

AFTER KATRINA:

Building Back Better Than Ever



A Report to the Hon. Haley Barbour,
Governor of the State of Mississippi
from the Governor's Commission on Recovery, Rebuilding, and Renewal

– James L. Barksdale, Chairman
December 31, 2005

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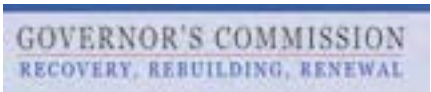
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INTRODUCTION

“Out of this terrible disaster, beyond all imagination, comes our opportunity. And I beg you not to let Mississippi miss it. I’m determined we will not fail to seize this opportunity.”

— Governor Haley Barbour, before the Special Session of the Mississippi Legislature, September 27, 2005

By Jim Barksdale

What happened to Mississippi in the last days of August 2005 is unrivaled in our nation’s history. Hurricane Katrina, one of the largest and most violent storms ever recorded, cut a swath of destruction along the Gulf Coast from the Alabama border west to Texas. New Orleans flooded. Mississippi took the brunt of the winds and a storm surge that rose to more than 30 feet.

At least 230 people were left dead in our state. Sixty-five thousand homes were destroyed. Churches, schools, and historic landmarks were obliterated. The keys to Mississippi’s economic growth, the infrastructure of community and commerce, were so badly damaged it will take years and billions of dollars to put us back on track.

Recovery from such unprecedented calamity requires unprecedented commitment, and Governor Haley Barbour initiated the effort immediately. He asked me to chair the Governor’s Commission on Recovery, Rebuilding, and Renewal with a mandate to explore the range of options before us and to recommend approaches that would not only restore what was lost but, in the governor’s words, make a Gulf Coast “better than ever.”

Our privately funded Commission examined the work of groups appointed after other national disasters. What we found was that in most cases, whether it was after the Galveston hurricane of 1900 or our own experiences with the Mississippi Floods of 1927 and Hurricane Camille in 1969, merely identifying problems and suggesting solutions weren’t enough. The fact is, we’re facing some of the same challenges of recovery, rebuilding, and renewal in 2006 because we failed to engage them fully after 1969.

So, we take it as our responsibility not only to name the problems but also to suggest paths of implementation and accountability. Beginning on page 165, you’ll find a table enumerating every recommendation. Alongside each are resources to be



Mississippi Governor Haley Barbour (right) and Governor's Commission Chairman Jim Barksdale (left) listen as President George W. Bush speaks at a tent meeting held in Gulfport shortly after Hurricane Katrina hit the Gulf Coast.

Photo: Courtesy Mississippi Power Company

tapped and individuals or organizations to be held responsible for achieving the goals. To do otherwise would fall short of the mission the governor assigned us: Forge a way through the pain this hurricane visited on our citizens, so that in 30 years, the legacy of the work we now begin is a Mississippi that enjoys higher prosperity and a better quality of life for all than we dared imagine before Au-

gust 29, 2005.

The work of Commission teams over the last four months has been prodigious. We've called upon the talents of more than 500 volunteers to serve on the Commission, on 20 highly energized committees, and on our field staff working with citizens and community leaders. Together, this group invested more than 50,000 man-hours research-

ing, listening to and debating alternatives. We crammed the work of decades into three months.

We staged a six-day Mississippi Renewal Forum where planning specialists from the state and all over the world generated designs and proposals that already have inspired some communities to begin charting their own rebuilds. After listening to all those voices and

embracing their deepest concerns, we would find it unconscionable if their hopes are unrealized because their leaders failed to make the hard choices and commit the full resources necessary to move from great ideas to meaningful action.

Certainly, from our experience over the last four months, the willingness of some leaders to set the pace is inspiring. This has been the greatest outpouring of public spirit and unselfish labor I've ever experienced. It would take all the pages in this report to name each contribution and thank each person individually. To each committee chair and member, to each of the elected officials in towns and counties throughout Mississippi, to each person on the Commission's hard-working staff, and to all the volunteers who came from around the world: Thank you. Your reward, as you already know, is to have been a part of an unprecedented enterprise -- what might well be the most ambitious planning effort in history.

Thank you, Governor Barbour, for giving us the opportunity to help.

“Our mission: Forge a way through the pain this hurricane visited on our citizens, so that in 30 years, the legacy of the work we now begin is a Mississippi that enjoys higher prosperity and a better quality of life for all than we dared imagine before August 29, 2005.”

What the Commission searched for are recommendations for Mississippi's renewal that are sensible, doable, and that truly make a difference in all our citizens' lives. The 238 committee recommendations that follow emerged from a healthy, participatory process. While we all may not agree on each one, together they reflect our determination to move toward a renewal South Mississippi that includes everyone.

There are several common themes: **The hardest hit communities have attracted the most focused study.** Forty-three counties in the state were declared natural disaster areas. Some were obviously more affected than others. Those areas, therefore, were where our work groups targeted much of their efforts and focused most of their recommendations.

Everything is connected. An emergency like Hurricane Katrina peels away delusions of independence. We're reminded, yet again, that “no man is an island.” We all rely on one another. Every business, nonprofit entity, and government agency is linked in crucial ways. Our industrial recovery is dependent on access to workers. Workers depend on available housing and a supportive infrastructure of schools and health and social services. Schools and services depend on the physical infrastructure of roads, bridges, and communications. The infrastructure is dependent upon the ability of local governments to not only address the needs within their jurisdictional borders but to also understand how those needs connect with regional and state networks. And on and on it goes. For that reason, you will see recommendations here for broader, more connected, and more comprehensive approaches to problem-solving. It's time for collaboration and, where practical, consolidation of services.

Local governments have the most opportunity and the highest accountability. What you read in these committee reports are recommendations – as informed

as we can make them, but recommendations nonetheless. Some are appeals for aid beyond Mississippi's borders, but most are proposals to cities, towns, and counties, who have the most to say about how citizens live, work, and play in their communities. They write the zoning and building codes. They choose whether or not to join regional transportation, infrastructure, or economic development initiatives. If we are to behave differently in the aftermath of Katrina than we did after Camille, the communities most at risk will have to lead the change.

I feel a personal obligation to one overarching concern at the top of our state's planning agenda: **We must recognize where we live.**

At one of our meetings, a coastal engineer pointed to the Mississippi Gulf Coast on one of his maps and called it "a storm surge magnet." As we prepared these reports, the experts who annually predict the frequency and intensity of hurricane seasons issued their first projections for 2006 and warned of the potential for more dangerous storms than in 2005. We will see another major hurricane, perhaps not this year, nor next year, nor the year after that – but almost certainly within our lifetimes. Will we be prepared?

Partly because of the sense of urgency the Commission brought to planning efforts, the Federal Emergency Management Agency accelerated production of detailed flood zone advisory maps for the Coast. The new flood zones won't become official until after more study and a public process that could take a year or longer. There will be much wrangling over interpretations of the maps as they apply to specific parcels and neighborhoods. The politics of zoning and building codes will be fractious. However, coastal engineers warn us that to ignore these interim maps – these guides to changes in the ways we build and live on the Coast – is to risk lives, property, and the very existence of whole communities in the decades to come.

I can't imagine how any prudent property owner or any responsible community can fail to take this discussion seriously. Home builders and developers must plan with the new flood zones in mind, and communities must pass codes that acknowledge reality.

I can understand how someone would look at all the proposals that follow and be overwhelmed by what's required, but that would misread both our intent and our recommendations' underlying message. Our recommendations can be modified where needed, but we don't have to lower our expectations. We have the resources we need within our grasp – or within reach, with help from allies in the nonprofit, government, and private sectors. The question is: Do we have the will?

We have models of high performance to emulate. From the moment Katrina came ashore, we witnessed the power of churches and other charitable organizations that immediately rushed into disaster areas with aid. Other nonprofits, including the foundations that have funded the Commission's work, are behind much of the research that will lead to the next steps in our rebuilding.

"After listening to all those voices and embracing their deepest concerns, we would find it unconscionable if their hopes are unrealized because their leaders failed to make the hard choices and commit the full resources necessary to move from great ideas to meaningful action."

Governor Barbour immediately committed the state's support, and shortly before Christmas, he and Senators Cochran and Lott led an effort in Washington to secure billions of dollars through omnibus federal legislation targeting the Katrina-stricken Gulf region. It will take years for us to understand fully the value of the work these leaders – and the entire Mississippi congressional delegation – accomplished in the closing weeks of 2005. We can say with confidence, though, that this funding will go a long way toward helping communities implement key Commission recommendations.

Thanks to this aid package, homeowners who qualify will have the money to rebuild. Schools will have money for operations during a period of lower ad valorem taxes. Infrastructure needs, including roads and sewer systems can be addressed. Naval shipbuilding will be escalated. Agriculture and forestry are getting help. Training funds will become available. Military housing and reconstruction, plus environmental restoration and rural redevelopment are likely to get help.

The tax and loan incentives included in the recent legislation will encourage firms to rebuild and to migrate here. Housing developers and companies already have begun sharing their intentions. Some are committing to projects. Many more will step forward with ideas and proposals to drive our economic recovery and to increase our citizens' chances for better lives.

So, where do we go from here?

Early in 2006, this Commission's work transfers to a new entity working out of the Governor's Office with

staff in coastal counties. That group will coordinate government assistance at all levels and assemble a package of advisory help for local jurisdictions. It's left to them to pass and enforce ordinances that implement good policy and apply most directly to their citizens.

We must recognize, however, that same approach didn't work 36 years ago. After Camille, local elected officials, concerned about imposing anything on constituents already beaten down by the hurricane, ignored many of the recommendations of a Governor's Council. What makes us think it will work this time?

Because it has to. We have exhausted the alternatives.

Federal taxpayers' billions in aid, though generous and coming after exhaustive work by some of the most politically influential officials in our state's history, cannot make us whole in 2006. Is anyone so naive as to believe that another set of Mississippi leaders can go to another Congress and expect the exponentially larger sums required to deliver us from the consequences of another big hurricane?

We have learned through this ordeal that we have friends everywhere. But their empathy and even their aid are not enough. Ultimately, we must rescue ourselves.

Federal and state officials have roles to play, certainly. At the state level, the governor must use first his bully pulpit, then the discretionary dollars from the recent federal appropriation to prod local officials into action. It's this simple: Communities that make the best decisions should reap the financial rewards.

It's time, as well, for results-focused discussions with federal emergency management officials. No one, including those in Washington, can be happy

with the performance of some federal agencies during and after Katrina. We have to do better. The next hurricane season will soon be upon us.

No one, however, is going to come from Washington or Jackson to lift the burden of choices from local communities and transport them magically into the future. For local decision-making to work, local citizens have to support – have to demand – tough choices from mayors, aldermen, and county supervisors. This report is nothing if not a call to arms for exactly that kind of responsible citizenship.

That's the big idea implicit in this report. Local citizens and local leaders must own the challenge of shaping a landscape and a legacy. They must commit to achieving the results on which they'll be judged – and in which they can take pride – not only in the next months but in generations to come. The whole country is watching.

FROM CAMILLE TO KATRINA

LESSONS LEARNED. AGAIN.

The hurricane, fueled by near-perfect conditions for a monster storm, crashed ashore in August. It pushed a record storm surge onto the Mississippi Coast, erasing in a matter of hours lives, homes, and assets that would take years to replace.

No one had ever seen anything like it, nor did they expect to see its like again. It was the 100-year storm. The awful aberration.

After the hurricane came the analyses. A special commission was appointed by the governor. Experts were consulted, and wise folks agreed on key points. Chief among them: Coastal communities risked too much by ignoring the realities of life in a hurricane zone. They must plan for safer patterns of growth. They must toughen zoning and building codes.

It would also be prudent, said the experts, to leverage the recovery for future economic development. Why not turn Highway 90 back into the scenic beach boulevard it once was by creating east-



west transportation alternatives farther inland? Tourism, an economic driver before the hurricane, promised to be an even more powerful force in coming years. Wouldn't a scenic boulevard heighten the appeal of a Coast with a uniquely Mississippi sense of place?

While they were at it, Coastal governments, whose population growth and service demands were outpacing revenues, should think about consolidating efforts – especially with regard to water management, sewer systems, and solid waste disposal. There were attractive opportunities for getting more bang for the infrastructure buck, too, by regionalizing transportation planning.

All good ideas backed by convincing evidence. You can read the details in the pages to follow, or you could turn back to the reports of the Governor's Emergency Council in the wake of Hurricane Camille 36 years ago. The themes are eerily similar.

As all Mississippians know, Camille was the benchmark disaster until Katrina came along. For those who survived it, Camille was a life-changing experience. There were "lessons learned," volumes of them, recorded in the state's archives and in the libraries of disaster preparedness throughout the country. But if they were learned, the lessons were not exactly taken to heart.

In August of 1969, Camille was a tightly wound Category 5 hurricane that left 130 dead and destroyed 3,800 homes in the six southernmost Mississippi counties where its effects were concentrated. Overall, Camille's damage totaled just under \$9 billion in current dollars.

In August 2005, Katrina came ashore as a slightly less intense but far larger

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storm than Camille. Its storm surge was undiminished from its Category 5 levels before landfall. When Katrina was finished, Mississippi had more than 230 dead and 65,000 homes wiped from the map. The federal bill for recovery in Louisiana, Mississippi, and Alabama is inching toward \$100 billion. The costs to state and local governments, to property owners, and to private businesses may be incalculable.

If we had really learned the lessons of Camille and applied them in the years between 1969 and 2005, could we have saved lives and dollars? Without doubt.

The money we were reluctant to invest in storm-worthy infrastructure and storm-ready procedures we will pay many times over in restoration costs. The rules we put off enacting and

enforcing would have kept many out of harm's way and would have made buildings more resilient to high winds and high water. The hard choices we ducked in 1970 await us in 2006, only with more zeroes on the price tags.

So, here we are again in the aftermath of a nightmare. We have another hard-working commission, another set of recommendations, another opportunity.

Will we get it right this time?

REACHING OUT

Experts and industry leaders in infrastructure, economic development, and services are critical to the long-term recovery of South Mississippi. The work of the

Commission would have failed, however, had it not listened to the best asset of Mississippi — her people. Through a series of open, town hall meetings across 33 counties, the Commission sought from citizens their ideas and opinions

on the long-term recovery and renewal of South Mississippi. Thousands of Mississippians attended over 50 public forums and shared their vision of what home would look like five, 10 and 20 years from now. Over 800 more voiced



Photo: Sun-Herald

“We all recognize that Katrina brought the kind of change we would never seek, and it is clear that we are determined that it will only strengthen our community and our character.”

— Chuck Benvenuti,
Hancock County Chairman

“Stone County is poised to bring projects to the table in a hurry.”

— Jill Holleman,
Stone County Chairman

“It is clear that developing a long-range plan and keeping the vision in focus is a daunting task, but consider this — we’ve survived the most devastating hurricane in our history, and we are a stronger community as a result. It is essential that we come together on the overall vision for our future with a plan that embraces and enhances those qualities that have made Harrison County and its municipalities into such a special place.”

— Anthony Topazi,
Harrison County Chairman.

suggestions and comments via email, telephone, and an online Internet community forum established by the Commission. The Commission’s website not only reached out to English-speaking citizens but was translated into Spanish and Vietnamese, the native tongues of many Coast residents. The Commission listened to these opinions and considered them carefully as the issues were debated in committees and the final recommendations were made in this report. The process of public participation helps to ensure that this body of work is reflective of the general will of the people it seeks to serve.

The Commission divided the area affected by Katrina into eight county committees — one committee for each of the six southernmost counties of Hancock, Harrison, Jackson, Pearl River, Stone and George; a Southeast Mississippi Committee, and a Southwest Mississippi Committee. The Southeast Mississippi Committee was comprised of Rankin, Scott, Newton, Lauderdale, Simpson, Smith, Jasper, Clarke, Covington, Jones, Wayne, Lamar, Forrest, Perry, and Greene Counties. The Southwest Mississippi Committee consisted of Hinds, Copiah, Adams, Franklin, Lincoln, Lawrence, Jefferson Davis, Wilkinson, Amite, Pike, Walthall, and Marion Counties. Each committee held multiple town hall meetings across their geographic area. Most meetings began with a short video presentation that illustrated the devastation wrought by Katrina and the hope that has followed. Next, the county committee chairman or other Commission member discussed the work of the Commission and the proposals that had been developed. The audience then was invited to voice its concerns about rebuilding, point out

specific problems in their area, critique Commission proposals, and give ideas on recovery. Numerous city and county officials attended, participating in the discussion and listening to the concerns of their constituents. In addition to general town hall meetings to discuss a wide range of future plans, the Commission also held public meetings in each of the 11 coastal cities to present and discuss the designs and ideas generated during the Mississippi Renewal Forum.

The nature and extent of Katrina’s effects vary over South Mississippi. While coastal counties are faced with destroyed infrastructure and obliteration of their tax base, some inland counties encounter swells in their population, increased property values, and a heavily used but limited infrastructure capacity. Below is a summary of the input gathered from the public meetings and the perspectives on problems and opportunities facing South Mississippians.

Six Southernmost Counties

The Commission’s town hall meetings attracted standing-room-only crowds in Hancock, Harrison, Jackson, George, Stone and Pearl River Counties, and residents voiced their opinions on how their neighborhoods, streets, downtowns and communities should be rebuilt and renewed.

The residents of the most heavily damaged areas faced the daunting challenge of engaging in the long-term vision of their community while dealing with the current, basic needs of shelter, food, clothing, employment, childcare, and application for assistance. The Commission recognized the difficult proposition of asking citizens on the Coast to think about their communities in 2015 when so many per-



Photo: Sun-Herald

sonal uncertainties exist. True to their resilient spirits, however, participants progressed beyond their daily struggles and focused on opportunities for the future.

Two central desires emerged during this process: preservation of community uniqueness and charm while rebuilding stronger and better, and the adoption of improved zoning and building codes. These themes are closely intertwined and critical for the area to recover fully.

Some ideas and concerns are unique to certain counties.

Hancock County was ground zero, suffering the most severe devastation from Katrina, and will require comprehensive rebuilding. Opportunities for regional consolidation of public services, quality affordable housing, a county-wide transportation, and development of Beach Drive into a scenic byway were all topics raised by residents of Hancock County and have been addressed in this report.

Harrison County residents demanded that land-use planning be more sensitive to the heritage and sense of place of the communities while accommodating county development and economic progress. The proposals to relocate the CSX railroad line and convert Highway 90 into a scenic boulevard were met with overwhelming support. Participants also favored plans to study the efficiencies that may be realized from consolidation of public services, such as water, sewer, police,



“While the town hall meetings revealed a great sense of concern and frustration as people struggled to find solutions to some of the basic problems associated with recovery, the meetings reflected the overall will and commitment of the communities to focus on recovery, rebuilding, and renewal.”

— Jerry St. Pé, Jackson County Chairman

fire, emergency medical services, and schools.

Town hall meetings in Jackson County, with one attended by over 500 people, illustrated the concern with the FEMA Flood Recovery Maps, specifically its impact on the cost of rebuilding, financing, and flood insurance. Delays in the permitting process caused frustration for those ready to rebuild and restore their homes and businesses.

Virtually all homes on the beachfront in Jackson County were destroyed, and affordable housing for poor and middle class residents is an urgent need, particularly as temporary housing begins the transition to permanent housing. Citizens also expressed concern for the reconstruction of the Highway 90 bridge connecting Ocean Springs to Biloxi, and most Ocean Springs residents favored a smaller, four-lane bridge. Designs created in the Missis-

sippi Renewal Forum were received with high praise and support.

Residents in Pearl River County commented that they had never seen such a high level of community participation in public meetings in their county. Improvement in health care facilities emerged as the highest priority in the county where it is estimated that 80 percent of medical care for residents was performed outside of the county. A new hospital is needed to fulfill county health care needs and to attract and retain quality health care professionals. Expanding existing infrastructure to meet expanding population was another priority topping the list in Pearl River County. More short-term problems associated with increased population include potential budget shortfalls due to additional staffing and equipment required by law enforcement agencies and fire departments.

Stone County is the sixth-fastest growing county in the state according to 2000 census data and, after Katrina, immediately began working with MDA to create a strategic plan. New



water and sewer projects there are critical to future development, and county leadership is working to consolidate existing county systems. Residents also emphasized the need for additional schools to match the population explosion seen from Katrina.

In **George County** discussions about the future focused on the communities' greatest asset – their scenic beauty. Residents there believe the importance of nature in the county's lifestyle and economy should be a central focus in their recovery, and the idea of building a lake or reservoir emerged as the top recommendation. The new body of water would provide new recreational activities and serve the water needs of George and Jackson counties. Development of the Pascagoula River Basin for eco-tourism activities like bird watching, hunting, fishing, boating and water skiing also drew great attention.

Citizens and local officials also discussed the possibility of acquiring a public golf course and developing a nursery welcome center and experimental station.

“I hope that local public officials will look at the report and understand the areas of concerns of Pearl River County residents. ... I am proud of Governor Barbour for encouraging us to look at this disaster as an opportunity to improve upon the past.”

— Suzy McDonald, Pearl River County Chairman

Inland Counties

Although the Mississippi Gulf Coast sustained catastrophic damage from Hurricane Katrina, inland counties in Mississippi also felt its devastating effects. In these counties, homes, businesses and timber were destroyed; land was damaged; roads were littered with debris; electricity was out for extended periods; food, water, ice, and fuel

were in short supply; and communication was often available only through word of mouth. In contrast to the ghost towns left on the Coast, inland communities also were flooded with coastal residents seeking shelter and aid. The Governor's Commission held forums in places far from Katrina's landfall. Residents in Hattiesburg, Laurel, Taylorsville, Waynesboro, Meridian, McComb, Brookhaven, Natchez, and

“We must be proactive in ensuring that the goals and recommendations of the citizens are carried forward into action.”

— Joe Sanderson,
Southeast County Chairman

“George County is the Nursery Capitol of Mississippi, with approximately 50 wholesale nurseries, and such a center may promote and grow the horticulture industry in Mississippi.”

— Mayor Dayton Whites,
George County Chairman

“Housing has become extremely limited, to virtually non-existent, as displaced families move to Natchez and Southwest Mississippi”

— Mayor Phillip West,
Southwest County Chairman



Prentiss all had the opportunity to make their voices heard in town hall meetings.

The most pressing issue in southeast and southwest Mississippi is the need for a newly revised emergency response plan for each county. Fire departments, law enforcement, other emergency response agencies, healthcare providers, churches, and volunteer organizations, among others, should collaborate in creating a better plan for safety and response to emergencies. Local officials should receive training on how to implement the plan, and leaders should be designated well in advance of an emergency. As more fully discussed in the chapter on public services, residents in inland Mississippi identified the critical need for trustworthy, effective communications during and immediately after a disaster. They also said that each community should designate an emergency location long before an emergency occurs as centers for citizens to gather and receive aid and information.

