provide long term affordable housing in Hancock, Harrison, Jackson, and Pearl River counties.
Neighborhood Home Program	\$181,679,644	93%	This program was designed to repair, rehabilitate and reconstruct Hurricane Katrina-damaged homes owned by low and moderate income families who have been unable, through other means, to meet their housing repair needs.
Gulf Coast Regional Infrastructure Program	\$628,075,000	96%	This program was established to identify the water, wastewater, and storm water infrastructure needs of the six Gulf Region counties of Hancock, Harrison, George, Jackson, Pearl River and Stone and to provide infrastructure for long-term growth and recovery in these counties.
Building/Code Inspectors Grant Program	\$9,262,694	100%	Due to the significant amount of construction taking place on the Mississippi Gulf Coast and the need to adequately plan and inspect construction activities, MDA established a grant pool for grants to local governments in Hancock, Harrison, Pearl River and Jackson counties for costs of additional permitting and building inspector officials for one year.
Ratepayer/Windpool Mitigation Program	\$440,000,000	100%	This program helped utility and gas companies defray excessive costs associated with damaged infrastructure and providing emergency response services. In addition, this program also helped the Mississippi Windstorm Underwriting Association offset insurance premium increases. Without the State's grant program, all increased costs would eventually be passed on to the ratepayer resulting in additional utility and insurance costs to consumers.
Economic Development Program	\$383,556,010	84%	The purpose of this program is to assist local governments affected by Hurricane Katrina to provide infrastructure to support economic development. The funds have been given in the form of grants and loans and are being used to address the need for jobs as a result of the permanent relocation of displaced people.

<b>PROGRAM</b>	<b>TOTAL CDBG \$</b>	<b>% DISBURSED</b>	<b>PROGRAM DESCRIPTION</b>
Community Revitalization Grant Program	\$285,741,319	93%	This program offers grants to local governments in the six coastal counties that suffered damage to their downtown commercial areas.
Tourism Program	\$4,784,680	100%	The primary objective of the Tourism Restoration Grant Program was to increase the number of visitors to the impacted areas in order to recover and sustain the small businesses that rely on tourism, increase and sustain related jobs, and return the tax revenues to the communities in which these businesses reside.
GO Zone Grant Program	\$56,081,012	91%	This Community Revitalization Activity offers grants to local governments that suffered damage from Hurricane Katrina or experienced growth from evacuees from the Mississippi Gulf Coast, Louisiana or Alabama. This program is open to the 49 Presidentially Declared Disaster counties, excluding the lower six coastal counties.
Planning Grant Program	\$9,528,066	100%	This program offers grants to local governments that suffered damage to their downtown commercial areas for use in eligible community planning activities.
Port of Gulfport Restoration Project	\$576,800,000	36%	This program provides funding to the Mississippi State Port Authority to facilitate the restoration of the Port of Gulfport's public infrastructure and its publicly owned facilities that were destroyed by Hurricane Katrina. This program also provides for the long-term recovery of the operating capacity of the Port and is designed to increase the labor force on the Mississippi Gulf Coast by creating and returning jobs in the region, with an emphasis on low- to moderate-income jobs.
Hancock Co LTR/Ground Zero	\$150,366,680	93%	This program was created to assist local governments in Hancock County affected by Hurricane Katrina to address their long-term recovery efforts.
Fraud Investigation/ Contractor Fraud	\$5,540,000	95%	This program established a Katrina Fraud Prevention and Investigation team managed by the Office of the State Auditor to investigate instances of fraud identified during the application review and eligibility process.
Low-Inc. Housing Tax Cr. Asst. Fund	\$17,917,757	100%	The purpose of this fund is to provide funds for use as an additional source of gap financing for projects receiving affordable housing tax credits from Mississippi Home Corporation (MHC) as a result of market-wide re-pricing of credits since allocation by MHC.
<b>Total</b>	<b>\$5,360,681,499</b>		

## FEMA Funding Disbursements through MEMA *(through 6/30/15)*

PROGRAM	TOTAL FEMA/ MEMA \$	% DISBURSED	PROGRAM DESCRIPTION
Individual Assistance	\$1,296,454,555.16	100%	Individual Assistance provides financial help or direct services to individuals or households who have necessary expenses and serious needs if they are unable to meet the needs through other means.
Public Assistance	\$3,218,990,471.26	87%	Public Assistance provides financial assistance to state, Tribal and local governments, and certain Private Nonprofit organizations for debris removal, emergency protective measures, and the repair, replacement, or restoration of disaster-damaged, publicly owned facilities, parks, utilities, roads and bridges.
Mitigation	\$504,447,276.00	85%	Mitigation provides funding for eligible mitigation activities that reduce disaster losses and protect life and property from future disaster damages.
Alternative Housing (Cottages)	\$281,318,612.00	100%	The Mississippi Alternative Housing Pilot Program provided alternative methods to address disaster related housing needs following Hurricane Katrina. The program was intended to provide transitional housing for residents before permanent housing could be obtained.
<b>Total</b>	<b>\$5,301,210,914.42</b>		

***“Mississippi’s comprehensive approach to recovery has proven to be the winning formula both in the short term and looking to the future. The longer term strategic investments in every key sector of our regional economy and infrastructure from our shipbuilding industry, tourism infrastructure, ports, airports, road, rail and job training will drive sustainable economic growth in the region for the next 10 years and well beyond”***

*Jack Norris, President, Gulf Coast Business Council*



***“It’s hard to believe it has been 10 years since Hurricane Katrina devastated the Gulf Coast, destroying homes and businesses in what seemed like the blink of an eye. This anniversary is a time to reflect not only all that we lost that day, but also all that we have gained and overcome throughout this decade-long journey to rebuild our beautiful coast. Through the days and years following Katrina, we showed the true strength and resilience of Mississippi as we worked tirelessly to restore all that was lost. We would not be where we are today if it weren’t for neighbors helping neighbors, hardworking community and business leaders, and the continued support of our state and local officials.”***

*U.S. Rep. Steven Palazzo*



The following individuals and organizations supplied information and photography used in this report:

Mississippi Institutions of Higher Learning  
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Mississippi Department of Marine Resources  
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