Distribution systems must be put in place to ensure that supplies are delivered to these emergency centers in each county. One citizen described her county as “the forgotten corner of the

state.” “Forgotten” because her county was passed up by the relief trucks headed to the Coast. Consequently, coastal residents who had fled to these inland counties and the residents of these counties were left in need of food, water and ice.

Generators for individuals and, particularly, for the critical facilities like hospitals and disaster response centers must be more available, and fuel resources to run the generators must be coordinated. Folks in Wayne County suggested that critical equipment such as the “jaws of life” and utility maintenance equipment also be readily accessible during and after an emergency.

Community centers also must be replaced. In Moselle, the gym that served a variety of community functions was completely destroyed by the hurricane. In discussing plans to rebuild and expand the facility, one citizen recommended that the community offer English as a second language course at these locations to assist the growing Hispanic population in South Mississippi.



INFRASTRUCTURE

The four subcommittee reports in this Infrastructure Committee section – Land Use, Intermodal Transportation, Affordable Housing, and Public Services – target the most obvious effects of the hurricane. They also point to some of the most hopeful aspects of recovery.

Katrina ripped through the physical landscape, destroying structures and roads and disrupting systems that support mobility and communications. As we rebuild, we have the chance to connect in smarter, safer, and more appealing ways.

Just as important, we can use infrastructure redevelopment to shape a post-Katrina future that improves the quality of life not only for the most affluent but also for working families and for young people just starting out. This is the right thing to do. But there are also powerful economic incentives. A vibrant, adaptable economy depends on workers at all income levels having access to affordable housing. The kind of community likely to attract investment is one that signals its pride in the quality of its public spaces and in the reliability of its public services.

To realize these goals, we must:

- Embrace comprehensive planning principles that define how we want to grow. Let's be explicit about what we love about the Coast, what we want to preserve, what we want to avoid. Then, let's frame ordinances that guide redevelopment – and future development – with those goals in mind. The design specialists who participated in the Commission-sponsored Mississippi Renewal Forum showed us ways to do that, and several communities on the Coast have already begun enacting codes and adapting plans that move in that direction.
- Think regionally. The hurricane exposed the folly of imagining our communities as separate, independent entities. Regional connectivity, from transportation policy to emergency communications systems, should become the rule. Already, some cities and counties are beginning conversations about combining efforts.

LAND USE

To meet the Governor's challenge of creating a South Mississippi better than the one before Hurricane Katrina, residents and companies who suffered losses from the hurricane must see the benefits of rebuilding in a smarter, more sustainable, storm-worthy way. The plan for development of the coastal communities must attract new investment, preserve the character of communities and protect those citizens most vulnerable to change. Foremost, development decisions should protect individual property rights, preserve the right of local governments to make zoning and building code decisions, and ensure that decisions are sensitive to the natural environment.

In mid-October, the Commission hosted the Mississippi Renewal Forum, a week-long, intense, collaborative

planning session or "charrette" that involved local officials, community leader, planners, architects, and engineers from Mississippi and around the world. The Renewal Forum has been called the largest charrette ever attempted. It was certainly among the most ambitious. The goal: To shrink what could have been a multi-year process of examining and evaluating development-related issues for the three coastal counties and 11 communities into six days of hands-on discussion and design.

In conjunction with the Renewal Forum, the Commission conducted brainstorming meetings with business and civic leaders and held town hall meetings to generate ideas from residents. From these meetings and work sessions came suggestions which many identified as key principles for future planning. Among them:





- City land use plans should be based on the form of human communities, not on separation of uses.
- Town centers, neighborhoods, and the streets that connect them should encourage walking and should provide essential services (food stores, pharmacies, entertainment, schools, and public services) within a five-minute walking distance.
- Pedestrian pathways throughout each city's residential areas should connect neighborhood parks and playgrounds.
- Federal, state and local tax incentives, as well as ad valorem tax structures, should support planned community development.
- Land use planning and related transportation planning should create places with a sense of history and a future focused on human life, not vehicular traffic; plans should reduce dependency on automobiles while providing more efficient public transit routes that connect residents with jobs.¹

These principles are at the heart of a planning approach called new urbanism, which advocates time-tested patterns of development that focus on the way humans live, play, and work rather than on patterns that make automobile travel and parking the top priorities. The Congress for the New Urbanism, the nonprofit umbrella organization that promotes new urbanist principles, organized the group of 100-plus international architects, planners, engineers, and other specialists who joined with a like number of Mississippi colleagues for the Governor's Commission-sponsored Mississippi Renewal Forum. New urbanism is one approach that communities may look to in rebuilding and contributed to some, but not all, of the recommendations set forth in this report. Make no mistake; the Commission is not trying to encourage the rebuilding of "Santa Barbara" in Pascagoula as one critic has suggested – only that Mississippi has the opportunity to build back better. Why not take it?

Led by Andrés Duany, a prominent leader of the new urbanism, a movement that promotes the design of walkable, diverse neighborhoods as a solution to fight suburban sprawl, the Mississippi Renewal Forum was held for a week in October at the Isle of Capri Hotel in Biloxi, Miss. Approximately 200 architects, planners, engineers and other specialists converged for a week to design plans, codes and recommendations that could be used to assist rebuilding efforts on the Gulf Coast.

Photo: Eliot Allen.



■ **Preservation of South Mississippi character.** Rebuilding efforts must encourage the preservation of certain qualities of the region, such as, the diversity and the friendly nature of its people; pedestrian-friendly neighborhoods; public access to the water and the beach; the waterfront as a place to live, work and play; the architectural charm of historic buildings and art districts; the urban forests created by the majestic live oaks; and the natural beauty of the wetlands and marshes.

■ **Pre-storm problems.** Rebuilding efforts should also address issues critical to an improved quality of life for all South Mississippi residents, including: housing and mobility needs of all residents; improved building standards to protect structures in the event of future natural disasters; land use and zoning laws and regulations modified to improve the human scale and the walkability of neighborhoods, downtowns and commercial areas; mixed-use neighborhoods and downtowns that meld commercial and residential uses; and architectural standards to protect the pre-hurricane character of coastal communities and foster new development sensitive to that character.

■ **Problems created by the need to rebuild.** Some issues rose to the surface because of the hurricane. Among them: Federal Emergency Management Agency (FEMA) flood zone modifications and the changing requirements and availability of flood insurance; access to affordable, easily financed housing; restoration of historic neighborhoods and downtowns; incentives for investment; replanting live oaks and other trees to encourage urban forests; re-establishment and protection of wildlife; and evaluation

of the efficiencies of regional planning and regional utility systems for water and sewer.

The Commission proposes the following priorities that should be supported by resources available from the Commission or a state office continuing the Commission's efforts and by extended public efforts that will rebuild the Mississippi Gulf Coast:

■ **Mixed use.** Each county and city should adopt amendments to land use ordinances for mixed-use alternatives which promote walkability. Walkability can be defined as pedestrian access to basic services, recreation, and retail within a five-minute walking distance of their homes. Mixed-use alternatives include: (a) business and residential in downtown areas; (b) mixed use in neighborhoods using "community-based retail," which incorporates only those commercial amenities needed and approved by residents; and (c) neighborhood residential areas without mixed uses but connected to other areas by a sidewalk or pedestrian path system.

■ **Safe, affordable housing.** Redevelopment efforts should provide safe, affordable housing that can be easily financed for the Coast residents. Residential and mixed-use developments should encourage a specified percentage of affordable housing that is compliant with building standards.

■ **Environmental sensitivity.** All counties, cities and regional authorities should make land use and economic development decisions that accommodate and are sensitive to the protection of existing natural areas including watersheds, wetlands, urban forests, and natural habitats.

■ **Regional shared services.** On a re-



gional level, coastal cities and counties should consider the feasibility of shared water and sewer systems while maintaining a sense of community identity. (See Public Services chapter.)

■ **Waterfronts and waterways.** Economic growth and development should match citizen expectations for protection of South Mississippi's natural resources. Plans should take advantage of the waterfront as the Gulf Coast's unique aesthetic and economic asset, balancing public access with potential developments which are consistent with community identity.

Public access to coastal waters should be encouraged through waterfront parks and networks of boardwalks and piers that connect retail and commercial areas with public spaces on the waterfront.² Marinas should provide dockage and access to commercial and recreational boats of diverse sizes and price ranges, from working shrimp boats to small pleasure craft and large, inter-coastal trav-

eling yachts that enhance the tourism industry.

Each coastal county and city should promote working waterfronts that coordinate water-related recreational and commercial uses and that specifically coordinate wharves and docks for the commercial shrimp and oyster fleet with an inland seafood park or parks. Land use and economic development decisions should preserve and promote public use and enjoyment of the beach, water front parks, the Mississippi Sound and inland waterways. Port facilities should institute emergency planning measures to minimize risk of damage and debris to the mainland caused by shipping containers that are not secure.

■ **Transportation.** Wise land use decisions are closely aligned with appropriate transportation planning. The quality of life and sustainability of cities and neighborhoods depends in large part upon changing the post-World War II conventional wisdom for design of streets, major



thoroughfares and federal highway connectors. Hundreds and hundreds of citizens have said that Highway 90 should not become six-lanes. Rather this scenic highway should become a slower-moving, pedestrian-friendly boulevard that allows safe pedestrian crossing to the beach. Railroad traffic should be moved north of the bays, allowing the vacant CSX right-of-way to be redeveloped as a tree-lined avenue with light rail down the center connecting the 11 communities of the Coast with landscaping and mixed uses bordering it in the manner of St. Charles Avenue in pre-Katrina New Orleans.

It is impossible and irrational to plan land use without planning transportation uses and methods. There are no issues more important to smart land use and livability of coastal towns than

moving the railroad and reversing the customary expansion of interstate-standard highways that are detrimental to neighborhoods and downtowns. Every regional agency and every county and city should evaluate transportation planning in conjunction with land use planning. Future development should promote interconnectivity and provide non-automotive public transportation alternatives in the form of trolleys, light rail, and sidewalks that connect all neighborhoods and provide access to retail.

Codes and Standards

The Mississippi Renewal Forum produced several guides designed for Mississippi's recovery, rebuilding, and renewal effort. In addition to the city-specific team reports, these products included a form of the SmartCode tai-

What's a "Charrette"?

The Mississippi Renewal Forum in Biloxi in was one of the largest charrettes ever. In six days, 200 designers and other specialists met with community leaders, drew up ideas, debated the results, revised them based on that discussion, then offered final versions in public presentations that captured a consensus and delivered actionable plans.

The word "charrette" comes from the French for "little cart," which was the means of delivering art students' work to their professors at the Ecole de Beaux Arts in Paris in the 19th century. Like most students, the artists often pressed deadlines. They ran alongside the cart finishing their work as it moved through the streets.

A charrette is more than a brainstorming session. Ideally, it brings stakeholders into the same room to hash out priorities and agree on paths of implementation on a deadline. The compressed time frame forces a sense of urgency. What emerges are not only ideas but tools to achieve results.

Hundreds of new towns, neighborhoods, and urban infill projects have grown from new urbanist charrettes. As you will read in these pages, the method is also recommended for consensus-based, decision-making in non-design matters. Commission committees are suggesting charrettes for retail, tourism development, and transportation strategies.

lored for South Mississippi; *A Pattern Book for Gulf Coast Neighborhoods*; and recommendations for revised building codes for sustainable construction in hurricane-prone areas. The core values discussed above are incorporated into these resources, and the Commission recommends that local communities evaluate and adopt them.

The SmartCode

The SmartCode is a unified land development code, which is a combination of zoning code, subdivision regulation, and architectural form code tied into one document for simplified and efficient administration. It governs all public and private land development to ensure that the pattern of streets and buildings shapes the community's desired character. For best results, the SmartCode should replace the existing land use zoning code and subdivision regulations. This will enable new de-

velopment that is diverse, walkable, and economically sustainable.

The objective is to provide the living areas and the basic necessities for every day life within a five-minute walking radius. These nodes become urban centers. This concept promotes denser development, a more efficient use of valuable land, and sensitivity to urban neighborhood character.³

The Commission recommends that the state enact legislation authorizing and encouraging the adoption of the SmartCode by communities. The legislation would not compel any city or county to adopt the SmartCode, but it would provide the framework for adoption of the SmartCode, or certain parts of it, as a new comprehensive code or as an alternative code to existing zoning. Although additional legislation may not be necessary for cities and counties to adopt the SmartCode, a new statute would encourage and ratify a community's choice to move away from traditional zoning and adopt the SmartCode. The Commission recognizes that this, like all recommendations for legislation, is the prerogative of the governor to recommend or not if he believes there is a better way of accomplishing the same goals.

The Commission further recommends that each city and county adopt the SmartCode as a model code for new zoning. The Smart Code should be tailored so it is consistent with the floodplain management requirements of the National Flood Insurance Program (NFIP). The Commission anticipates a possible population explosion in rural areas in the southern-most counties of Mississippi. This potential surge in residents will require appropriate land use planning for future development and infrastructure to support it.



The SmartCode should be considered as a guiding document for these areas and should be evaluated and revised for each county's needs. Local governments are encouraged to seek the advice and assistance of professional land planners to create comprehensive land use plans where ones do not exist, to incorporate the SmartCode into existing comprehensive land use plans, and to customize the code for each community's needs.

In the event a town does not prioritize walkable neighborhoods over conventional suburban subdivisions, the Commission strongly recommends that local governments adopt the SmartCode as an optional overlay so property owners and developers may choose that approach for themselves. The SmartCode works in tandem with building construction codes that address structural and safety issues. For areas desiring stronger architectural design and detail standards, a *Pattern Book*, as discussed below, can be adopted to supplement the SmartCode.

The Commission further recommends that if implemented as an optional code, incentives be provided by local governments to encourage developers to use the SmartCode as a model for mixed-use development. These incentives are as follows:

- (1) After the SmartCode is adopted and approved by a local government, development proposals based upon the SmartCode receive automatic zoning approval and given priority in the permitting and plan review process, avoiding the expensive and time-consuming public hearing and comment process typically associated with overlay district applications. In effect, the public hearing and comment takes place at the time of adoption of the SmartCode, and

thereafter, developers who utilize the SmartCode model go straight to application for a building permit.

- (2) As an incentive to developers, municipalities and counties can offer to construct and maintain thoroughfares where the development proposal provides interconnectivity to the community and transportation nodes.

The *Pattern Book* and Architectural Guidelines

One of the most exciting products of the Mississippi Renewal Forum is *A Pattern Book for Gulf Coast Neighborhoods*, which captures the architectural heritage and diversity across the Mississippi Gulf Coast and suggests guidelines for delivering in new construction the traditional character of the region's houses, streets, neighborhoods, and towns. The Commission recommends that local governments adopt the Gulf Coast *Pattern Book*



The quality of life and sustainability of cities and neighborhoods depends in large part upon changing the post-World War II conventional wisdom for design of streets, major thoroughfares, and federal highway connectors.

as a compliment to its building code so as to provide local officials, developers, and homeowners with a tool to build or renovate residences and commercial buildings in a manner that is sensitive to the architectural heritage of the Gulf Coast. Adoption of the *Pattern Book* may assist communities and developers by streamlining the approval process.

Building Codes for Sustainable Construction

Local governments in South Mississippi, including counties, must adopt more stringent building codes and requirements in order to protect its citizens and to reduce the extent of destruction from a future hurricane or other natural disaster. The FEMA's NFIP can be a guidepost for local government's efforts. This program was created after flood control projects such as dams, levees, and floodwalls failed to reduce flood losses because people continued to build in floodplain areas. Floodplain management has now evolved from heavy reliance on flood control, or structural measures, to one using a combination of many tools. As a result of this evolution, United States floodplain policies are now multi-purpose and result in a mix of solutions to suit many situations. Non-structural flood protection measures include:

- Regulating floodplain use by using zoning codes to steer development away from hazardous areas or natural areas deserving preservation, establishing rules for developing subdivisions, and rigorously following building, health and sanitary codes.
- Establishing development and redevelopment policies on the design and location of public services, utilities, and critical facilities.
- Acquiring land in a floodplain in or-

der to preserve open space and permanently relocate buildings.

- Elevating or flood-proofing new buildings and retrofitting existing ones.
- Preparing people and property for flooding through forecasting, warning systems, and emergency plans.
- Restoring and preserving the natural resources and functions of floodplains.⁴

The creation of the NFIP in 1968 also was a landmark step in this evolution. The NFIP:

- Established an insurance program as an alternative to disaster relief.
- Distributed responsibility for floodplain management to all levels of government and the private sector.
- Set a national standard for regulating new development in floodplains.
- Began a comprehensive floodplain mapping program.⁵

On a local level, availability of flood insurance and participation in the NFIP is based upon an agreement between local communities and the federal government. The agreement provides that if a community adopts and enforces a floodplain management ordinance to reduce future flood risks to new construction in Special Flood Hazard Areas (SFHA), the federal government will make flood insurance available within the community as a financial protection against flood losses.⁶ Development may take place within the SFHA, provided that it complies with local floodplain management ordinances, which must meet the minimum federal requirements. Flood insurance is required for insurable structures within high-risk areas to protect federal financial investments and assistance used for acquisition and/or construction purposes

within communities participating in the NFIP.⁷ Non-federal lending institutions likely will also follow these requirements to protect their investments from the risk of flood.

In certain places along the Gulf Coast, the storm surge from Hurricane Katrina reached several miles inland. FEMA, therefore, had to reevaluate the SFHA. This process normally would have taken several months to a year; however, in an effort to aid the rebuilding effort, FEMA released preliminary advisory maps on November 18. These maps show revised base flood elevations along the Mississippi Gulf Coast.⁸

The revised maps are only advisory and preliminary. The current Flood Insurance Rate Maps (FIRMs) that were in place at the time of the hurricane will remain the standard until the advisory maps are adopted into law in 12 to 18 months. During this period, the advisory maps will be subject to evaluation and public comment.

FEMA and other federal agencies have adopted the advisory maps for purposes of their programs, including financial assistance. Local communities have the option of adopting the advisory maps now or waiting until the advisory maps are formally passed into law and adopted in order to continue the NFIP in their communities. Adoption of the maps by local communities will necessarily involve revisions to floodplain management ordinances and building requirements for the revised flood areas. Local governments can adopt the advisory FEMA maps immediately. Additionally, if local governments desire to remain in compliance with the flood insurance program, they must adopt the new FIRMs, after public comment, unless the advisory maps are a higher standard than the FIRMs.

Because FEMA and other federal programs have adopted the advisory maps, it is advisable for new construction to comply with FEMA building requirements in order to be eligible for flood insurance in the future. Depending upon the elevation of the proposed building site and its location in the flood zone, new construction may be required to be elevated.

If new construction will be located in a velocity zone (V-zone) or an area subject to additional hazards resulting from storm-induced waves, additional building requirements may be imposed. Buildings that were only partially damaged as a result of Hurricane Katrina may be restored under the current FEMA and community requirements.

The Commission recommends that local governments immediately adopt the revised advisory flood maps and begin assessment and revision of their flood zone management ordinances



and building requirements. Regardless of when these measures are taken, federal lending institutions most likely will not underwrite new construction unless it is in compliance with the new flood zone designations and federal requirements. Likewise, the Commission believes that private lending institutions will follow suit. The adoption of the new ordinances and building codes should proceed simultaneously with each local government's evaluation of the SmartCode and *Pattern Book*. The prompt adoption of these requirements and codes will aid the rebuilding effort and will ensure that future generations are sufficiently protected from another Katrina.

The Commission further recommends that the state of Mississippi adopt the latest versions of the International Building Code (IBC) and International Residential Code (IRC), with appendices, as a model code. Following statewide adoption, each county and city should likewise adopt and enforce the IBC and IRC. The adoption of the IBC and IRC would be a basic code and allow for additional code provisions consistent with the SmartCode and the *Pattern Book*. Counties and cities should evaluate the consequences and benefits of such codes with regard to flood and property insurance, property values, and other land use issues peculiar to that community.

Local governments ultimately will be responsible for implementing proposals that came from the Mississippi Renewal Forum. It will be their responsibility to integrate these resources into existing comprehensive land use plans and zoning codes. Local governments will require financial assistance from federal and state governments to retain technical experts to assist with evaluation and

The Commission recommends that local governments immediately adopt the revised advisory flood maps and begin assessment and revision of their flood zone ordinances and building requirements.

approval processes. Additionally, federal and state agencies can provide guidance on the application of new federal and state guidelines with regard to the rebuilding effort. The Commission believes that these objectives can be accomplished through the Mississippi Renaissance Advisory Council as recommended below.

Through the Renewal Forum land use planners, architects, engineers, and designers evaluated the 11 cities on the Mississippi Gulf Coast and prepared summary reports for redevelopment and renewal. The state of Mississippi is prepared to provide similar professional assistance to the six southern-most counties. In order to take advantage of these resources and the ideas generated from the Renewal Forum, the cities and counties of South Mississippi should establish a procedure and a task force in each city and county to begin the process of evaluation and implementation.

An Overlay District for Highway 90 and a New East-West Corridor

Highway 90 always has served as the optimal transportation corridor between the 11 coastal cities. Many residents prefer the marvelous Gulf view of this route versus Interstate 10. Before the casinos, the view along Highway 90 was as diverse as the communities through which it passed. From Bay St. Louis to Long Beach, the view of the coast line and the Gulf of Mexico was unobstructed. Travelers marveled at the large antebellum residences along the north side of the highway and the peaceful landscape of palms, live oaks, and white sands. Farther to the east in Harrison County, the corridor converted to a highly commercialized zone of pawn shops, souvenir shops, and restaur-

rants. With the approval of water-based casinos, the coastline became further littered with large, glitzy structures that interrupted and, even worse, blocked the view of the Gulf of Mexico.

Throughout the Renewal Forum and the work of the Commission, South Mississippi has been referred to as a “clean slate,” providing an enormous opportunity to rebuild in a way that optimizes the natural beauty of the Gulf Coast. Nowhere is this statement more accurate than with regard to the Highway 90 corridor. Hurricane Katrina’s winds and flood waters destroyed most, if not all, of the existing structures along this corridor. From Waveland to Pascagoula, the structural remains can be described as a fresh canvas awaiting a skilled artist’s creativity. Although the damage is catastrophic, there is a seminal opportunity to create a beach boulevard that invites pedestrians to stroll along the beach, provides light rail to move residents to and from work and home, transports visitors to and from hotels and retail areas, and permits automobile traffic, but at reduced speeds.

Land use and transportation planning by coastal counties and cities and state agencies should include a scenic boulevard concept for Highway 90 and adjacent lands in all three counties. Likewise, if the CSX right-of-way becomes available, counties, cities, and state agencies should cooperate in creating a new east-west corridor. These corridors should be beautifully landscaped and friendly to adjacent neighborhoods, businesses, pedestrians, and tourists and should maximize accessibility through public transit and pedestrian walkways.

An “overlay district” is a special zoning district that is adopted by the each city to identify special resources or development areas. It is implemented by

Through the Renewal Forum, land use planners, architects, engineers, and designers evaluated the 11 cities on the Mississippi Gulf Coast and prepared summary reports for redevelopment and revival.

adopting new zoning provisions that apply to that area consistently in each city. These regulations are in addition to the existing provisions of the existing zoning ordinances. An overlay district can facilitate a wide array of development options and goals, including traditional neighborhood development, transit-oriented development, cluster development, and historic preservation.

The Commission recommends that the cities adjacent to Highway 90 cooperate to develop a model ordinance for this transportation corridor. The ordinance should include consistent development requirements, setbacks, architectural specifications, and building requirements. The ordinance also should incorporate the SmartCode for properties adjacent to the Highway 90 right-of-way. The ordinance should encourage mixed uses, including downtown residential and retail uses and neighborhood-friendly commercial uses.

Highway 90 should be converted to a beach boulevard that encourages alternative means of transportation and highlights the Gulf Coast’s most valuable asset, the waterfront. Each local government along Highway 90 should adopt this ordinance as an overlay to their existing zoning along the corridor and amend their comprehensive zoning plans accordingly. Likewise, upon acquisition of the CSX right-of-way, a similar overlay district should be created.

Local governments ultimately will be responsible for implementation. They will be responsible for retaining professionals to assist with the development of an overlay district that is compatible with existing zoning and any revised zoning in the coastal cities which border Highway 90 and the CSX corridor. Local governments will require assis-

Throughout the Renewal Forum

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tance from federal and state governments to assist this process. The Commission believes these objectives can also be accomplished through the Mississippi Renaissance Advisory Council as recommended below.

The Mississippi Renaissance Advisory Council

Land use decisions are not limited to zoning and comprehensive land use plans. As discussed above, a community’s land use decisions necessarily involve issues of public health, transportation, environmental quality, economic development, disaster preparedness and response, and the planning of neighboring towns and counties. As a result, a city or county must traverse a complicated maze of government agencies in order to address all of these issues comprehensively. Simply stated, land use decisions and policy-making are spread across numerous agencies of federal, state, and local

government.

To foster the speedy recovery and the adoption of feasible land use planning, the cities and counties of the Coast must be given easy and affordable access to these agencies and decision makers. The Commission recommends that the governor, by executive order, establish the Mississippi Renaissance Advisory Council to facilitate access to these decision makers. The advisory council would provide a forum for local and state officials to address land use decisions with federal and state government policy makers. It should prepare advisory standards for land use and orchestrate training and technical assistance for building and zoning offices of local governments. The standards and technical assistance provided by this agency would not be mandatory, but would be made available to counties and cities to aid rapid consideration of new codes and smarter development and to provide supplemental personnel for administering the large volume of permits during the rebuilding period.

The Council’s chairman should be the executive director of the Mississippi Development Authority and its membership should include officials from key federal, state and local government agencies. (For suggested membership of the Council and organizational structure, see the full committee report at www.governorscommission.com.)

State Design Center

In order to assist the implementation of the SmartCode and other products of the Renewal Forum, the Commission further recommends the creation of a central Design Center to offer technical assistance and expertise to local governments. The Design Center would be directed by the Council described

above and would include participation by architects, planners, engineers, attorneys, builders, building officials, and other professionals who might provide assistance to communities as they implement the Commission's recommendations. Additionally, the Design Center should partner with public universities to provide access to students in these professions who are willing to perform internships and provide assistance in their areas of study.

Mississippi statutes currently provide a viable mechanism for providing public university research and assistance. The University Research Center (URC) was created in 1998 partially in response to filling the statewide planning and development void resulting from the demise of the Mississippi Research and Development Center. This resource taps the expertise of specialists, researchers and graduate students within the eight public universities for the purpose of developing the state and helping its citizens obtain a higher quality of life.⁹ The Commission anticipates that the URC would be a member of the proposed Mississippi Renaissance Advisory Council and would be primarily responsible for the implementation of the state Design Center.

Local Design Centers

The Commission also recommends that each city and county, with assistance from the Mississippi Development Authority and the Advisory Council, create local design centers to provide local zoning and building officials, as well as private developers, with practical, technical assistance from land use planners, code experts, architects, and engineers provided through government agencies, universities, and volunteer organizations. The design centers would assist

It is impossible and irrational to

plan land use without planning transportation uses and methods. There are no issues more important to smart land use and livability of coastal towns than moving the railroad and reversing the customary expansion of interstate-standard highways that are detrimental to neighborhoods and downtowns. Every regional agency and every county and city should evaluate transportation planning in conjunction with land use planning. Future development should promote interconnectivity and provide non-automotive public transportation alternatives in the form of trolleys, light rail and sidewalks that connect all neighborhoods and provide access to retail.

each community in drafting necessary amendments to comprehensive land use plans and in tailoring the SmartCode to the specific needs of each community.

One of the successes of the charrette process and the Commission was the involvement of the local communities. Addressing the social impact of the charrette process, the Renewal Forum's report suggested that the rebuilding process should include a "central coordinating and communications center to facilitate the flow of information regarding every aspect of recovery and rebuilding."¹⁰ Through their local design centers, citizens can gain access to information and resources to assist in the implementation of the SmartCode, the *Pattern Book* and revised building codes.

Local Housing Resource Centers

In the coming months, procedures should be implemented to shorten the

approval process for construction and investment in redevelopment. FEMA regulations and local permitting and licensing approvals are key elements in this process. The preliminary FEMA advisory map will provide guidance to local residents and developers regarding the impact of changes on future construction. In order to assist local developers and residents with the application of these guidelines and the SmartCode, the Commission recommends that temporary multi-disciplinary permitting authorities, or “Housing Resource Centers,” be established. They should provide residents with more efficient and timely access to all necessary approvals for permitting, utilities, and licensing. The Housing Resource Centers would be funded, staffed, and managed under the guidance of the state design center and the local design centers.

Under state law, the governor has

authority to create the Mississippi Renaissance Advisory Council by executive order, and the Commission recommends that the executive order be issued as soon as possible. The Advisory Councils should begin work immediately and report its progress to the Legislature in its 2006 Regular Session. The Advisory Council should then petition the Legislature to create enabling legislation to convert this advisory council into a state agency within the Governor’s Office that will coordinate decisions by the state agency council members and would receive funds to provide its advisory and technical assistance to local governments. The Commission suggests that statutory authorization is necessary to ensure participation of state agencies and local governments.

The state and local design centers and the local housing resource centers should be established by the Advisory Council based upon available resour-

Do High-Rises Fit with New Urbanism?

Condominiums and casinos can play a vibrant, meaningful role on the Mississippi Gulf Coast, but some issues of design are critical if they are to be real assets to their communities.

Scale is key. High-rises are rarely welcome adjacent to single-family detached housing. Ideally, they should be designed into a downtown’s fabric and buffered by a few blocks of mid-rise structures.

High-rises should build to the street. They should shield parking from view with liner retail or other public functions. If they are designed to be aware of one another and of their collective influence, they offer win-win situations to developers and to the community.

They can bring retail to the street level and shape the public realm to enhance the pedestrian experience. This brings more people on the streets, which, in turn, means more business for shopkeepers — and casinos.

Downtowns, then, will be alive with possibility instead of places to drive through on the way to casino and condo parking lots.

es and funding. The Advisory Council should partner with universities and professional organizations to ensure a proper coordination of resources and to avoid overlapping objectives.

The Mississippi Renaissance Corporation

After a natural disaster such as Katrina, many residents and homeowners are left with nothing but vacant land. Due to the lack of flood insurance, many of these people will be forced to sell their properties at values well below the value of their property prior to the hurricane. Due to changes in the flood zone south of the CSX railroad and increased building requirements, it may be economically unfeasible for residents to return or rebuild. As a result, those residents who lost their homes, and personal belongings will lose even more – the chance to realize possible appreciation in land values during the rebuilding effort.

The current real estate market on the Coast promises increased land values. Casino corporations are preparing to move inland. Additionally, large condominium developers are clamoring to acquire property along Highway 90. If the residents and business owners of South Mississippi decide not to rebuild, they should be given a mechanism by which they can pool their ownership interests and properties into a common state-approved entity to either market their property and realize the benefits of the sale of a larger tract, or develop their property with a group of adjacent owners and realize the benefits of economies of scale.

The Commission recommends that, subject to the governor's approval, the state enact legislation enabling property owners in neighborhoods and

downtowns to join together in small, geographic groups to redevelop downtowns and neighborhoods according to the concepts of connected, walkable communities outlined in this report. The state should provide financial incentives for building affordable housing in accordance with new storm-worthy building codes.

The Commission specifically recommends adoption of legislation creating a Mississippi Renaissance Corporation, a for-profit, state corporation with the public purpose of marshalling capital, planning projects, and assisting private developers and local governments in public-private partnerships in smart development consistent with the core land use values stated in this report.

The state corporation would provide technical assistance to local neighborhood and downtown groups, working in public-private partnerships with developers and local governments, to form local renaissance corporations to plan and build site-specific projects. A key purpose of such local corporations would be to provide a vehicle for land-pooling for joint projects by local residents and property owners to assist pre-Katrina residents in rebuilding or relocating according to individual, voluntary choices. By pooling land and planning larger projects for a whole block or a group of blocks, such corporations would assist low- and moderate-income residents and small businesses in adding value to their property by participating in larger, mixed-use projects that would provide residential opportunities for pre-Katrina residents, as well as new residents seeking housing near work.

The Commission recommends to the Governor that this legislation be submitted in the 2006 Legislative Session.

The legislation should be approved and appropriate funding be provided for the creation of the Mississippi Renaissance Corporation. Federal, state, and local agencies also should provide funding to encourage neighborhood residents and downtown businesses to form these voluntary organizations for redevelopment.

After passage of the legislation, private land owners will be responsible for the creation of private or non-profit renaissance corporations for the pooling of land. The Mississippi Renaissance Corporation should appoint a director who is responsible for assisting private land owners with the formation, funding, and management of these corporations.

INTERMODAL TRANSPORTATION

After Katrina, the immediate concern of transportation officials in South Mississippi was repairing damaged roads, bridges and ports. A vast reconstruction effort began almost immediately and is ongoing. In addition to reporting on that work, the Commission also has considered the challenges and opportunities facing transportation that extend beyond the initial period of recovery to 20 or more years into the future.

The Commission focused on seven areas of special interest to citizens, elected officials, and other community leaders:

- Relocation of CSX railroad operations and acquisition of the CSX rail line and right-of-way for the

development of a new east-west transportation thoroughfare.

- Conversion of Highway 90 to a pedestrian-friendly “beach boulevard.”
- Redesign of the Canal Road-State Port connector to accommodate plans for the new east-west corridor, the beach boulevard, and the state port in Gulfport.
- Creation of a new master transportation plan for a multi-modal network that improves automobile traffic flow while providing alternatives to car travel, such as bikeways, jogging paths, pedestrian walkways, and trolleys; and improves east-west and north-south travel for the central and northern portions of the coastal counties and Peal River, Stone, and George Counties.

- Development of a public transit plan and system in conjunction with the new transportation master plan.
- Evaluation of the role and mission of the three coastal ports.
- Development of inland ports, particularly an inland port to promote maritime growth of the Port of Gulfport.

Dealing with the Damage

The CSX rail line runs east and west along the coastline through the three southern-most counties. CXS sustained significant damage and total destruction in certain areas along the Coast. The railroad bridge over the Bay of St. Louis was destroyed, and the railroad bridge over Biloxi Bay was heavily damaged. In Hancock County and western Harri-



Biloxi-Ocean Springs bridge post-Katrina.

Photo: Sun-Herald

son County, railroad tracks were ripped away from track beds, track beds were washed out, and signal systems sustained heavy damages. Damages sustained by the rail system in the remainder of Harrison County and in Jackson County were less dramatic. Official CSX reports have placed the CSX rail system damage in the coastal counties at approximately \$250 million. CSX is presently conducting repairs to its rail system and plans on resuming normal operations in February 2006.¹

Within a few hours on August 29, 2005, Katrina returned Highway 90 into a beach boulevard but not one with the welcoming concept of a pedestrian-friendly, scenic drive. The hurricane destroyed or heavily damaged much of Highway 90 from the Bay St. Louis area to the Biloxi-Ocean Springs bridge in eastern Harrison County with most of the destruction and heavy damage occurring along the beach-front route. Destruction or heavy damage was widespread to the road surface, road bed, curbing, drainage system, traffic signals, and road signage. Every part of the Highway 90 roadway system was affected.

The Mississippi Department of Transportation (MDOT) initiated repair efforts immediately after the storm, and these efforts are continuing with all of Highway 90 projected to be open for limited two-lane traffic before the end of the year and some areas opened for limited four-lane traffic. The estimated costs for repairing and rebuilding are high: \$100 million for Highway 90 and \$400 million to rebuild the Bay St. Louis and Biloxi-Ocean Springs bridges.²

The hurricane also imposed heavy damages on Coast Transit Authority (CTA), the regional public entity that provides public transportation services



Why do expanded highways fill up with traffic faster than designers predict?

on the Coast. The undercarriage of each CTA vehicle was submerged in salt water for eight to 10 hours. Although CTA began limited bus operations on September 5, 2005, the bus fleet has experienced severe transmission failures, starter failures, and a number of airbrake system valve problems. Vehicles also are experiencing alternator failures due to water intrusion, and it is anticipated that within the coming months, differential and mechanical parts of the brake systems will fail because of saltwater exposure. Furthermore, significant damage was sustained to CTA's Gulfport Transit Center, its bus stop benches and shelters, and its operations facility.³

Prior to Katrina, CTA depended on locally generated revenue and local government support for 50 percent of its operating budget. These funding sources have been dramatically cut. When CTA resumed limited operations after the hurricane, it provided free transit services to the public, as many riders were unable to pay a fare. CTA and local governments want to continue free services during the recovery period.⁴ CTA has submitted an Emergency Public Transportation Plan to the United States Congress seeking 100 percent emergency funding to provide fare-free public transportation for the next two years and to fund repairs and/or replacement of facilities and equipment. The damage inflicted upon CTA property and vehicles and the loss of riders, however, presents a remarkable financial challenge.

The Port of Gulfport sustained heavy losses and will require significant financial investment to resume pre-Katrina levels of operations. At the East and West Terminals, berths were destroyed or remain unusable until debris is removed. Several buildings are total losses;

others will require millions of dollars in repairs.⁵

Damage to facilities at the Port of Pascagoula is estimated to be approximately \$10 million of insurable damage with approximately \$2 to 3 million of uninsurable damage and extra expense. Repairs were underway to return the public facilities to approximately 80 percent of pre-Katrina operations by the end of December.⁶

The Port in Pascagoula supported relief efforts by returning basic services to operation by September 9, allowing the hospital ship *USNS Comfort* to berth at the Port where approximately 2,000 persons received medical treatment. In addition, emergency modifications were made to allow the berthing of the cruise ship *Holiday*, which continues to provide shelter to approximately 1,600 Coast residents. Likewise, preparations were under way to receive shipments of building materials beginning in December.⁷

At Port Bienville Industrial Park in Hancock County, Katrina caused an estimated \$70 million in damages to industries and companies. These companies employed approximately 1,250 people, not including subcontractors and suppliers. Three companies employing approximately 200 people have ceased operations since Katrina and show no indication of resuming operations. CSX Railroad lost 38 miles of track and 11 bridges that resulted in termination of rail service for rail-dependent industries within Port Bienville. As a result, these industries turn to other means of commercial transportation at costs increased by approximately 30 percent to 40 percent.⁸ Even though the damage sustained by the Port Bienville Industrial Park tenants was significant, the Port's wharves were not damaged, and the ca-

A: **Because of a phenomenon known as "induced traffic."**

When planners add capacity, such as new lanes to a multi-lane highway, the expansion changes drivers' behavior. Those who had been taking other routes, traveling at off-peak times, or choosing other means of transportation abandon alternatives to take advantage of the new, higher capacity of the old highway. Congestion builds rapidly—more rapidly than the population growth on which transportation planning is often based, and the new lanes become as clogged during peak times as they ever were.

This is why wider roads don't necessarily lead to better traffic flow.

Source: Governor's Commission. Mississippi Renewal Forum. Final Team Reports. Transportation. "Building a 21st Century Transportation System for the Gulf Coast." 19 Oct. 2005. <<http://governorscommission.com/info/plansReports.html>>.

nal system serving the Port received a minimal amount of silting.

Recommendations

CSX Rail Line

The location of the CSX east-west rail line was at the forefront of public debate on the Coast long before the arrival of the economic boom from gaming and long before Hurricane Katrina. For decades local elected officials, community leaders, businesses, and residents have unsuccessfully engaged in efforts to secure the removal and relocation of the rail line and its rail operations. The vast majority of the CSX rail traffic constitutes "thru freight trains," trains that pass through the Coast without stopping and serving local industries, with limited service to the Port of Bienville and the Port of Pascagoula. Problems associated with the rail line became more pronounced as the casinos fueled economic growth along the Coast and increased traffic congestion and gridlock.

With 170 grade crossings along the CSX rail line in the three coastal counties, the risks to motorists and pedestrians have increased with the traffic. From January 2000 through August 2005, 90 grade crossing accidents involving CSX trains were reported to the Federal Railroad Administration.⁹ In addition to the dangers, the noise and other annoyances associated with the trains are detrimental to development of neighborhoods near the rail line.

Discussions have been underway between CSX and the Commission focusing on the joint goal of moving the rail line and/or relocating CSX rail operations, and CSX has advised the Commission that it will evaluate all options to make this move a reality. Relocation of the rail line would eliminate

On public transportation:

Even before Katrina, the transportation infrastructure did not provide the general public with much incentive to utilize public transportation, which in turn limited the potential of CTA's ridership. Ridership directly determined operational and capital revenue and federal funding, and revenue and funding limited CTA's ability to provide innovative and expanded public transportation services to the Gulf Coast. It was the classic "domino effect."

some of the public safety concerns and traffic annoyances brought by trains. In addition, the project would open the railroad track bed and right-of-way for development of a new transportation corridor on which to locate an east-west thoroughfare that could include trolleys, bicycle lanes, and pedestrian walkways. Though it might require the acquisition of additional right-of-way, such a thoroughfare could provide four roadway lanes that could take some of the traffic pressure off Highway 90 and allow it to assume the character of a beach boulevard.

If popular support exists for this idea and CSX is willing to abandon the existing rail bed, what are the obstacles to making this happen? Costs and the right legal mechanisms for conveyance are two major impediments, although CSX and state regulatory officials view neither as impossible to overcome. The numbers, however, are daunting. One study puts the price tag for relocating the rail line north of I-10 at \$795 million. That idea is no longer seen as practical. Through the Commission's work, however, CSX has identified other options that could cost substantially less, require

very little additional right-of-way, and take significantly less time to complete. CSX is to be commended for working aggressively to address the issues so as to provide a definitive answer.

If CSX agrees to the conveyance, the state could acquire the right-of-way in 12 to 18 months. The Governor and Mississippi's congressional delegation would be responsible for implementing the recommendation to acquire the existing CSX rail line and right-of-way. The balance of the funding requirements must come from the state.

Highway 90 Conversion

Economic progress and the lack of a coordinated approach between land use development and roadway infrastructure construction resulted in Highway 90 losing its personality as a scenic beach boulevard and evolving into a heavily traveled and congested highway. The Gulf Coast now has the opportunity to redefine permanently the character of Highway 90 and return it to a pedestrian-friendly beach boulevard that reduces vehicular traffic and increases opportunities for bike paths, pedestrian walkways, and public transit.

The present Highway 90 should remain a four-lane road and should not be enlarged to six lanes. The Highway 90 conversion should incorporate a Gulf Coast bikeway that extends the entire length of the coast with designated bike lanes on the Bay St. Louis bridge and the Biloxi-Ocean Springs bridge, and linkages to inland bayous and greenways.

To reach this goal a new east-west transportation thoroughfare must be developed to remove the majority of vehicular traffic from Highway 90. The CSX rail line and right-of-way discussion above provides a potential location

for such a thoroughfare. If the CSX property cannot be acquired, an alternate route for a new east-west road for vehicular traffic must be considered.

The ability of Highway 90 to assume a boulevard character may be affected by the rebuilding design of the Bay St. Louis and Biloxi-Ocean Springs bridges. The Mississippi Department of Transportation (MDOT) intends to rebuild the Bay St. Louis and Biloxi-Ocean Springs bridges in their existing footprints at a total cost of approximately \$400 million. The Biloxi-Ocean Springs bridge has generated much debate as to whether a four-lane bridge should be built, instead of the six-lane bridge proposed by MDOT.

The Commission has specific con-

cerns as to the traffic volume and congestion that will be generated by a six-lane Biloxi-Ocean Springs bridge that feeds into the present four-lane Highway 90. If this occurs, MDOT must develop design features and plans to divert some of the traffic traveling west over the bridge to a new east-west roadway. Likewise, plans must be developed to divert the majority of commercial and private vehicles from Highway 90 onto a new east-west thoroughfare. Providing solutions to these traffic issues will require transportation and traffic engineering studies to address traffic volumes, flow and control, traffic signage and signalization, and redesign of existing roadways and thoroughfares.

The Canal Road-Port of Gulfport Connector

The growth and expansion of Gulfport, primarily fueled by the gaming and tourism industries prior to Katrina, created significant traffic congestion problems on Highway 49 from points north of Gulfport to the intersection with Highway 90. Development of business and commercial properties along Highway 49 north of Interstate 10 into central Harrison County contributed to increased use of Highway 49 by commercial and private traffic. This growth made Highway 49 the primary north-south traffic artery from the northern Harrison County to the intersection with Highway 90. Highway 90

Highway 90, Gulfport.

Photo: Sun-Herald



On the prospects for Beach Boulevard:

The Gulf Coast now has the opportunity to redefine permanently the character of Highway 90 and return it to a pedestrian-friendly beach boulevard that reduces vehicular traffic and increases opportunities for bike paths, pedestrian walkways, and public transit.

is unable to handle effectively the large intermix of commercial and private vehicle traffic flow which grows daily.

After conducting studies to arrive at a solution to this problem, MDOT selected a route for a connector interstate highway west of Highway 49. The connector, Interstate 310, is planned to begin at the Canal Road interchange on Interstate 10 and extend to a point on Highway 90 at the Port of Gulfport. The connector is designed to reduce traffic flow on Highway 49 and assist in reducing traffic volume on Canal Road.

Members of the Commission and local officials have met with MDOT officials to discuss redesigning the connector to accommodate and support the following Commission recommendations: (1) a new east-west thoroughfare, (2) the Highway 90 conversion to a pe-

destrian-friendly beach boulevard, and (3) Port of Gulfport activities, which are evolving into a mix of commercial businesses and gaming. The Commission recommends that MDOT redesign the I-310 connector to accommodate and support these three recommendations.

MDOT agrees and is currently working with the State Port Authority, the City of Gulfport, MDA, and the Commission to address this critical issue. The Gulf Regional Planning Commission, MDOT, and the Federal Highway Administration should all share responsibility in different degrees for the implementation of this recommendation with funding from federal highway appropriations and state participation.

A Transportation Master Plan

The unprecedented damage wrought

by Katrina and the subsequent decision to rebuild the Gulf Coast according to a new vision has rendered previous transportation planning obsolete.

The Commission further recognizes that George, Stone, and Pearl River Counties and the northern parts of the three coastal counties are now being used as staging areas for the rebuilding of South Louisiana and the coastal regions of Mississippi and Alabama. These counties were experiencing significant population growth before Katrina; however, this growth has been compounded with the influx of hurricane evacuees and construction workers, all of which has further stressed the transportation infrastructure system.

In addition to planning the rebuilding of the coastal transportation infrastructure, planning for east-west and north-south connectors and roadways in these other geographic areas is equally important. A new, more comprehensive transportation master plan for the Gulf Coast and the South Mississippi counties is necessary.

The Commission recommends that a transportation and traffic engineering firm be retained to study, evaluate, and produce a transportation master plan for the Mississippi Gulf Coast, including the six South Mississippi counties. Such plan should be designed to: (1) provide a pedestrian-friendly, multi-modal transportation network that improves traffic flow and provides for bikeways, jogging paths, pedestrian walkways, and trolleys, and (2) improve east-west and north-south travel for the central and northern parts of the coastal counties and George, Stone and Pearl River counties.

This project should include the conversion of Highway 90 to a beach boulevard and the development of a new

east-west thoroughfare utilizing the CSX rail line and right-of-way or an alternate route. The master plan should be compatible with and enhance the land use concepts and recommendations of the Commission.

The Gulf Regional Planning Commission, MDOT, the Federal Highway Administration, and the Renaissance Advisory Council (as proposed in the section on Land Use) would share responsibility in different degrees for the implementation of this recommendation. Funding is available through FEMA, MDOT, and the Federal Highway Administration, which was recently appropriated \$2.75 billion by Congress for rebuilding efforts.

Public Transportation

Even before Katrina, the transporta-

tion infrastructure did not provide the general public with much incentive to utilize public transportation, which in turn limited the potential of CTA's ridership. Ridership directly determined operational and capital revenue and federal funding, and revenue and funding limited CTA's ability to provide innovative and expanded public transportation services to the Gulf Coast. It was the classic "domino effect."

Free public transportation for a two-year period is critical to recovery and rebuilding efforts since many people have lost their vehicles and rely on public transportation to travel to relief centers, work, grocery stores, and shopping centers.¹⁰ As communities pass from the recovery stage to the rebuilding and renewal stages, public transportation becomes an integral part of the renaissance

of South Mississippi. The Commission makes the following recommendations:

- CTA should apply for all available federal funding to compensate for the revenue shortfall resulting from Katrina, and to repair and replace capital facilities and vehicles. CTA officials have been meeting with FTA representatives and made written application to Congress for emergency funding.
- An experienced and qualified transportation engineering firm should be contracted to undertake a comprehensive inter-modal transportation plan, including public transportation. The plan should focus on providing public transportation that affords a pleasant and cost-effective means of traveling to work, visiting casinos, and sightseeing and shopping for

CTA Lighthouse Station, Biloxi

Photo: Sun-Herald



On the need for a new master plan for transportation:

The unprecedented damage wrought by Katrina and the subsequent decision to rebuild the Gulf Coast according to a new vision have rendered previous transportation planning obsolete.

residents and tourists. It also should encourage less reliance on the car for daily use.

- CTA should obtain funding for a feasibility study addressing the construction and operation of an electric trolley/cable car system along Highway 90 and other innovative approaches to increasing ridership in conjunction with the land use and intermodal transportation recommendations. The Mississippi Department of Transportation should coordinate Highway 90 design and rebuilding plans with CTA to provide for a track bed location which supports a trolley/cable car system. The Commission notes that CTA has applied for a \$400,000 grant to study the feasibility of such projects.¹¹
- Casinos, condominiums and retail developers, particularly those located along Highway 90, should work and coordinate with CTA in the design and development of rider pickup stations for rubber-tire trolleys and rail trolleys. This effort would further re-

duce the volume of vehicles traveling on Highway 90 and contribute to a pedestrian-friendly beach boulevard.

The Coastal Transit Authority would be responsible for implementing these recommendations in coordination with Gulf Regional Planning Commission and other entities responsible for the implementation of a new transportation master plan. Funding resources would include federal, state, and local funds.

Coastal Ports

The Commission recommends that the Governor establish a Coastal Port Council to work directly with the Mississippi Development Authority (MDA) to study and evaluate the role and mission of the Port of Gulfport and the Port of Pascagoula. We also recommend that an experienced, qualified consultant conduct a study of these two ports and develop a master plan designed to maximize the growth potential of each port and minimize duplication of operations and services.

The Hancock County Port and Harbor Commission (HCPHC) has voiced opposition to being included in a Coastal Port Council since it is currently completing a master plan that specifically addresses these issues, as does the recently completed LATTs study. According to HCPHC, it does not compete for the same customers and products as the Ports of Gulfport and Pascagoula and has focused its planning and marketing efforts accordingly.¹²

The membership of the Coastal Port Council should be appointed by the governor and should consist of representatives of the two coastal ports, the local chairman of Local 1303 of the International Longshoreman Association, and any other persons deemed appropriate for membership by the governor.

Inland Port Development

The Port of Gulfport encompasses a significant land area that is occupied by large truck trailers and containers that await transportation to various destinations. Most of this cargo is subsequently transported from the Port by trucks and a small percentage is moved by rail. The rail line into the Port crosses Highway 90 at grade, disrupting traffic flow on Highway 90 and contributing to vehicular accidents as trains utilize the crossing. The Commission, therefore, recommends that property be acquired north of Highway 90 and developed as an inland port or staging facility in preparation for shipment of unloaded cargo to its final destination.

Such an enterprise would allow cargo to be unloaded directly onto trucks at the Port of Gulfport and immediately transported to the inland harbor for temporary holding until final movement by truck or rail. An inland port would reduce the amount of land area

needed by the Port of Gulfport at its commercial maritime operations, open land for casino and related developments, and eliminate the railroad grade crossing over Highway 90 as it enters the Port.

The governor, Harrison County, MDA, and Jackson County would share responsibility for implementing recommendations concerning the coastal ports and an inland port; however, Jackson County would not participate in the implementation of the inland port recommendation. Funding resources would include the Mississippi Development Authority, the state of Mississippi, and Harrison and Jackson counties. It is recommended that the Coastal Port Council make recommendations as to the funds received by the Port of Gulfport and the Port of Pascagoula.



Top: Bay St. Louis bridge.
Bottom: Barges washed ashore.

Photos: Courtesy of CSX

PUBLIC SERVICES

Katrina not only destroyed homes, businesses, and personal property, it left large communities stranded without shelter, food, water, sewer, and electricity. If South Mississippi learns nothing more from the effects of this catastrophic storm, it must re-evaluate the management of public services for communities vulnerable to natural disasters.

One of the most recurring issues to emerge from discussions regarding public services is the need to develop a multi-county, comprehensive plan for water, sewer, and solid waste facilities. Other ideas included: sharing certain services to increase efficiencies while preserving the identities of individual communities; establishing a plan for recycling and disposing of debris following a disaster; evaluating technologies

for a more robust and reliable communications system; and improving emergency responder disaster plans in terms of staging resources, manpower, and equipment.

Commission research was bolstered by recommendations that came from the Mississippi Renewal Forum in mid-October. The Renewal Forum not only focused on land-use issues, but also addressed the need for regional planning of public services. Renewal Forum design teams identified the need to use the rebuilding period as an opportunity to solve pre-existing problems and make key infrastructure resilient to hurricanes and other natural disasters. Among Renewal Forum suggestions: moving utilities underground to reduce hurricane damage; enhancing water quality through integrated water systems; upgrading and regionalizing wastewater treatment; discouraging individual sep-





tic tank use; and establishing emergency response plans for debris recovery and disposal.

The Governor's Commission also organized town hall meetings with the residents in South Mississippi to present ideas and to listen to citizens' concerns. The Infrastructure Committee continued to develop these ideas in several meetings during November and December.

The call for regionalization that characterized so many of the conversations suggests that city and county governments address problems, issues, opportunities, services, and facilities in a collective manner. Successful regional organizations throughout the country have all been based on a simple model: a long-term process with specific goals, objectives, work programs, committees, and committee assignments designed to achieve optimum cost and service performance with minimum bureaucracy. A regionalized approach would view the six South Mississippi counties as one operational area with many components, alignments, configurations, and coalitions.

The Need for Sharing

Demands facing individual local governments grow at increasing rates. Most governmental services affecting daily life are performed by local governments. Additionally, public services are highly regulated. State and federal governments continually adopt unfunded mandates to local governments and control the ability of local governments to tax their citizens and borrow money.

Local governments should communicate with each other their issues, concerns and opportunities about the services provided to their citizens. It is virtually impossible for each local gov-

**In effect,
the human
communications
disaster
compounded the
impact of the
natural
disaster.**



ernment to construct facilities and provide services in a cost-effective manner without working in cooperation with other local governments. Functions such as transportation, technology, environmental protection, public safety, water and sewer collection and treatment, and economic development are too complex and expensive for local governments to chart their path alone. In any regional system, however, communities that have already invested in upgraded infrastructure should be rewarded and not penalized.

Intergovernmental Cooperation

Virtually every type and level of general purpose government is involved, to some degree, in the provision of the same types of services and facilities. Even domestic protection, which most citizens identify as a federal responsibility, has now been extended to local governments after the terrorist attacks on September 11.

The methods by which an individual government can spend its tax dollars more effectively by working with other levels of government are limitless. If a county has a responsibility, issue or problem, it also affects the cities within that county, surrounding counties, as well as the state and federal governments.

For example, it is virtually impossible for any local government to meet all of the environmental responsibilities it faces by acting alone. Additionally, transportation systems must be constructed through the use of joint funding and must be part of an overall functioning network to reach any level of success. In the area of law enforcement and criminal justice, if agencies and organizations cannot communicate with one another,

criminals and criminal activity become very difficult to control.

Regional Structure

Under state leadership, the more than 20 local governments that comprise the six lower counties have the opportunity to join together and create a regional organization to lead the development of a long-range, comprehensive plan that includes the management of water, sewer, and storm water utilities. This regional organization must have local government roots and be sensitive to private economic interests that will foster economic growth and development.

Several organizations currently exist that service all or part of the counties of George, Jackson, Hancock, Harrison, Pearl River, and Stone.¹ These multi-jurisdictional organizations could participate in the regional entity that may be solely responsible for the planning and provision of these regional services.

Regional Plans

There are several public services that are amenable to a regional structure. The most obvious are solid waste disposal, water, sewer, transportation, correctional facilities, and tourism development.

Voluntary cooperation between local governments is difficult to achieve without leadership and financial incentives. There should be a regional authority responsible for preparing a regional plan and addressing all appropriate facilities and governmental services. Initially this plan should be developed without regard to governmental boundaries. Once the plan is adopted, the regional authority must carry out certain common functions and participating governments must share in the cost proportionately.

One of the most important components of the regional plan is identifying which governments and individuals are responsible for implementation of its different parts. The best example on the Mississippi Gulf Coast is in the area of transportation.

Currently, there is a long-range, regional transportation plan required by federal law, which determines how state, federal and local governments will spend transportation funds. While individual governments may be building different components of this transportation network, it is nevertheless a comprehensive, regional transportation plan that is being implemented intermodal. (See chapter on intermodal transportation.)

State government has become empowered to direct and greatly influence how federal spending occurs. The state should not only require regional plans where appropriate but should consolidate grant funds into a Regional Services Fund. All spending from this fund must be aimed at implementation of the regional plan. It is unlikely that any local government will ever fully divest itself of providing any of these services, but they will look at the best means of sharing responsibilities, duties and requirements. A regional authority would be a likely candidate to assist in this process.

Role of State Government

Many times regionalism and inter-governmental cooperation require external leadership forces to be successful. This is primarily accomplished through funding incentives. The governor, or his designee, should use all appropriate influence to insist that state and federal agencies use their grant resources to support regionalism. Most public facilities projects involve multiple funding

Officials and residents assume that there will be a large infusion of new capital into the Gulf Coast and state of Mississippi as part of the recovery process. These funds should be used to support regional plans whenever possible.

[I]nfrastructure spending should be reestablished as the highest priority for state and local governments.

sources. The governor should influence agencies, such as the Mississippi Development Authority, Department of Environmental Quality, Department of Transportation, and the State Board of Health to pool their funding for the Gulf Coast and carry out a regional plan for different types of services.

State leadership and policy direction is a critical element in the implementation of a regional strategy. Without a strong commitment on behalf of state government, developing regional services will be extremely difficult. By establishing a Regional Services Fund and requiring that these funds be spent to support the implementation of regional plans, a funding mechanism that can drive the process. Officials and residents assume that there will be a large infusion of new capital into the Gulf Coast and state of Mississippi as part of the recovery process. These funds should be used to support regional plans whenever possible. Additionally, infrastructure spending should be reestablished as the highest priority for state and local governments.

Recommendations

A Regional Public Utility Authority

Public services such as water, sewer, and storm water currently are managed on a city and county level. Each community bears the burden and expense of managing private contractors, or training personnel, outfitting equipment, and maintaining facilities. After a natural disaster, the restoration of these services is critically dependent on the quick recovery of each county, city, and community. Smaller and more rural communities do not have the resources, capabilities, or personnel for a

quick recovery or for the speedy restoration of services for its residents. Larger communities suffering significant losses from such a disaster also face the same problem.

In addition to the needs for recovery planning, there are current inefficiencies in the provision of public services across the Coast. These inefficiencies result in ineffective use of resources, unresponsiveness, inadequate planning, and ultimately in degraded customer service.

For instance: There are 14 municipal water and sewer systems, eight separate water districts, 19 water associations, and over 30 private water companies operating separately across the region.² Many of the smaller systems are under-capitalized, under-sized, and in a poor state of maintenance. Prior to Katrina some of these systems would not have been able to support expected growth in the region; post-Katrina the situation is even more difficult, since most will be unable to repair and grow fast enough to keep up with growth predictions. In addition, available funding in the short-term of hurricane recovery is designed to rebuild to the pre-disaster state. If the systems were inadequate before, they should not be rebuilt to an outdated standard.

As a result of Hurricane Katrina, water and sewerage systems on the Mississippi Gulf Coast suffered significant damage. Temporary repairs have been made in some areas; however, long-term usage issues still must be addressed. For example, the Harrison County Waste Water Management District (HCW-WMD) sustained significant damage to regional waste water pumping, transfer and treatment systems and requires approximately \$26 million to restore the facilities to its original condition.

The same is true for the Mississippi

Gulf Coast Regional Wastewater Authority in Jackson County, which requires approximately \$26 million to restore its facilities to their original condition. Likewise, the sewer systems in the cities along the Coast suffered extensive flooding, causing significant damage to motor control centers, power panels and instrumentation systems, which were above ground but flooded.

Under current ownership and management of water and sewer systems, each community is responsible for restoring its own facilities for collection and transport. Governments have experienced a loss of cash flow, however, due to reduction of sales tax revenues. Most small businesses that were vital to the economy of the cities such as Bay St. Louis, Waveland, Pass Christian, Long Beach, Gulfport, and Biloxi have been devastated. Some may never come back. For those that will return, it may be



several months before they will see any sales tax revenues.

Adding to the problem, other sources of revenue such as water fees and ad valorem taxes have also been significantly affected. Most cities lost a significant portion of their ad valorem tax base and water customers due to the total devastation along Highway 90 and south of the CSX railroad corridor.

Additionally, alternative water sources are needed. Katrina's storm surge caused contamination of wells and other water supplies. Alternate water collection systems or a reservoir to protect against water shortages should be considered to protect against future disasters. A reservoir not only would supply additional resources, but also could provide a recreational resource and, potentially, flood control.

A regional authority operating across the six counties may provide significant



opportunities and cost reductions. A task force composed of the Department of Environmental Quality, the Mississippi Department of Health, and the Public Services Commission examined the concept and concluded that such an entity would be effective in meeting all the needs outlined above. (More details on task force considerations may be found in the full subcommittee report at www.governorscommission.com).

Consistent with the recommendations of the task force and other planning agencies, the Commission recommends that the state legislature create a regional utility authority for the purpose of managing sewer, water, storm water, and other utility services across the six southern counties.

This authority should be authorized to construct new facilities and acquire existing facilities from counties, municipalities, rural water associations, and independent providers. These providers would maintain billing and connection responsibilities for their service areas. The regional authority would be responsible for transport of water and sewage and for sewage treatment.

A study should be commissioned immediately, with input from all affected counties and cities, to determine the best structure of a regional utility authority and an implementation plan. The plan should be completed in three months. The Commission recommends that the regional authority be created by the Mississippi Legislature utilizing legislation modeled after successful regionalized utilities such as the DeSoto County Regional Utility Authority, the Mississippi Gulf Coast Regional Wastewater Authority, the HCWWMD, and entities currently providing such services in other states. The proposed legislation should provide the regional au-

thority with a broad range of oversight authority over water, sewer, storm water, and other critical utilities. (Sample enabling legislation may be viewed in the full subcommittee report at www.governorscommission.com).

The regional authority should be authorized to do the following:

- construct new and centrally located facilities and build new systems in unincorporated areas that have no service-area entity established;
- build interceptor lines to existing infrastructure;
- by agreement with municipalities, acquire and rebuild existing plants and systems in municipalities;
- by agreement with municipalities, take over and administer city systems in municipalities that choose to be relieved of the burden;
- acquire existing private systems;
- provide a six-county contract for operation and maintenance of all plants and water wells;
- provide service area functions such as bill collection and maintenance of lift stations that municipalities, counties, and public utility districts may voluntarily choose to transfer to the regional authority;
- partner with the Pat Harrison Waterway District to commission a study to evaluate the cost and benefits of a reservoir to serve South Mississippi;
- develop a water, sewer, and storm water plan for the six-county region; and
- coordinate funding from state and federal resources.

The provision of water and sewer services necessarily involves three phases — connection, transport, and treatment. Under the proposed system, the municipalities and independent utility pro-

Before Katrina no single public safety radio system served the entire region.

viders would remain responsible for the “connect” phase. The regional authority would be responsible for transport and treatment. In order to implement this system, the regional authority should be further authorized to:

- pass ordinances in the counties and cities imposing fees and requirements for transport lines;
- enter into service agreements with municipalities, counties, rural water associations, and independent providers;
- meter the amount of sewage transported to centralized or acquired facilities;
- review and approve water and sewer connections in addition to the approvals required by the Department of Environmental Quality and the Department of Health; and
- charge a monthly fee based upon an estimate of the amount of waste treated annually.

The municipalities and independent utilities will maintain authority over connections in their service areas and may charge a premium in addition to the treatment charges of the regional authority. These customers of the regional utility would remain responsible for collecting treatment fees from their residents.

Congress recently appropriated \$45 million to the Rural Community Advancement Program to help communities reestablish water, waste disposal, and waste water facilities. Additional funding assistance may be obtained from the USDA. The USDA’s Water & Waste Water programs can provide assistance to a public body, utility district or nonprofit water association that is located in a rural area or an incorporated city/town with a population of less than 10,000.

Eligible loan/grant proposals include the installation of new water and wastewater systems, repairs, or additions to existing systems.

Standardized Emergency Communications

Before Katrina, no single local public safety radio system served the entire region. Each of the six coastal counties maintained its own radio system. Several coastal municipalities had their own system. Each system’s coverage area was limited to its jurisdiction or slightly beyond.

Also, because the various state agency systems have different manufacturers, different technologies, and different frequencies, they are not easily interoperable with each other, and no statewide mechanism provides interoperability among those first responders (ambulances, fire, police and medical) and state agencies. For example, prior to and in the immediate aftermath of Katrina, most first responders from the Mississippi Department of Transportation (MDOT), the Department of Public Safety (Public Safety), and the National Guard could not talk directly to each other or directly to first responders on local coastal systems, except for limited communications with Harrison County.

The same problem existed between federal and state agencies. The U.S. Coast Guard, the military, and FEMA, for instance, could not talk directly to first responders from local and state agencies. The situation was worsened by the failure of local communications systems that were damaged or destroyed by wind or water.³

First responders on all levels – local, state, and federal – were resourceful and persistent. They found ways to communicate under difficult circumstanc-

es – often simply exchanging radios. Wireless vendors sent thousands of additional radios to the affected area. Before Katrina, the Harrison County system managed 3,027 radios. Within two weeks, over 800 additional radios had been distributed to local, state, out-of-state, and federal emergency personnel, who used the Harrison County system as a de facto strategic communications center.

In other coastal areas in the first days after Katrina, however, local law enforcement and first responders could not communicate effectively, if at all, within their own jurisdictions, and certainly not with other jurisdictions. Where the local radio system went offline, first responders could operate only within visual limits, with no coordinated allocation of assets within the jurisdiction and no communications outside their jurisdiction.

Mutual aid and common channel use among jurisdictions, when and where available, quickly became overloaded. Even in Harrison County, where the local system continued to operate, connectivity to the outside was limited initially to satellite phones.

As the scope of the destruction and need for massive outside help became clear, there were few links between local responders and responding state agencies, such as Public Safety, MDOT, and the National Guard, and those agencies could not talk effectively to each other or to responding federal agencies. As a result, the ability of state and federal disaster relief agencies to immediately assess damages and plan a coordinated response was severely limited. In effect, the human communications disaster compounded the impact of the natural disaster.

Local governments must work with the Mississippi Wireless Communica-

tion Commission. Before Katrina, the 2005 Mississippi Legislature created the Mississippi Wireless Communication Commission to implement “a statewide wireless communications system” and “enable interoperability between various wireless communications technologies.”⁴ So, when seeking improvements and replacements to the emergency communications systems within South Mississippi, local governments must work with the Wireless Commission as it seeks to develop a statewide system and improve interoperability.

The Wireless Commission should issue a request for proposals to develop a statewide wireless communication system. The cost of a comprehensive statewide wireless communications system is impossible to predict and will depend largely on the technical requirements of the RFP. A 2003 report by RCC Consultants, Inc., however, predicted the cost could be as high as \$262.5 million.⁵ It is possible to pay for much of this by allowing private carriers to resell part of the state radio spectrum in return for installing the state’s wireless system. Based on the experience of other states, funding options include federal grants, user fees, and state bonds.

The Commission recommends that the Wireless Commission and the RFP address the following issues.

Local Option. Local governments should be able choose their own system and vendors so long as the system and equipment are compatible with the state’s interoperability plan, as discussed below. If the state builds a statewide system, local governments should have the option to join the state system, subject to full disclosure of initial and ongoing capital and maintenance costs, governance and control issues, present and past technology requirements, and local



coverage capabilities. If local governments decline to join the state system, the state system should provide interoperability between those local governments and the state system, as described below.

Interoperability. Based on lessons learned from Katrina, immediate voice and data communications among first responders (local, state and federal) must be coordinated, even if they are outside the normal system coverage or jurisdiction of the lead agency responding to the incident. Coastal interoperability should also address the need to communicate with first responders and appropriate state and federal agencies in adjacent states.

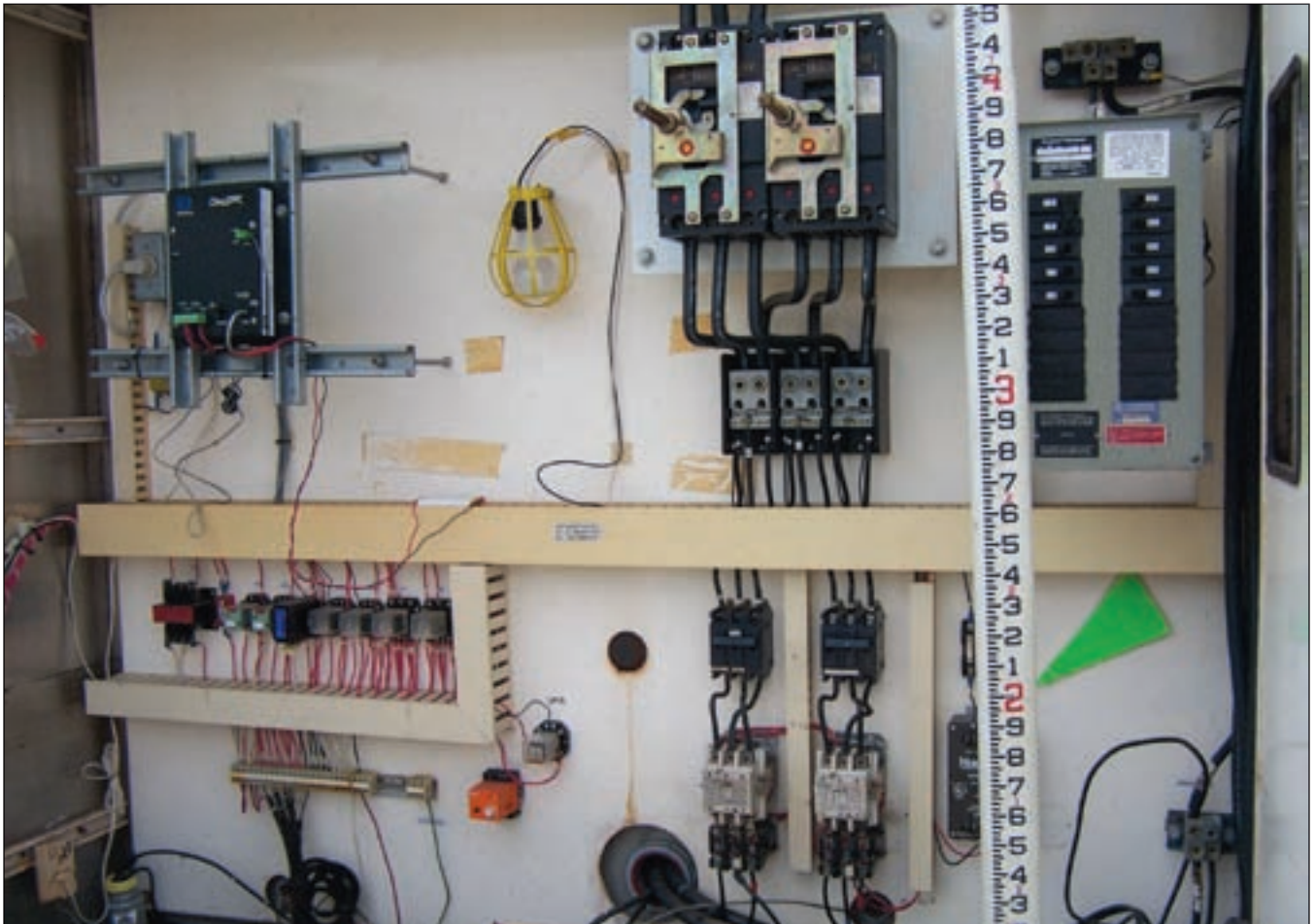
Survivability. The Commission recommends that the Wireless Commission develop survivability standards for design and construction of new and replacement wireless communications equipment and systems, and enforce those standards to local governments; otherwise, funds may be spent on systems at risk for future failure.

Priority for Coastal Wireless Communication System. The Commission recommends that if the Wireless Commission contracts for design and construction of a statewide wireless communications system, the area most severely affected by Hurricane Katrina should be the first area placed in full operation, especially with respect to

improvements to interoperability.

Emergency provisions. This Commission recommends that the Wireless Commission include in the RFP a requirement for portable wireless units, towers and other infrastructure to be deployable as needed in the event of another disaster.

Emergency plans and agreements. The Wireless Commission should take the lead in development and implementation of a plan to coordinate public and private communications resources and assets during major natural disasters and emergencies. The Wireless Commission should also encourage mutual aid pacts between local governments with similar systems and between local governments



and nearby state agency facilities. The Wireless Commission also should determine if a commercial network that is highly survivable and covers the Coast could be used as a redundant backup system, similar to the system used by Harrison County and Mississippi Power Company.

Funding. Recognizing the severe impact of Katrina on Coastal governments' revenue and expenses, the Wireless Commission, the Governor's Office, the state legislature, and all other relevant public officials and agencies should avoid placing the cost of these measures on local governments. In most situations, FEMA will pay for replacement equipment, but other sources of funding will be necessary for a statewide system and for improvements to interoperability as recommended by the Commission. Federal funds should be accessed to the fullest extent possible, including both traditional Department of Homeland Security and law enforcement grants and supplemental appropriations. A competitive procurement process should maximize cost savings and technology innovations. The process also should look at the possibility of reselling part of the spectrum for area-wide digital broadband services such as in Philadelphia, Pa.

Needs and cost assessment. Before issuing the RFP, the Wireless Commission should update the RCC report⁶ regarding current state agency communications assets, needs, costs, and projected expenditures. The Wireless Commission should accomplish a similar assessment for local governments, especially those in the area impacted by Katrina. Without such information, it is not possible to ensure that actual state and local needs will be addressed, or to calculate net costs and/or savings from

implementing a statewide system.

Regional Disaster Preparedness

The Commission recommends that evacuation maps be prepared for the southern six-county region. Hurricane Katrina proved that hurricane damage and risks are not confined to coastal counties. Rather, the extent of Katrina's damage covered an area from the Gulf Coast to over 150 miles north. New plans must consider the evacuation of more people than just those in the three southern counties. Routes also should identify designated evacuation centers to organize the movement and temporary relocation of communities. The Corps of Engineers should work with counties and the Gulf Regional Planning Commission to prepare these maps.

The Commission also recommends that the Mississippi Civil Defense and Emergency Management Association (MCDEMA) be funded to provide a formal regional disaster plan for the six counties or for all counties on a basis representative of their proportional risks and needs. A comprehensive plan should clarify the roles of federal, state, and local authorities to provide a more coordinated response to disaster and emergency situations and optimize the operations and/or contributions of nonprofit organizations and third party providers of utilities, debris removal, food, and water. The following issues should be included in the statewide disaster plan:

- dissemination of disaster preparedness materials and checklists to citizens;
- dissemination of maps establishing clear and adequate evacuation routes;

- clear designation of temporary local housing facilities;
- identification of specific cities or counties for temporary housing by evacuees;
- plans for collection of food, water, and human necessities;
- plans for the quick restoration of basic public services;
- coordination and use of staging areas by government agencies and utilities;
- contracts for debris removal and salvage operations;
- ensuring that emergency response professionals are prepared, equipped, and trained;
- education of senior citizens, people with disabilities, and/or special needs groups with the skills and knowledge they will need to prepare for, respond to, and recover from emergency situations;
- training in flood-fighting techniques using sandbags and other materials;
- response of non-affected areas to aid and support affected areas; and
- a clearinghouse agency with a working knowledge of federal and state funding mechanisms for disaster relief.

Additionally, the state legislature should fund MCDEMA to construct a storm-worthy operations center. This center would be the control center for disaster response efforts following a storm, hurricane, or disaster.

The Commission further recommends that an ad hoc task force be created by the governor that requires participation by entities providing statewide disaster planning services. These agencies should include FEMA, MEMA, the Highway Patrol, and the Department of Transportation, and the Department of

The methods by which an individual government can spend its tax dollars more effectively by working with other levels of government are limitless.

Health. It should also include utilities, nonprofit, and faith based organizations. This task force should be mandated to prepare a disaster readiness plan by June 1, 2006, prior to the 2006 hurricane season. Additionally, the task force should address communications issues as outlined above.

Consolidation for Schools, Law Enforcement, and Fire Departments

Not only have school districts, law enforcement agencies, and fire departments sustained heavy facility and equipment losses, they also are vulnerable to the decimation of local and regional tax bases. Certain schools, law enforcement agencies and fire departments, particularly those in Hancock County, may not be able to resume operations or only on

a very limited basis.

The need to consider the consolidation of school districts, law enforcement, and fire department consolidation has never been more apparent than now. The focus should be more on consolidating facilities, equipment, funding, training, and manpower than on reducing costs, since cost reductions have already been imposed by Katrina. The Commission notes with interest such dialogue between Waveland and Bay St. Louis.

The Commission recommends that the state retain qualified and experienced consultants to study the school districts, law enforcement agencies, and fire departments in the six southern counties. The study may be funded by local planning and development districts and/or the state and should make recommendations as to the feasibility and effects of consolidation of services.

Updating Geographic Information Systems (GIS)

There are several different state and local governments currently gathering and maintaining maps and database information for Geographic Information Systems. (For a complete survey of current GIS capabilities, see the full subcommittee report at www.governorscommission.com) As a result of Hurricane Katrina, however, many streets, roads and other geographic benchmarks have been damaged or destroyed. GIS information likely must be reevaluated for both horizontal and vertical accuracies. Additionally, the systems maintained by state and local governments are not always compatible.

The Commission recommends that a GIS task force, composed of members of the appropriate government agencies, be created to undertake the fol-

lowing objectives:

- Evaluate the current sources of regional GIS information and platforms.
- Assimilate and establish a central repository for base map and database information for the entire state on a platform that is consistent with existing information. Through the work of the Coordinating Council, the Mississippi Department of Information Technology Services (ITS) has received \$1 million to establish such an infrastructure. The RFP(s) to configure, acquire and set-up this statewide effort will be out by early 2006.
- Create a web-based base map and database that includes the following data which should be accessible by the public to aid in the rebuilding and development effort: roads and streets; water and sewer lines; zoning; proposed zoning amendments such as the SmartCode; aerial and satellite imagery; flood zone data for pre-Hurricane Katrina; and flood zone data for post-Hurricane Katrina. A site exists at the Geospatial One Stop⁷ with many of these capabilities. The new clearinghouse effort led by ITS will have these capabilities.
- Initiate collaborative efforts with adjacent regions in Alabama, Louisiana, and north of the six-county area.

A Public Services Cooperative

As a result of the destruction of Hurricane Katrina the local governments of South Mississippi are faced with daunting responsibilities, including removal and hauling of debris; restoring infrastructure such as water, sewer and communications; providing housing to dis-

placed residents; and coordinating and overseeing rebuilding efforts through inspection and permitting.

To make matters worse, most local governments will not have enough income to support these efforts as sales tax revenues have plummeted and ad valorem tax revenues are projected to do the same. A regional cooperative can provide an expanded set of services to the areas most devastated by Hurricane Katrina. The Commission recommends that a six-county public services cooperative be created to purchase common items, train personnel, and perform maintenance of facilities. Obviously, this regional approach could be used by other areas of the state.

Centralizing procurement will allow services to be offered more competitively and will result in more consistent pricing across the region. Significant cost savings can be realized in the areas of training and maintenance by allowing all counties and cities to draw from a larger pool of resources and funding.

To establish a cooperative, the Commission recommends that each county and city prepare a report detailing staff and personnel losses, the public services which it will be unable to supply during the rebuilding effort, estimated funding shortfalls for its programs and services, and any other areas of assistance. Additionally, the governor should create a task force to assist with the preparation of these reports, to evaluate the feasibility of providing such services on a regional basis, and to evaluate the cost savings which could be associated with centralized procurement of equipment and supplies. The task force should further evaluate funding and personnel resources that can be utilized and shared across the region during the rebuilding effort.

The task force should prepare a final report outlining its findings and propose a plan to implement shared services across the region. Based upon the recommendations of the task force, the governor should create a temporary agency which will be responsible for implementing the findings and recommendations.

AFFORDABLE HOUSING

In Mississippi, more than 134,000 homes received damage as a result of Hurricane Katrina. At least 65,000 were completely destroyed. More than 50,000 received flood damage, and 35,000 of those homeowners had no flood insurance.

While the hurricane's winds and waters affected everyone in its path, some were affected more dramatically than others.

The role of personal assets in enabling people to survive and recover is important, and the presence or absence of assets, and insurance on those assets, will determine who can participate in the long-term rebuilding of South Mississippi.

For that reason, strategies for renewal must closely consider approaches that

promote asset-building among low-wealth families and communities. Financial education, savings tools, and access to non-predatory financial services would help mitigate the challenges that confront many residents. As home ownership is one of the primary means in which individuals build wealth, it is important to target policies and funding streams that help low-income residents buy their own homes, repair them, and retain them when faced with income disruptions from crises such as national disasters.

To understand the need for such initiatives on behalf of low-wealth citizens, officials must consider the breadth and depth of the challenges they face. Table 1 highlights key socio-economic demographics for Mississippi as compared to the rest of the nation.





Table 1, below, illustrates two aspects of poverty – a lack of income and a lack of assets. For example, in Laurel, the Median Family Income (MFI) was more than \$7,000, or 19 percent less than the MFI across the entire state of Mississippi. Likewise, in Gulfport, the MFI was more than \$10,000, or 20 percent less than the MFI for the United States. Not surprisingly, the poverty rates for both locales also were significantly higher than the poverty rate for the country.

Income levels are reflective of the abundance of low-wage work in both areas. More than 42 percent of all working families in Mississippi are low-income – the highest rate in the nation. Over a third of the jobs in Mississippi pay below-poverty wages.¹

The prevalence of low-wage work is partially explained by the rise of the hospitality industry. The total number of hotel jobs tripled in Mississippi during the 1990s – the second highest growth rate in the nation; however, industry growth did not translate into high-wage jobs. On average, hotel workers in Mississippi earned \$20,190 a year.²

The second aspect of poverty illustrated in Table 1 is a lack of assets. According to the Joint Center for Housing

Studies at Harvard University, “Home equity is the cornerstone of household wealth for most Americans,”³ yet the rates of home ownership and home values in these Mississippi cities trailed the rates and values for the rest of the nation. Many residents in South Mississippi possessed limited assets on the eve of the hurricane.

Regardless of race or class, the presence or absence of assets and insurance will play a significant role in determining who participates in the long-term rebuilding of Mississippi. Over 90 percent of the homes in Harrison County (Biloxi and Gulfport) did not have flood insurance.⁴ Homeowners without significant assets and flood insurance face a huge affordability gap between covering existing mortgage payments and paying to rebuild. As mortgage grace periods expire, those without reserves or pending insurance payments risk foreclosure and the disappearance of their equity. Even those who may not face foreclosure have already experienced the loss of their only major asset, and likely all or most of the equity they may have spent years building up.

In the short term, limited housing stock spared from the hurricane has experienced rapid price appreciation and

is unaffordable for most residents. Many people without insurance will also face challenges paying a mortgage and covering the high cost of rebuilding. Those who experience mortgage defaults will be unable to obtain financing for another home loan even if they possessed a strong credit record before the hurricane. The inability to obtain a mortgage then will hamper their long-term prospects for building assets through home equity. Simultaneously, given the high cost of housing, foreclosed properties represent an opportunity for widespread gentrification across the region if developers acquire the properties at low prices.

How will the poor and uninsured afford to return to their homes? Who will help people without insurance bridge the affordability gap – especially when most sources of capital are risk averse, and government aid programs are slow to move? How will renters who have lost all of their possessions rebuild their lives? In order to create a more equitable region, rebuilding strategies must answer these questions and provide people with the tools necessary to acquire and preserve assets.

Katrina wrought widespread and unprecedented destruction in Mississippi

Selected Socio-Economic Characteristics in Hurricane-Affected Areas

	Urban Biloxi, MS	Gulfport, MS	Rural Laurel, MS	Picayune, MS	State / Nation	
					MS	US
Median Family Income	\$40,685	\$39,213	\$30,185	\$33,260	\$37,406	\$50,046
Poverty Rate	14.60%	17.7%	28.9%	20.8%	19.9%	12.4%
Homeownership Rate	49.10%	58.7%	66.2%	66.2%	72.3%	66.2%
Median Home Value	\$92,600	\$80,300	\$51,600	\$67,200	\$71,400	\$119,600

TABLE 1

Source: U.S. Census 2000

and Louisiana, having a particularly devastating impact on low-wealth residents who lacked an economic safety net. At the same time, the hurricane presented a unique opportunity to correct decades of inequitable development. Affordable housing and home ownership are cornerstones upon which the region will rebuild for the long term. Investments in housing strategies that target low-wealth residents will help South Mississippi emerge as a stronger, more equitable region.

The Destruction – A Closer Look

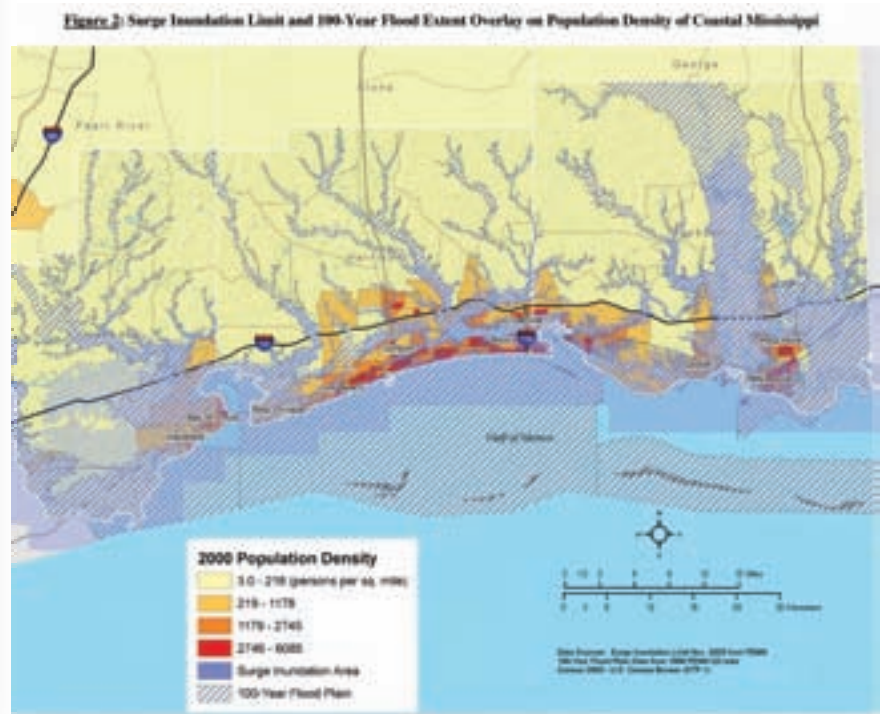
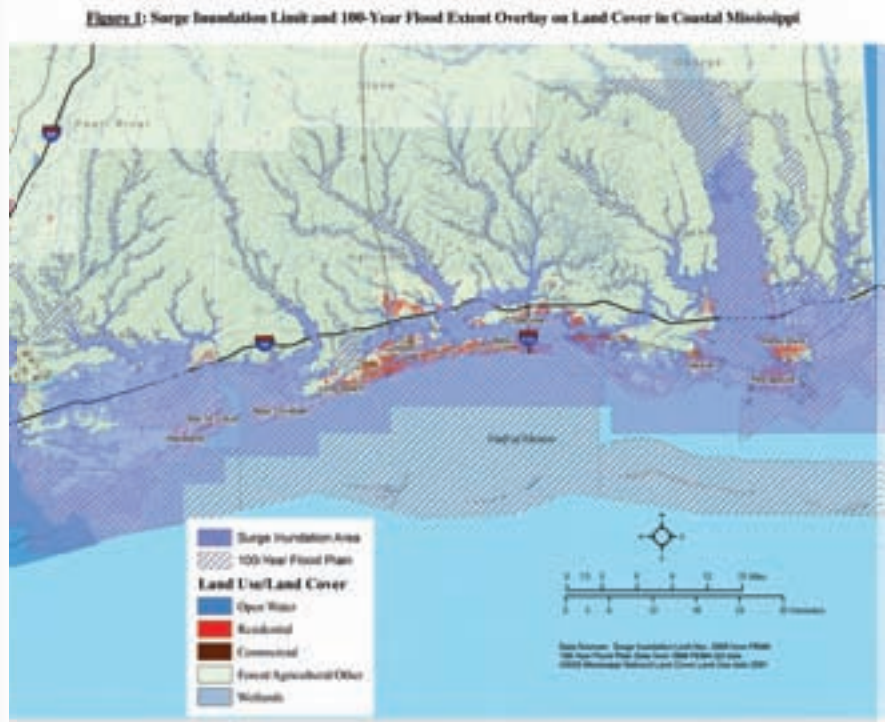
Hurricane Katrina wrought damage throughout many counties in Mississippi. Regrettably, most of the preliminary data to assess post-hurricane impacts are currently available only for the three coastal counties that suffered major flood and surge damage. As such, the Governor's Commission has initially conducted its pre- and post-Katrina housing analyses solely within the counties of Hancock, Harrison and Jackson. It is anticipated that future follow-on analyses will include all counties affected by the hurricane.

Most of the residential and commercial development in the three coastal counties occurred near the coastline where Hurricane Katrina's coastal surge and flooding occurred, as indicated in Figure 1. As one would expect, population and housing unit densities were greatest in the cities, particularly in parts of Long Beach, Gulfport, and Biloxi (in Harrison County) as well as Pascagoula and Moss Point (in Jackson County), as shown in Figure 2.

About two-thirds of the housing units in those counties were occupied by households with income below the U.S. median level (approximately \$42,000 as

of the year 2000). In Hancock and Harrison Counties alone, almost 75 percent

of the housing units were occupied by households living below the U.S. median income level. Across all three counties, about 12 percent of households



lived below 150 percent of the federal poverty level (FPL) and thus were eligible for various federal assistance pro-

grams. For a four-person household in the year 2000, this would correspond to an annual income of less than \$25,575

(in 2005, the income for a family of four at 150 percent FPL is \$29,000 per year).

In Harrison County, the proportion of housing units occupied by households living below 150 percent FPL was 14 percent. The spatial distribution of these low income households can be seen in Figure 3.

Across the three counties, 62 percent of the housing units were owner-occupied, with overall home-ownership in Harrison County slightly lower at 56 percent (see Table 2). Figure 4, however, shows that the lowest home-ownership rates – less than 42 percent – occurred in coastal communities of Harrison County, namely Gulfport and Biloxi (Figure 4).

The majority (62 percent) of housing units across the three county area was built before 1980 (Table 2). As Figure 5 shows, the greatest shares of these older vintage homes were located in Gulfport, Biloxi, and Pascagoula.

Based on this information, it would appear that Gulfport and Biloxi and Pascagoula and Moss Point present the greatest challenges for rebuilding.

First, these areas contained a larger percentage of older homes that were probably not designed to modern codes, and thus more likely to suffer wind- and water-related damage during severe weather.

Second, these cities contained a larger percentage of lower-income households with limited ability to invest in the rebuilding efforts themselves, and private, for-profit landlords may see little incentive to reinvesting in the areas.

A preliminary estimate of the damage resulting from Hurricane Katrina can be derived from information regarding housing units that were exposed to the storm surge and potential flooding. The

Figure 3: Surge Inundation Limit and 100-Year Flood Extent Overlay on Median Household Income for Coastal Areas of Mississippi

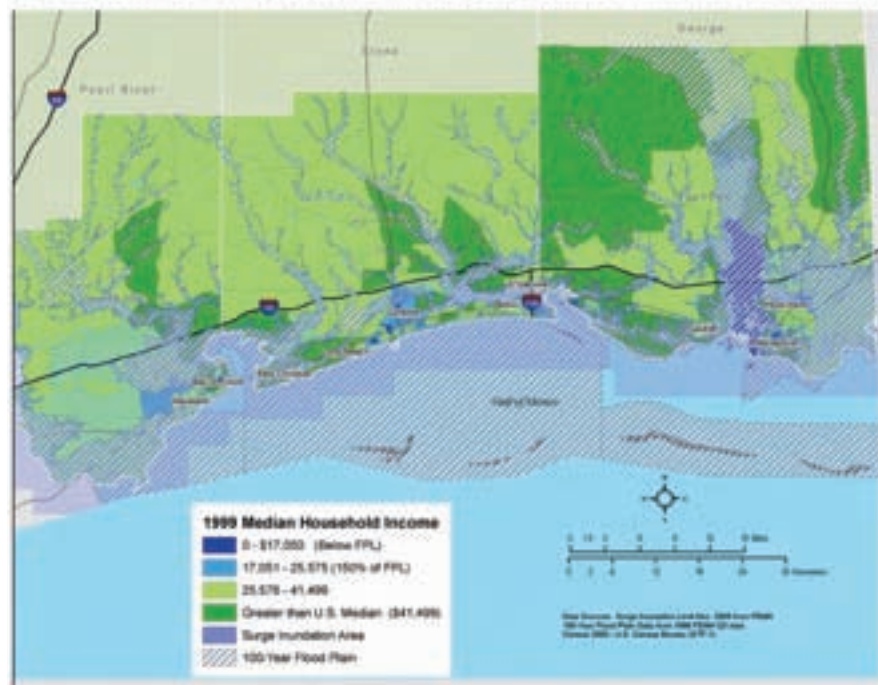
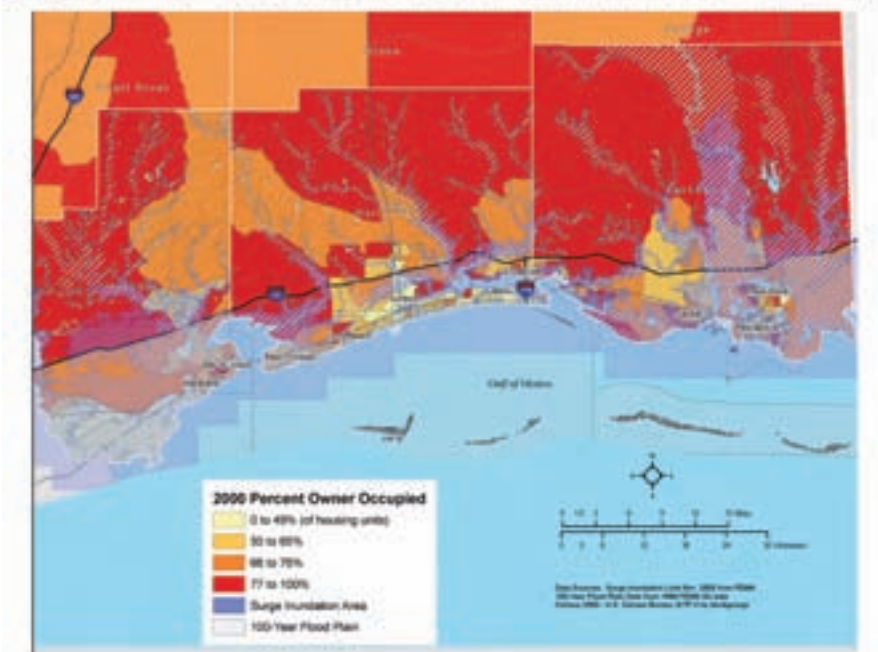


Figure 4: Surge Inundation Limit and 100-Year Flood Extent Overlay on Percent Owner-Occupied Housing for Coastal Areas of Mississippi



pre-Katrina Flood Insurance Rate Map (FIRM) designations are helpful in considering this issue. Areas within the FIRM are deemed prone to flooding, and thus households within the FIRM were more likely to have had flood insurance than those in other areas. The other option for evaluating damage exposure is from the Surge Inundation Limits (SIL). The SIL data were modeled by FEMA based upon field measures of post-Katrina High Water Marks (HWM) and recent Light Detecting and Ranging (LIDAR) surveys. Table 2, shown previously, provides estimates on the number of housing units within either SIL or FIRM bounded areas; these represent a rough estimate on the number of housing units exposed to either surge or flooding conditions in the three coastal county area.

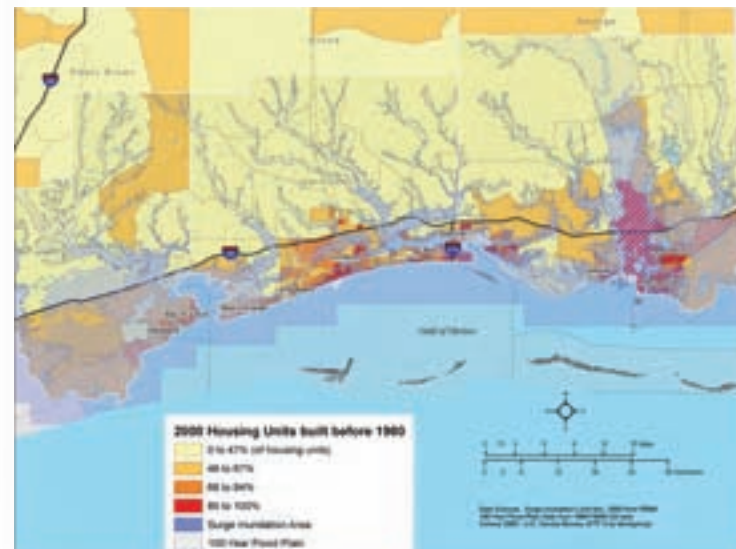
As shown in Table 2, more than 40,000 housing units across the three-county area fell within the FIRM area, and, therefore, faced a higher likelihood of damage from flooding. In these same three counties, more than 75,000 housing units were within the SIL area and faced potential damage from storm surge. What these numbers indicate is that between 25 and 50 percent of all housing units in the three-county area faced likely damage by flooding, by storm surge, or by both. These rough estimates, however, almost are certainly lower than the actual number of homes damaged or destroyed. First, the calculations do not consider wind damage, which could occur in areas not affected by flooding or storm surge. Second, the housing numbers are now five years old and do not include new homes built in the region since 2000.

Tying together the questions of demographics and damages across the three counties, the data in Table 2 show

Table 2: Three-County Housing Assessment.

Area	Measures	Categories	Pre-Katrina Households		Katrina Damage Exposure			
			Num	%	Num	%	Num	%
Three County Area	Housing Units	Total	152,386	100%	75,733	50%	40,137	26%
		Median						
	Household Income	< FPL	2,322	2%	1,192	1%	105	0%
		< 150% FPL	15,100	10%	10,228	7%	2,967	2%
		< US Median	101,217	66%	49,490	32%	23,145	15%
		> US Median	51,169	34%	26,243	17%	16,992	11%
	Tenure	Owner-Occ.	93,823	62%	43,226	28%	25,230	17%
		Rental	42,288	28%	22,454	15%	9,459	6%
		Vacant	16,275	11%	10,052	7%	5,444	4%
	Housing Vintage	Pre 1980	94,087	62%	51,674	34%	23,911	16%
Post 1980		58,299	38%	24,059	16%	16,226	11%	
Hancock County	Housing Units	Total	21,072	100%	15,277	72%	8,293	39%
		Median						
	Household Income	< FPL	457	2%	457	2%	0	0%
		< 150% FPL	1,825	9%	1,825	9%	301	1%
		< US Median	15,454	73%	11,918	57%	6,055	29%
		> US Median	5,618	27%	3,359	16%	2,238	11%
	Tenure	Owner-Occ.	13,447	64%	9,013	43%	4,931	23%
		Rental	3,450	16%	2,856	14%	1,181	6%
		Vacant	4,175	20%	3,408	16%	2,180	10%
	Housing Vintage	Pre 1980	10,762	51%	8,559	41%	4,189	20%
Post 1980		10,310	49%	6,718	32%	4,104	19%	
Harrison County	Housing Units	Total	79,636	100%	31,051	39%	17,445	22%
		Median						
	Household Income	< FPL	980	1%	58	0%	20	0%
		< 150% FPL	10,028	13%	5,409	7%	2,113	3%
		< US Median	56,526	71%	21,421	27%	10,253	13%
		> US Median	23,110	29%	9,630	12%	7,192	9%
	Tenure	Owner-Occ.	44,826	56%	15,334	19%	9,910	12%
		Rental	26,712	34%	11,554	15%	5,440	7%
		Vacant	8,098	10%	4,161	5%	2,102	3%
	Housing Vintage	Pre 1980	49,146	62%	21,938	28%	10,738	13%
Post 1980		30,490	38%	9,113	11%	6,707	8%	
Jackson County	Housing Units	Total	51,678	100%	29,405	57%	14,399	28%
		Median						
	Household Income	< FPL	885	2%	677	1%	85	0%
		< 150% FPL	3,247	6%	2,994	6%	453	1%
		< US Median	29,237	57%	16,151	31%	6,837	13%
		> US Median	22,441	43%	13,254	26%	7,562	15%
	Tenure	Owner-Occ.	35,550	69%	18,879	37%	10,389	20%
		Rental	12,126	23%	8,044	16%	2,838	5%
		Vacant	4,002	8%	2,483	5%	1,162	2%
	Housing Vintage	Pre 1980	34,179	66%	21,177	41%	8,984	17%
Post 1980		17,499	34%	8,228	16%	5,415	10%	

Figure 5: Surge inundation limit and 100-year flood extent overlay on percent of housing units built before 1980 in coastal areas.



that about 65 percent of the housing units exposed to the surge and over 57 percent of the units exposed to flooding were occupied by households with incomes below the U.S. median household income level. In Harrison County,

around 17 percent of the units exposed to surge were occupied by households below 150 percent of the FPL.

Generally, the number of owner-occupied units throughout Harrison County exposed to the surge or to

flooding was about two to three times larger than the number of rental units with similar exposure, and about three to four times the number of vacant units with similar exposure.

In the three-county area, about one-third of the housing units exposed to the surge were also built before 1980; in Hancock and Jackson Counties, this estimate increases to over 40 percent.

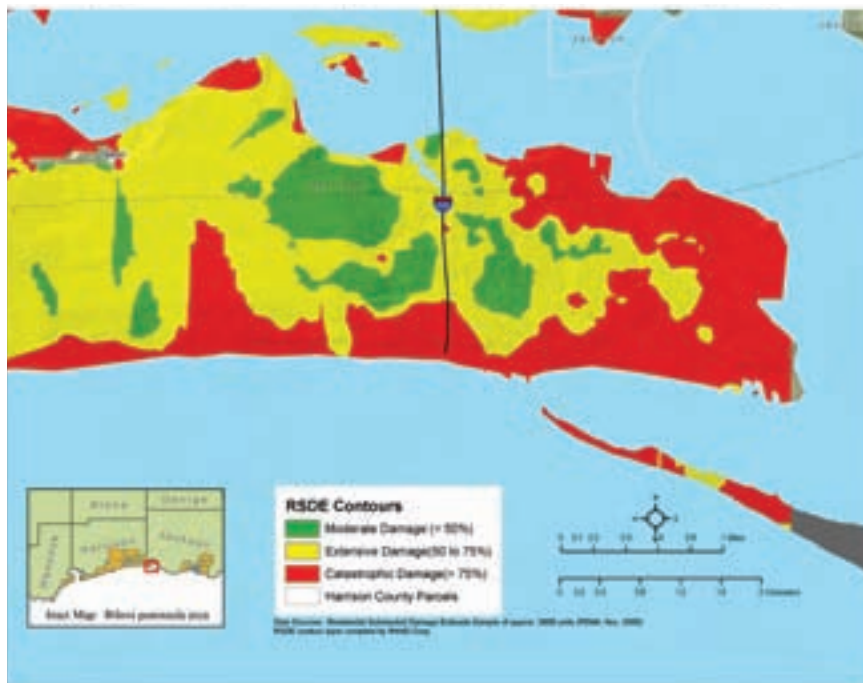
Level of Damage Estimates for Biloxi: A Sample Case Study

To develop a more accurate assessment of actual hurricane damages, as opposed to the estimates of exposure to the surge and to flooding described above, more rigorous and detailed analyses are necessary. The following is an illustration, one that focuses on the peninsular tip of Biloxi, to show how a more detailed analysis could be structured.

Figure 6 illustrates the damage caused within this section of Biloxi, and data from the analysis are presented in Table 3. In a sample of 6,404 housing units, almost all were occupied by households living below the U.S. median income level, and 80 percent of these experienced extensive or catastrophic damage. At an even lower income cutoff, 40 percent of the households in this sample area lived below 150 percent FPL and experienced extensive to catastrophic damage. Less than 40 percent of housing units in this area were owner-occupied, and the vast majority of the remainder was extensively or catastrophically damaged. Ninety percent of housing units in this area were built before 1980; pre-1980 vintage homes that were extensively or catastrophically damaged represented 73 percent of all homes in the area.

Table 3: Biloxi Peninsula Damage Estimates

Area	Measures	Categories	Pre-Katrina Housing Units		Katrina Damage Exposure			
			Num	%	Within SIL		Within FIRM	
Biloxi Peninsula Area	Housing Units	Total	6,404	100%	5,546	87%	2,381	37%
		Median						
	Household Income	< FPL	0	0%	0	0%	0	0%
		< 150% FPL	2,957	46%	2,932	46%	1,430	22%
		< US Median	6,018	94%	5,226	82%	2,201	34%
		> US Median	386	6%	320	5%	180	3%
	Tenure	Owner-Occ.	2,489	39%	2,220	35%	985	15%
		Rental	2,901	45%	2,437	38%	1,008	16%
		Vacant	1,014	16%	892	14%	390	6%
	Housing Vintage	Pre 1980	5,779	90%	5,005	78%	2,129	33%
Post 1980		625	10%	541	8%	252	4%	
Area	Measures	Categories	RSDE Modeled Damage Estimates					
			Limited-Moderate		Extensive		Catastrophic	
Biloxi Peninsula Area	Housing Units	Total	1,236	19%	2,295	36%	2,839	44%
		Median						
	Household Income	< FPL	0	0%	0	0%	0	0%
		< 150% FPL	347	5%	825	13%	1,754	27%
		< US Median	1,152	18%	2,092	33%	2,742	43%
		> US Median	84	1%	203	3%	97	2%
	Tenure	Owner-Occ.	463	7%	923	14%	1,094	17%
		Rental	586	9%	1,049	16%	1,252	20%
		Vacant	187	3%	326	5%	493	8%
	Housing Vintage	Pre 1980	1,107	17%	2,093	33%	2,553	40%
Post 1980		129	2%	202	3%	286	4%	



Meeting the Challenges

Tackling the post-Katrina housing needs of Mississippi poses an array of daunting tasks. First, there must be an adequate supply of housing to satisfy the needs of former residents and business employees seeking to rebuild in the area. Of equal importance, a significant portion of the supply must be affordable to lower-income groups, and the calculation of affordability should take into consideration the life-cycle costs of home ownership. This implies that the new housing should be as efficient as possible with respect to energy and water consumption along with durability.

Drawing upon research efforts, community outreach, and input from other interested parties and stakeholder groups, the Governor's Commission has identified a range of recommended actions that appear to offer the most promise in meeting the housing challenges outlined above. These may be divided into four categories: (a) near-term analytical efforts and pilot studies; (b) institutional mechanisms; (c) financial mechanisms; and (d) coordinated planning and finance strategies.

Near-Term Analyses

Recommendation 1: Housing Needs Assessment. A detailed housing needs assessment should be conducted on a county-by-county and community-by-community basis that considers factors such as: prior housing stock (vintage, value, etc.); residential demographics (income levels, owners vs. renters, etc.); the extent of hurricane-related damages and costs to rebuild; characterization of the displaced population (including prior insurance coverage and the ability to pay for rebuilding); and estimated employment requirements. This informa-

Regardless of race or class, the presence or absence of assets and insurance will play a significant role in determining who participates in the long-term rebuilding of Mississippi.

tion should be correlated with financial data, planned infrastructure projects, case management information, and environmental concerns to help guide state and federal funding efforts to where they are most needed. The state government should coordinate funding and oversee the independent assessment of housing needs, which should in turn be coordinated with all other data collection and analysis efforts. The need for this information is urgent, and the analysis should be initiated as soon as possible. Draft results could be available within three months, with a full report completed within six months. Funding may come from a combination of private and public sources, including philanthropic organizations, and perhaps federal sources such as United States Geological Survey and FEMA. The expected cost would be around \$1 million, considering that much of the needed data must be collected on a community-by-community basis, often through surveys.

Recommendation 2: Best Practices Assessment. This study should assess building technologies, model codes, and zoning ordinances, and management practices that could be applied on the Coast. Tasks to be addressed within the scope of the study would include: evaluating the costs and benefits of technologies for meeting wind and flood resistance; evaluating the costs and benefits of technologies for reducing maintenance and using water and energy more efficiently; performing a scan of the best code, zoning, and inspection management practices across the country; and identifying ways to transfer this knowledge to Coast communities. Case studies in which improved construction codes led to demonstrably better outcomes during Katrina, such as with the Hope VI project in Biloxi, would

be helpful. The state should coordinate funding and oversee the independent assessment of housing needs, which should in turn be coordinated with all other data collection and analysis efforts. This should be initiated as soon as possible and could be completed within six months. Funding may be available from a combination of private and public sources, including philanthropic organizations as well as federal sources such as HUD's Partnership for Advancing Technologies in Housing, the Building and Fire Research Program in the National Institute of Standards and Technology, and the Department of Energy's Building American Program. Cost likely would be around \$500,000.

Recommendation 3: Barriers Assessment. This study would analyze, at a detailed level, existing code and zoning provisions within individual counties and cities in the affected region in order to identify potential barriers to the creation of a sufficient supply of safe, efficient, and affordable housing. Specific findings could indicate a need for legislative action at the state level, such as, for example, requiring all counties and municipalities to embed certain provisions within their zoning ordinances. State government should coordinate funding and oversee the independent assessment of housing needs, which then should be coordinated with all other data collection and analysis efforts. Private and public sources, including philanthropic organizations and federal sources such as HUD's Partnership for Advancing Technologies in Housing should fund this assessment at a likely cost of \$500,000.

Pilot Efforts

Many participants in the Commission's discussions on housing urged that



How will the poor and uninsured afford to return to their homes? Who will help people without insurance bridge the affordability gap—especially when most sources of capital are risk averse, and government aid programs are slow to move? How will renters who have lost all of their possessions rebuild their lives?

In order to create a more equitable region, rebuilding strategies must answer these questions and provide people with the tools necessary to acquire and preserve assets.

progress be made swiftly. One way to achieve near-term success with new and innovative ideas is to create pilot projects to test ideas quickly, create familiarity with different processes, and put plans to work more rapidly. Currently, the Enterprise Foundation is working with Enterprise Corporation of the Delta and NeighborWorks America to launch several pilot projects using private funding sources. Accordingly, the Governor's Commission recommends a series of possible pilot efforts.

Recommendation 4: Mixed-Use on HUD Site Pilot. A former HUD housing site that was destroyed during the hurricane should be developed into a new high-density, mixed-use affordable housing project. Rather than rebuilding only HUD housing on this site, public and private partners would join together to design and implement a mixed-use neighborhood. The pilot project would combine best practices from recent HUD projects along with relevant Smart Growth or new urbanism elements. The HUD Hope VI program may be an ideal candidate for such a program. According to the Mississippi HUD multi-family housing office, over 3,000 subsidized rental units were damaged by Katrina. These rental units provided housing for the poorest families on the Coast, including elderly, disabled, and other renters on very small fixed-incomes. Most of these units are owned and managed by local housing authorities. The Waveland Housing Authority, for example, owned and managed 75 units that were destroyed. These damaged units must be rebuilt with a combination of grant funds and loans made to the local housing authority. To develop long-term solutions that will provide the local housing authority with sufficient funds to make improvements

and repairs to the properties and provide high quality management of the properties, debt service of loans must be kept at minimal levels. A portion of Community Development Block Grants (CDBG) or other grant funds should be set aside for use in rebuilding the local housing authority structures.

This pilot project would involve coordination between HUD, the state government, a local housing authority, one or more private developers, and one or more lending institutions. The state could work with HUD and local communities to identify a suitable project location, and the Mississippi Home Corporation could take a lead role in the project. A site and private partner should be identified as quickly as possible and construction begun within six months. Funding would be provided both by HUD, for the affordable housing component, and a private developer for the other housing and other components, such as retail. HUD may provide technical and analytical assistance. Overall project cost would depend on the size and location selected.

Recommendation 5: Financial Incentives Pilot. The Commission recommends development of a small-scale program to pilot some of the proposed financial mechanisms that provide incentives to go beyond basic building codes. The first step would be to develop building guidelines for safe, energy efficient, water-efficient, and durable homes, and then to create a certificate program with three or four “quality of construction” levels that exceed minimum codes. The next step would be to work with communities and institutions to create one or more small-scale pilot efforts – these might be located in specially designated “innovative finance zones.” It may be possible to identify

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atrina wrought widespread and unprecedented destruction in Mississippi and Louisiana, having a particularly devastating impact on low-wealth residents who lacked an economic safety net. At the same time, the storm presented a unique opportunity to correct decades of inequitable development. Affordable housing and home ownership are cornerstones upon which the region will rebuild for the long term. Investments in housing strategies that target low-wealth residents will help South Mississippi emerge as a stronger, more equitable region.

a neighborhood in which to develop a pilot program combining lower insurance rates based on higher building safety codes as well as lower mortgage rates based on location efficiency and resource efficiency.

To implement this recommendation, the state government should ask for assistance from the Department of Energy’s (DOE) Building America Program and EPA’s Energy Star Building Program to identify and fund an organization to lead this pilot program. This organization should develop the certification program and work with a community to begin the pilot program.

A partner should be identified within three months and a program in place within six to nine months. Initial effort to set up the program would likely cost \$250,000. In addition to EPA and the DOE, large insurance companies and/or Fannie Mae may also provide assistance with this pilot.

Recommendation 6: Modular-Permanent Housing Pilot on a Site Currently Being Used for Transitional Housing. This pilot involves the development of modular, permanent housing on a site that is currently being used for temporary housing. It serves two purposes, the first of which is to identify transitional housing sites that may be appropriate for permanent affordable housing. Given that money is being spent to lay infrastructure in these transitional sites, it seems wasteful to just remove it when the transitional housing is no longer needed. Along these lines, the pilot would be used to help identify appropriate criteria for identifying candidate sites and develop processes for making the transition from temporary to permanent housing, with set-asides for affordable housing. The other purpose of the pilot would be to show how modu-

[I]t would appear that Gulfport

and Biloxi (in Harrison County) and Pascagoula and Moss Point (in Jackson County) present the greatest challenges for rebuilding. First, these areas contained a larger percentage of older homes that were probably not designed to modern codes, and thus more likely to suffer wind- and water-related damage during severe weather. Second, these cities contained a larger percentage of lower-income households with limited ability to invest in the rebuilding efforts themselves, and private, for-profit landlords may see little incentive to reinvesting in the areas.

lar housing technologies can be used to develop affordable, attractive, and efficient housing. Because this approach is relatively novel, many residents and community leaders may fear that modular housing would look cheap and undesirable. To ease these fears, this pilot would allow modular home developers to compete for the chance to design and build homes within a mixed-use, affordable housing development that would showcase the quality that can be achieved in modular technology. If the pilot is successful and the resulting homes are both attractive and affordable, different communities along the Coast may feel more comfortable in

adopting codes that allow for modular housing technologies, and more sites can be transitioned from temporary to permanent housing developments.

The state government should work with FEMA to identify the criteria and process for transitioning the sites from temporary to permanent housing. The Mississippi Home Corporation may take the lead on this project. Modular home builders will also be involved in the design and building phases. Criteria and site identification should happen within three months, and the design competition should take place within six months. Construction can begin soon thereafter.

While FEMA may be able to provide initial assistance, the state should approach a consortium of modular housing developers to participate in this pilot project. The developers will recoup their investment when the homes are sold and may also view this as a valuable marketing opportunity to expand their prospects throughout the rest of the state.

Building and Zoning Codes

While Hurricane Katrina struck with devastating power, it appears that substandard building codes and questionable zoning practices in certain areas exacerbated the destruction. Prior to rebuilding, it is essential to address these gaps – now apparent in hindsight – to minimize the damage that may result from any future severe weather event to strike South Mississippi.

Recommendation 7: Stringent Temporary Codes. It will take some time for cities and counties to evaluate and approve new building codes, as well as for FEMA to create its new FIRMs. Until this process is completed, the Governor’s Commission recommends that cities and counties adopt – and grant expedited permits under – temporary codes that combine FEMA’s advisory flood map elevation advisories with Florida’s stringent coastal hurricane resistance building standards. If homeowners or developers meet these strict interim codes, they can rebuild quickly. Any buildings constructed according to these interim standards would be grandfathered into any longer-term code programs. This recommendation must be implemented at the city and county level; however, the state could potentially “encourage” local governments to adopt this approach by withholding certain recovery aid from any

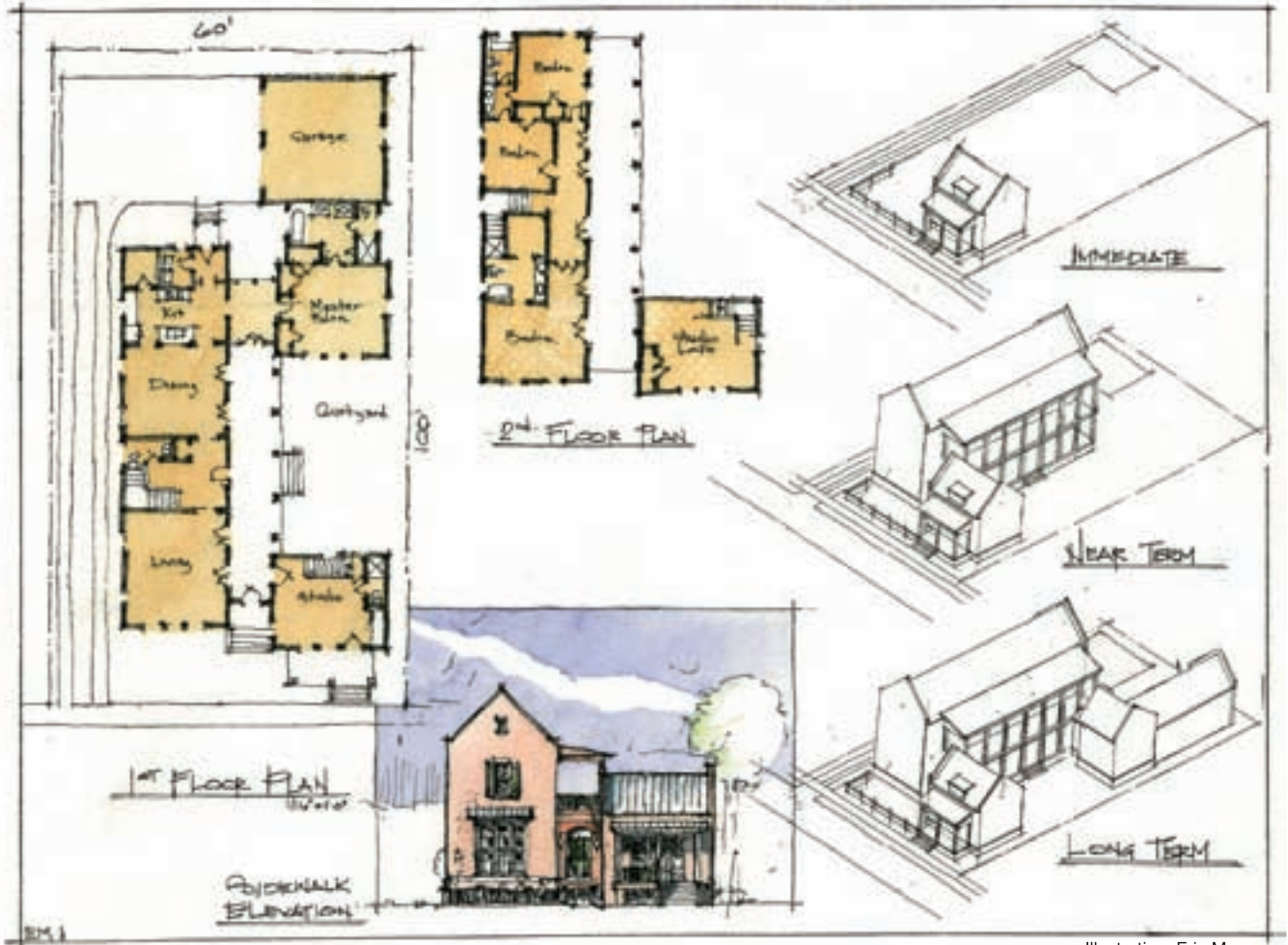


Illustration: Eric Moser



Illustration: Lew Oliver

cities or counties that do not follow the recommendation. Guidance on adoption of temporary housing codes may be provided by HUD's Partnership for Advanced Technologies in Housing (PATH) program. The temporary codes should be established immediately and remain in place only until FEMA has released the new FIRMs and cities and counties have officially adopted longer-term code revisions, which could occur over a 12 to 18 month timeframe. The financial resources for local governments to adopt this recommendation are minimal, consisting mostly of some additional administrative effort on the part of cities, counties, and the state. Recommendation No. 32 provides other sources of funding that may apply here.

Recommendation 8: Minimum Long-Term Safety Codes. Over the longer term, cities and counties should establish stringent minimum building safety codes based on the latest International Building Code (IBC) and International Residential Code (IRC) as well as hurricane and flood resistance codes. This can certainly be achieved at the city and county level. To ensure conformity, however, an option exists to establish and enforce this at the state level through legislative action. Assuming that cities and counties adopt conservative temporary building codes over the short term, these permanent code changes can be adopted over a longer timeframe. Administrative costs of updating these codes will be relatively insignificant, but development costs will increase. Over the short term, these higher development expenses should be at least partially mitigated by lower insurance premiums. They also will result in a considerable reduction in damages from the next hurricane that hits

the Coast.

Recommendation 9: Modular Housing Codes. New modular and panelized housing technologies can be used to create homes that are attractive, safe, and affordable. To leverage these potential advantages, cities, and counties should consider reviewing their building codes to make sure these technologies are permissible within their jurisdictions. It also may be appropriate to reduce permitting and inspection fees for such housing, since the burden on inspectors should be substantially less. Note that this may present an opportunity for economic development, since modular housing factories could be created in any community that requires significant levels of rebuilding. Cities and counties should be responsible for this action. State level entities, including eventually the "New Statewide Community Development Entity" as described below, or nonprofit organizations concerned with affordable and efficient housing, may be able to provide assistance with sample code structures that serve this end.

Implementation should occur in the near term, ideally within three to six months, such that developers can consider modular housing among the possible options as they begin to rebuild. This recommendation will result in small administrative costs on the part of cities and counties as they take time to research and update their codes. At least two modular housing pilot projects are underway in Gulfport for at least 70 housing units.

Recommendation 10: Dense, Mixed-Use Zoning. Where it is desirable to create vibrant neighborhoods, to support affordable housing goals, and to coordinate with planned development of increased transit options, communities

must ensure that their zoning codes allow for dense, mixed-use development, including ample multi-family housing. This may require significant rezoning in some cases. Affordable rental housing requires that apartment complexes of significant size be part of the supply mix. Communities must consider high-quality, affordable rental housing developments as not every family can be a homeowner and not all rental needs can be met by scattered-site single family residences. NIMBY (Not in My Back Yard) attitudes have, at times, made it impossible for developers to obtain approvals or pushed them to use land less suitable for residential housing because of preconceptions residents may have about rental housing. Considering the magnitude of the housing problem, however, affordable apartments must be a part of the solution. Further, multi-family housing is an essential part of the concepts of walkable communities, which must be a part of the rebuilding process.

Cities and counties should be responsible for this action. State agencies, along with various nonprofit organizations, should be able to provide appropriate zoning guidelines. While this goal may take time to coordinate, it should occur as quickly as possible; ideally within six months so developers can follow the new guidelines as they rebuild. This recommendation would result in small administrative costs to cities and counties as they take time to research and update their zoning plans and may be covered by the funding sources identified in Recommendation No. 32.

Recommendation 11: Preventing Inappropriate Zoning. Airports, shipping ports, and other heavy industrial sites may generate numerous negative externalities such as noise and air pollution

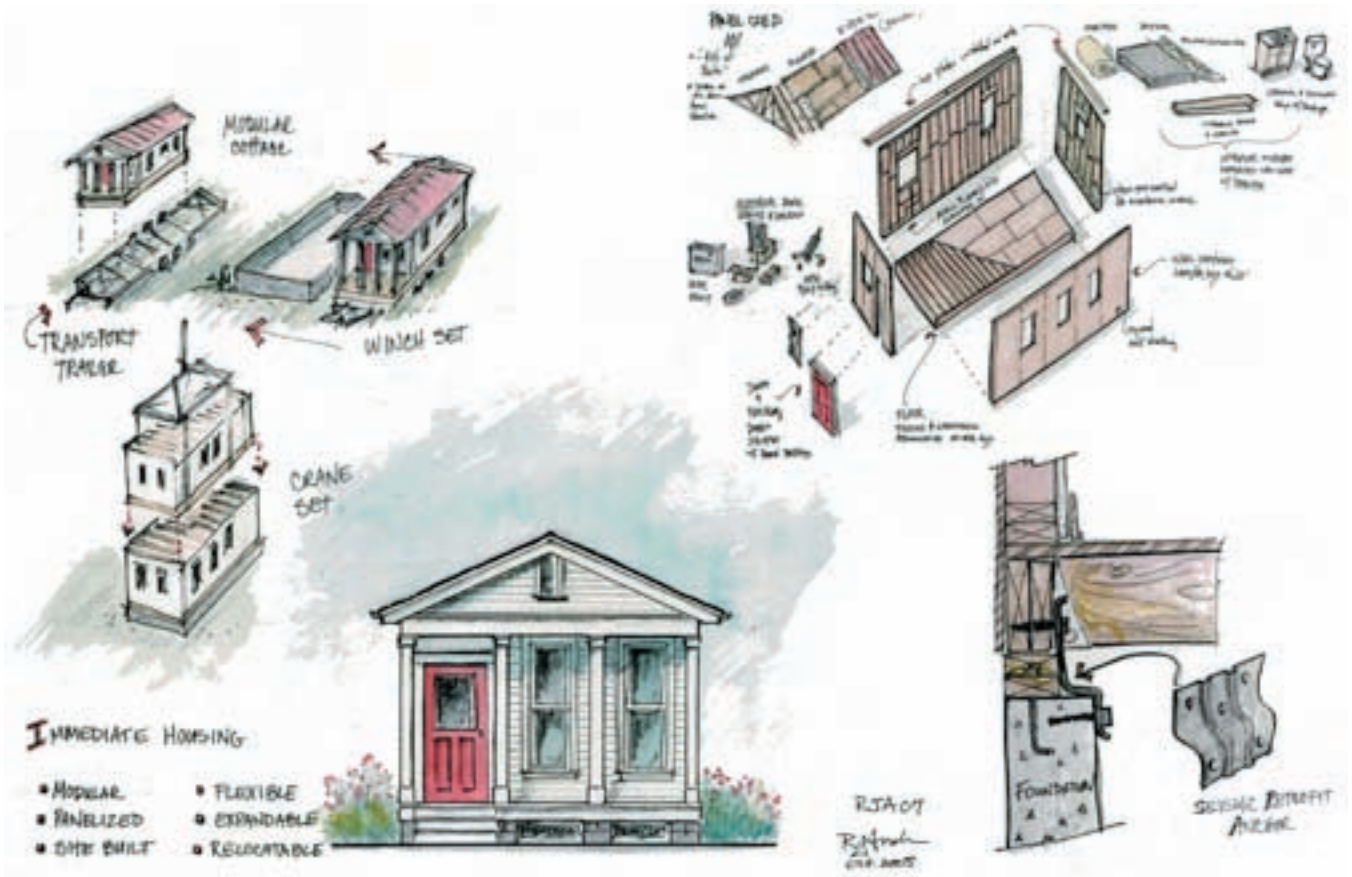


Illustration: R. John Anderson

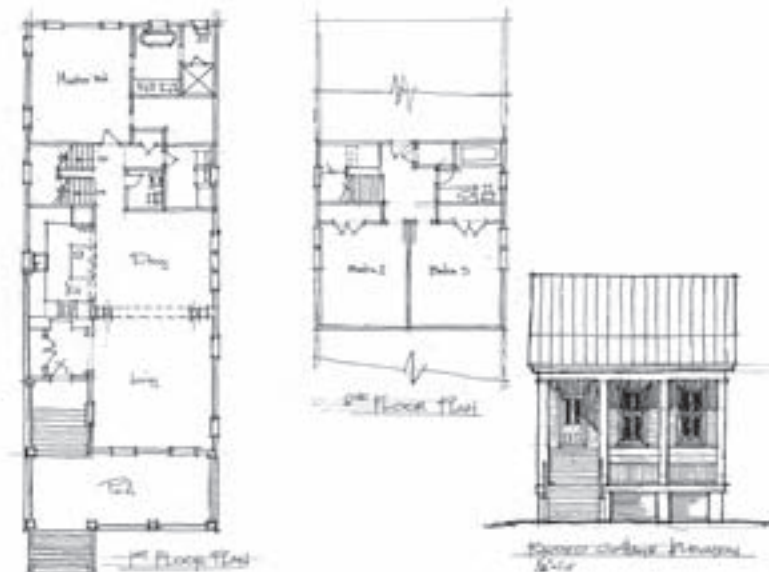


Illustration: Eric Moser



Illustration: Michael G. Imber

and heavy truck traffic. As a result, land values surrounding such areas may be less than in other areas. Any reduction in land rents, however, should not be used as an opportunity to create more affordable housing. Simply stated, the noise and air pollution would be harmful to nearby residents, especially children. Moreover, experience from other areas in the country demonstrates that residents living near such facilities are often able to organize effectively against future facility expansion. Given this lose-lose relationship, areas near these industries should be strictly zoned solely for compatible industrial or commercial purposes. While this must be implemented at the local government level, it is important that the state consider enforcing the recommendation through appropriate legislation. Implementation should occur simultaneously with plans to expand these industries.

This recommendation would result in small administrative costs to cities and counties or to the state.

Planning Strategies for Affordable Housing

Many of the residents in South Mississippi are from lower-income groups, and many of the traditional jobs available in the area pay comparatively low wages. For these reasons, it is important to ensure the availability of a sufficient supply of affordable housing. To the extent that new investment in the region during the rebuilding process results in increased land values, this task will become even more challenging. As such, the Governor's Commission recommends several strategies to ensure that enough affordable housing options are available to support the area's residents and employment base, and that these units remain affordable in future years.

Recommendation 12: Permanent Affordability Goals. Local governments should be required to set and maintain permanent affordable housing goals. To enforce compliance, state, or federal re-development funds could be withheld from those communities that have not developed a plan indicating how such goals will be achieved. Specific affordability goals for each community would be determined through the in-depth housing and business needs assessment as discussed above in the section on "Housing Needs Assessment." While local communities will be responsible for developing plans to meet their affordability goals, the oversight for such a program, including the use of financial incentives to encourage compliance, must occur at the state level. This recommendation should be implemented over the near term, within three to nine months, so that local communities can develop appropriate strategies as rebuilding commences. Ensuring an adequate supply of quality affordable housing will entail a high price tag, but in practice the costs will likely be spread out across numerous entities, including local governments, the state, the federal government, and nonprofit donors. Some of these would include Mississippi Home Corporation, Mississippi Development Authority, HUD, and the Rural Development Authority.

Recommendation 13: Developer Affordability Requirements. Developers of certain projects, as part of the permitting process, should be required to develop a minimum percentage of affordable housing. As an alternative to providing affordable housing within a specific project, developers could also be granted the option of paying "in lieu" fees that would be contributed to the community's affordable hous-



ing fund, which may be channeled into “Community Land Trusts” as described below. This approach would be adopted on a community-by-community basis, as part of a local government’s plan for meeting the permanent affordability goals and, where adopted, should be implemented relatively early on, perhaps between six and nine months, so that it may be applied as developers begin the rebuilding process. This recommendation carries a relatively high price tag that will be imposed primarily upon developers. Ultimately, however, developers will pass the price increase along to the purchasers of non-affordable housing within their developments.

Recommendation 14: Developer Affordability Incentives. In place of, or in addition to, affordability requirements for developers, cities and counties can create incentives to encourage developers to incorporate a greater percentage of affordable housing within their projects, as well as to make their housing units safer and more efficient. These incentives could take the form of density bonuses that allows higher densities than would normally be allowed within the zoning requirements, expedited permitting, waived or reduced off-street parking requirements, or other incentives backed by financial mechanisms. Each community must assess its capacity for incentives, although some nonprofit organizations, such as Global Green, Smart Growth America, or the Urban Land Institute, may provide suggestions on the type of incentives that have proved effective in the past. These will be less controversial than affordability requirements for developers, and, therefore, can be implemented more rapidly – ideally within three to six months. This will encourage the development of more affordable housing as

the rebuilding process begins. Some of the incentives – such as reduced permitting fees – may result in a small reduction in local government revenues. Over the longer term, however, much of this reduction may be offset by lower infrastructure requirements associated with dense, mixed-use development patterns.

Financial Mechanisms

In addition to the institutional recommendations described above, there are a number of financial mechanisms that could be used to encourage an adequate supply of affordable housing as the Coast reconstructs and grows. These suggestions can be organized into three broad categories: providing immediate financial relief for communities to allow time for adequate planning for affordable housing; increasing the opportunities for affordable home ownership, and increasing the quality and efficiency of affordable housing.

With displaced residents, businesses struggling to reopen with a shortage of labor, and decimated municipal and county tax bases, the pressures to rebuild housing as quickly as possible are enormous. Even so, it is important to ensure that adequate time is allowed for strategic planning such that the time and money invested in the rebuilding process yields optimal returns. It is useful, therefore, to consider strategies that can relieve, at least to some extent, the pressure to rebuild at break-neck speed.

Recommendation 15: Municipal Tax-Base Relief. Municipal and county budgets are highly dependent on property taxes, which have been dramatically reduced following the destruction of Katrina. For this reason, local governments are pressured to have owners rebuild as quickly as possible – even before

the planning process is complete – so they may begin paying property taxes. To circumvent this dilemma, it would be useful to allocate some federal and state funding, likely through appropriations, to pay a portion of the lost property taxes within these communities for 2006 and 2007. This would allow the communities to continue to provide services and maintain employees without having to “rush to rebuild” before they are ready and before planning is adequate. Congress, federal agencies such as HUD or FEMA, state government, or some combination thereof should fund this relief. The funding stream for this recommendation should be established as quickly as possible, ideally within three months. The required subsidy to local governments gradually will diminish over a period of one to two years as housing is rebuilt and local tax-base revenues stabilize. The exact costs for such a program have not been tabulated, but they are certain to be large. For this reason, federal involvement will likely be necessary, but state resources, if available, will certainly prove useful as well.

Affordability

The Commission recommends that that all housing initiatives related to Hurricane Katrina place a priority on addressing the needs of low-income/low-wealth residents by directing significant resources to those census tracts designated by the United States Treasury Department as “Investment Areas.” The Treasury Department’s Community Development Financial Institutions Fund (CDFI Fund) requires that recipients of certain federal funds designate a target market. All target markets must include “Investment Areas” to be competitive in the application. CDFI Fund

Investment Areas (IA) are:

- Census tracts with the percentage of the population living in poverty of 20 percent; or
- Census tracts with a Median Family Income (MFI) less than 80 percent of the Area Median Income (AMI); or
- Census tracts with an unemployment rate greater than 1.5 times the national average;
- Rural counties that have experienced population loss of 10 percent as calculated from the most recent decennial censuses.

Investment Areas also include Hot Zones that are a subset of Investment Areas and are considered the areas “in greatest need of assistance.”

Table 4 exhibits the penetration of Investment Areas in the Coastal Cities:

The Commission recommends that the state use a modified version of U.S. Treasury Department’s Investment Area Criteria to target housing resources to low-income/low-wealth census tracts.

There are several advantages to this approach:

■ **Ease of Implementation** — The census tracts have already been designated, and online mapping software can be used to determine if a project is in an eligible area.

■ **Follows Existing Federal Guidelines** By using criteria from an existing Treasury Department program, the criteria have been tested and are not open to criticism of subjectivity.

■ **Achieves Desired Outcomes** — The criteria assure the use of funds in low-wealth areas, thus increasing the probability that the desired impact in low-wealth communities will occur. There are specific models and organizations in the state that have significant experience with each of these programs. Rather than the creation of new programs and areas of expertise, existing channels should be used whenever possible. By using existing models, speed and accountability will be increased.

Under the most likely scenario, a qualifier for affordable housing would have annual income of less than \$30,000

(60 percent of median income) and a target monthly payment on a home of \$350 and \$400 per month. Below are some examples of conventional loan scenarios using a 6.75 percent projected interest rate.

LOAN AMOUNT	TERM	INTEREST RATE	MONTHLY PAYMENT
\$100,000.00	30 Year	6.75%	\$648.60
\$75,000.00	30 Year	6.75%	\$486.45
\$65,000.00	30 Year	6.75%	\$421.59
\$50,000.00	30 Year	6.75%	\$324.30

Using traditional financing, the only scenario that meets the above mentioned criteria for affordable housing would be a unit where the end user obtains financing for \$50,000. In this scenario, a 1,000-square-foot home would have to sell for \$50.00 per square foot. With rising costs of construction, notwithstanding new flood elevation requirements which will likely further increase cost of construction on a per unit basis, it would be difficult, if not impossible, to deliver a quality product for \$50.00 per square foot. Additionally, such an arrangement would not be profitable for private contractors, making it very difficult to find a contractor to build the units.

Two alternatives make these units fit the affordable housing criteria: 1) through interest rates, or 2) through unit cost. The following table shows the same loan amount scenarios using the maximum interest rate that could be charged for each loan amount and yielding a monthly payment not exceeding \$400 per month:

LOAN AMOUNT	TERM	INTEREST RATE	MONTHLY PAYMENT
\$100,000.00	30 Year	2.50%	\$395.12
\$75,000.00	30 Year	5.00%	\$402.62
\$65,000.00	30 Year	6.00%	\$389.71
\$50,000.00	30 Year	8.50%	\$384.46

Table 4
Investment Area Penetration on MS Gulf Coast*

	Population	Population within an Investment Area	Estimated Percent of City within an Investment Area
Biloxi	50,644	21,036	41.5%
Gulfport	71,851	19,601	27.3%
Gautier	11,681	6,856	58.7%
Pascagoula	26,200	16,904	64.5%
Moss Point*	15,851	14,360	90.6%
SW Hancock County (Includes all of Pearlinton)		2,830	

* Does not include 1 IA west of Moss Point and Pascagoula with a population of 2514

Source: U.S. Census and U.S. Treasury CDFI Fund Community Investment Mapping System

By lowering interest rates, as shown above, an owner could finance a \$100,000 mortgage that will have a monthly payment of less than \$400 per month. However, finding a lender who will provide a mortgage at between 2.5 and 6 percent is unlikely. Establishing a federal mortgage pool that will allow low- to moderate-income home buyers in the disaster area to obtain financing with extremely low interest rates as illustrated above is an option. This would help deliver a superior product with monthly payments that are within the low- to moderate-income criteria. Additionally, this scenario would be much less of a burden to taxpayers.

If the interest rate solution is not feasible, then the cost of the units must be controlled to such an extent that the end user is still able to finance a home that yields a monthly note that does not exceed \$400. For example, if a builder is able to build a 1,200-square-foot home at a cost of \$62.50 per square foot totaling \$75,000 and requires at least a 15 percent net profit margin, then the home must be sold for \$86,250. At a 6.75 percent interest rate, the end user could only finance \$61,000 of the purchase price and still maintain a monthly payment not exceeding \$400, which leaves a \$25,250 gap between the selling price of the home and what the end user can finance. This gap would have to be subsidized in some manner, whether it is cash or massive tax incentives to the developer. The \$25,250 gap can be recorded as a mortgage on the home with a "due on sale" clause.

A combination of these two methods may provide a possible solution; lower interest rate loans provided to hurricane victims by a mortgage pool along with tax incentives to developers that will allow home builders to sell the homes at



cost with after-tax incentives that will guarantee them an effective net profit margin. These builders could be contracted to build numerous homes thus lowering their net profit requirement, which they could mitigate by sheer volume.

Multi-Family Affordable Housing

Multi-family affordable housing will experience the same issues with other lender requirements that must be met to obtain financing. For example, a 300-unit apartment complex with each unit totaling 900 square feet would have a total of 270,000 rentable square feet. The 300 units would yield \$1,440,000 in annual rental income at 100 percent occupancy. If the cost to build such a complex totals \$65 per square foot, cost of construction would total \$17,550,000. The loan amount at 90 percent of cost would be \$15,795,000,

which would carry with it an annual debt service of \$1,441,192 if the loan was amortized on 20 years at 6.75 percent interest. In this scenario, before any expenses are paid on the property, the property would have an operating loss of \$1,192 and would not come close to meeting a 1.20 debt service coverage required by a lender.

In both the single-family and multi-family scenarios, it is obvious that a low-interest lending pool for home owners and developers must be established and/or massive tax incentives or government subsidies to developers and homeowners will be needed to provide a quality product and meet the affordable housing criteria. In summary, it will be necessary for the governor and the legislature to work to develop programs which address home ownership needs that may not be covered or adequately financed by federal legislation. Recom-

mendations in this section, therefore, pertain to the goals of identifying and securing funds to subsidize affordable housing along with reducing other financial barriers to home ownership.

Recommendation 16: Hurricane Stress Mortgages. Existing mortgage programs will serve some, but not all, residents. Insurance settlements can be held pending FEMA resolutions, which have taken as long as 36 months in past disasters, and SBA programs may not cover the full replacement or repair costs. Consequently, it will be important to develop programs which address population segments with known difficulties in recovering their pre-Katrina housing situation: elderly homeowners that experienced severe loss, homeowners with mortgages whose settlements and current income do not leave them with enough resources to rebuild without filing bankruptcy, and individuals whose credit is too poor to allow them to qualify for SBA funding.

Many low-income homeowners are likely to be uninsured or underinsured, while renters generally have limited cash for down payments. In addition, borrowers will face difficulty meeting traditional mortgage criteria due to hurricane-related issues such as unsettled insurance claims on existing mortgages or late payments due to income disruption. Even people with strong credit may lose their homes due to the inability simultaneously to pay for an existing mortgage on a damaged property, for temporary housing, and for rebuilding costs to either replace or repair damaged property. The flooding caused by the hurricanes in non-flood zones, where flood insurance was almost non-existent, has only exacerbated problems. Non-predatory mortgage products with flexible underwriting features, which

Non-predatory mortgage products with flexible underwriting features, which take into account a borrower's pre-hurricane credit history and factor in other effects of the disaster, will be needed to ensure that low-income individuals and families participate in the long-term recovery of their communities.

take into account a borrower's pre-hurricane credit history and factor in other effects of the disaster, will be needed to ensure that low-income individuals and families participate in the long-term recovery of their communities. These products could be used by those facing mortgage defaults or foreclosure, or by those who have no other means to purchase a home.

For this recommendation, Enterprise Corporation of the Delta has an established mortgage program that works with local banks, mortgage companies and brokers. The mortgage products provide flexibility for residents displaced by Katrina. As additional flexibility is needed, the state along with other housing agencies should work together to suggest changes to the secondary markets. If necessary, the state may offer to act as an additional guarantor for such mortgages. This recommendation should be implemented within six to 12 months to assist residents as they transition from temporary to permanent housing. There is very little cost associated with this proposal, primarily administrative costs on the part of lending institutions. The most important factor is the willingness of mortgage brokers to revisit their risk analysis accounting procedures to consider extenuating circumstances in the aftermath of Hurricane Katrina.

Recommendation 17: CDBG/HOME Grants. Existing programs such as the CDBG disaster relief and HOME funds are well suited to provide grants to rehabilitate damaged homes and to assist homeowners who experience gaps in insurance and FEMA coverage. Additionally, these funds should be used as forgivable second mortgages to make home ownership affordable and to help residents build equity. To

ensure that public resources benefit those most in need, a percentage of subsidy funds should be dedicated to assist very low-income residents, particularly renters seeking to become homeowners. Responsibility for this recommendation should rest in part with the state, with an entity such as Enterprise Corporation of the Delta (possibly acting through the new CDE described in the recommendation “New Statewide Community Development Entity” to allocate the funds), and with HUD, which provides them. This can be initiated in the near term, and should continue until affordable housing needs within the Katrina-affected region are met. Little cost is associated with this recommendation; rather, it represents a redirection of existing funds.

Recommendation 18: LIHTC Hurricane Designation. Currently, low-income housing tax credits (LIHTC) developers who focus their affordable housing activities on communities with high poverty rates receive a credit that is 30 percent higher than for activity in other areas. Hence, most LIHTC development occurs in areas of high poverty, because the higher credit allows developers to make rental rates more affordable than in its absence. By expanding the higher credit to all areas affected by the hurricane, as designated by FEMA, the LIHTC program would create incentives to build affordable housing in economically diverse communities – not solely in areas of high poverty concentration.⁵ A percentage of units in all LIHTC projects should be dedicated to very low-income families. HUD administers the LIHTC program and must make a policy revision to affect this plan. The state should lobby HUD to consider this policy change. Efforts to encourage HUD to adopt this rec-

ommendation should commence immediately. Given the bureaucratic nature of large federal agencies, however, it might take six months to a year for HUD to make the necessary programmatic changes. There is little cost associated with this recommendation; rather, it represents a redirection of existing funds.

Recommendation 19: Section 8 Voucher Opportunities. Using FEMA payments combined with HUD rental vouchers and other subsidy funds, Hurricane Katrina has provided an opportunity for Section 8 voucher holders to become homeowners. Steps should be taken by local housing authorities, acting in concert with “New Statewide Community Development Entity,” to explain the process of qualifying for a mortgage loan to their voucher holders. Those who qualify would be able to purchase a home with a minimal down payment and in many cases could own a home for the same monthly cost as their rental payment. The Mississippi Home Corporation has agreements in place with eight public housing authorities to provide homebuyer preparation services to their Section 8 voucher holders who want to use a Section 8 voucher to purchase a new home. HUD recently funded the Mississippi Home Corporation to continue this program for FY 2006. The “New Statewide Community Development Entity” (CDE), acting in cooperation with HUD, should develop an initiative that would support this effort. The proposed outreach centers to be supported by the statewide CDE should have staff capable of working with low-income residents to pool resources and make them viable home purchasers, and FEMA-supported case management counselors should also be knowledgeable and capable of offering

“I’m currently living in the upstairs portion of my house due to 3 1/2 feet of water. I’ve just come back from the forum at Gautier at the junior college, and it was wonderful and exciting to hear what all was going to be done in our community.”

– Alice Baker, Pascagoula

advice on these matters. This recommendation would require the new statewide CDE to work with local housing authorities in collaboration with HUD, FEMA, and the Mississippi Home Corporation. Ideally, this program would be put together within six to nine months and require around \$250,000. FEMA and/or HUD may be able to provide supporting funds.

Recommendation 20: Employer-based housing assistance. Though employers do not have legal responsibility to assist their employees with affordable housing options, in many circumstances it may be in their best interest to do so. This is especially true for post-Katrina Mississippi, where lack of affordable housing may severely curtail the available labor pool as businesses attempt to rebuild. Per this recommendation, the

state should (a) help educate businesses on the advantages of providing financial assistance to support affordable housing, and (b) create the appropriate institutional mechanisms to funnel corporate housing assistance in the most efficient manner. In the case of the gambling industry, gaming laws require that gaming operators make peripheral community investments, and gaming regulations should be amended to allow investing in affordable housing as a qualifying contribution. Fannie Mae and Enterprise Corporation of the Delta have worked for the last several years educating employers about such programs and providing tools of implementation. There are several good models available through these two organizations. The state and local governments and private corporations should help assess the opportunities for employers, provide necessary outreach, and assist in the coordination of this effort. This assistance program should be established within three to six months. Costs of this program will likely be significant, and better quantified once the housing needs assessment discussed above is completed. Other than administrative support, most of the costs will be borne by the businesses. In many cases, however, assisting with the development of affordable housing will be cheaper than the alternatives – suffering labor shortages or paying to bus workers in from remote communities on a daily basis.

Recommendation 21: Private Finance Initiative. This initiative is similar to the Section 8 vouchers program, but here the government provides an annuity stream to private concerns to help them undertake development efforts that would not otherwise be profitable. For example, a development firm might construct affordable housing and col-

With such a high proportion of low-income residents in Mississippi and on the Gulf Coast, hurricane recovery in their neighborhoods poses particularly difficult challenges

- More than 42 percent of all working families in Mississippi are low-income—the highest rate in the nation.
- Over a third of the jobs in Mississippi pay below-poverty wages.
- Over 90 percent of the homes in Harrison County (Biloxi and Gulfport) did not have flood insurance.
- About 65 percent of the housing units exposed to the storm surge and over 57 percent of the units exposed to flooding were occupied by households with incomes below the U.S. median household income level.
- In Hancock and Harrison Counties, almost three quarters of the housing units were occupied by households living below the U.S. median income level.
- The majority (62%) of housing units across the three southernmost coastal counties was built before 1980, which means they were likely to be more vulnerable to wind and water damage and will cost more than their insured value to replace.
- In the three-county area, about one-third of the housing units exposed to the storm surge were built before 1980; in Hancock and Jackson Counties, this estimate increases to more than 40 percent.
- In a sample of 6,404 housing units on the Biloxi peninsula, 94 percent of the households lived below the U.S. median income level, and 80 percent of those homes experienced extensive to catastrophic damage.
- Ninety percent of housing units in the in the Biloxi peninsula neighborhood were built before 1980. Pre-1980 homes that were extensively or catastrophically damaged represented 73 percent of all homes in that area.

lect below market rents from residents and then be eligible for a supplemental payment directly from the government. This program could be supported by federal, state, and local governments. Endowments from public, philanthropic, and private sources may also fund this endeavor. This recommendation would involve collaboration with HUD, state and local governments, the Mississippi Home Corporation, the CDE, and private developers. This program should be established within six to nine months. The costs of this program are potentially high; funding could be provided by federal, state, or local governments, or by nonprofit foundation grants.

Recommendation 22: Community Land Trusts. This recommendation involves the use of public and private funds to create nonprofit community land trusts (CLTs) that would maintain land for affordable housing. A CLT is a nonprofit entity that would own the land but not the buildings on the land. Individual residents own the buildings, have a long-term lease on the land, and act as members of the trust. The compelling advantage for CLTs is to ensure that even if surrounding land values rise, homes within the trust will remain affordable. This can be achieved, for example, by structuring the charter of the CLT such that the appreciation of individual home values cannot exceed the rate of inflation. Possible mechanisms for assembling CLTs would include land purchases, transferable development rights, land swaps, or eminent domain. The Commission makes a similar recommendation in the section on Land Use. Local governments would work with housing advocacy groups to set up nonprofit community land trust entities. If necessary, the state could provide enabling legislation to govern

various facets of the CLT institutional structure. This recommendation should be pursued in three to six months such that development decisions and land assembly activities can commence. Assembling land trusts will be relatively costly. Likely funding sources include federal agencies such as HUD, the state, local governments, NGOs, developers, and local businesses interested in assisting with housing for their low-income work force.

Incentives to Improve the Quality and Efficiency of Affordable Housing

Providing housing that is affordable to lower-income workers involves not only ensuring sufficient supply, but also creating incentives to improve the quality of construction and, therefore, the long-term affordability of the housing. In many cases, so-called affordable housing is extremely inefficient, and as a result residents must spend more on energy, utilities, and maintenance than residents of larger, more expensive homes. Yet with proper incentives, developers will be motivated to build affordable housing that performs as well as other housing in the region. Accordingly, the overarching goal of recommendations within this section is to create opportunities for individuals and builders to include consideration of the long-run operational costs of a home, including safety risks, maintenance costs, water and energy costs, and transportation costs, within development decisions.

Essentially, this approach would begin with a set of basic minimum standards for building technologies and configurations, and then would identify several categories of improvement above and beyond the minimum standards that would result in higher levels of safety, lower maintenance costs, reduced water

and energy consumption, and reduced need for reliance upon the automobile. A coordinated set of incentive strategies would be implemented to encourage developers to build, and homeowners to purchase, housing units that meet these higher standards of improvement. Specific incentive strategies are outlined in the recommendations that follow.

Recommendation 23: Create a Combined Fannie Mae Mortgage Product. Fannie Mae currently offers energy-efficient mortgages under one program, and location-efficient mortgages under a separate trial program. Location-efficient mortgages are based on the idea that if one lives within a walkable neighborhood, or close to transit, then one does not necessarily need a car and can afford to spend a higher portion of income on housing. The Governor's Commission requests that Fannie Mae combine these mortgage programs, along with a housing durability component, into a single housing efficiency mortgage product. Based on reducing the overall lifecycle cost of a home, this program could be designated as an experimental Katrina Recovery Mortgage. If a home is built to enhanced standards of durability, energy efficiency, water efficiency, and location efficiency, then homeowners would qualify for this product. Additionally, in contrast to Fannie Mae's existing products, this program should qualify homeowners for a lower interest rate, as opposed to a larger loan. After all, when the operating cost of a home is reduced, then the risk of default, and hence the rate on the mortgage, should be lower. The state should work with Fannie Mae to develop this product. The goal would be to target program development within six months. The state should ask Fannie Mae for assistance in developing this

As insurance companies take stock of their operations on the Coast, they should be encouraged to reduce their risk premiums for housing that exceeds basic water and wind safety codes.

program. The Department of Energy and EPA might also be asked to support this effort. The long-term costs are difficult to predict at this point, though the long-term benefits should exceed the costs.

Recommendation 24: Innovative Efficiency Mortgages. Private mortgage companies should be encouraged to reduce their lending rates for affordable housing that is efficient with respect to long-term maintenance needs, water usage, energy usage, and location. The rationale is that as these operational costs for home ownership are reduced, so too is the risk of default. The Mississippi Home Corporation should encourage banks to experiment with this idea by providing guaranteed support as the financial community collects information to assess the program. For instance, in the event of a default the state could back the difference between the interest that would have been charged and the lower rate being offered under this program. The Mississippi Home Corporation and the CDE should work together with private companies to develop this program. This effort likely would be conducted in concert with the recommendation “Create a Combined Fannie Mae Mortgage Product” discussed above. This program would ideally be developed within six months. In addition to working with private lenders, the state should ask Fannie Mae, as well as the Department of Energy and the EPA, for assistance in developing this program. While the long-term costs are difficult to predict at this point, the long-term benefits should exceed the costs.

Recommendation 25: Innovative Insurance Programs. As insurance companies take stock of their operations on the Coast, they should be encouraged

to reduce their risk premiums for housing that exceeds basic water and wind safety codes. To the extent that additional safety measures reduce the risk of damage in the case of severe weather events, those savings should be passed along to homeowners. This, too, should help make housing more affordable and create greater incentives for developers to exceed basic codes. The federal flood insurance program already includes reductions for basic safety features, but perhaps the insurance premium reductions should be even larger to provide more incentives for additional safety strategies.

The Mississippi Department of Insurance should take the lead in developing this program and working with insurers to implement it. Within six months the program should be developed. The expense associated with this recommendation would likely be relatively low. The primary cost, borne by the Department of Insurance and private insurance firms, would be administrative in nature as the program is set up. Once the program is implemented, the premiums charged by insurance companies for homes built to higher safety standards will of course be reduced, but so, too, will the required payouts the next time a major storm hits.

Recommendation 26: Future Property Tax Rebates for Efficient Housing. With location- and resource-efficient housing, local governments over time will spend less on utilities and infrastructure such as roads or sewer lines. For this reason, they should be able to offer reduced property taxes on units that are located in high-density mixed-use neighborhoods, are located near transit, or use energy and water at high levels of efficiency. Unfortunately, with the existing loss of the property tax base, there is no



reasonable way for local governments to offer such tax breaks at the present time. On the other hand, as rebuilding occurs and the local tax bases are restored, it should be possible to offer future tax breaks, perhaps after 2008. Local governments should offer lower property tax rates after 2008 for all homes that reduce their needs for infrastructure. The Mississippi State Tax Commission, working in conjunction with the Mississippi Public Service Commission and the Mississippi Development Authority, should assess the potential infrastructure savings that would result from improved housing quality and efficiency, and subsequently recommend levels of tax reductions that would result in net benefits for municipalities. This evaluation may be informed by the results of the “Best Practices Assessment” recommendation discussed earlier. Even though the tax rebates would not occur for several years, the program

should be set up within six months so developers may consider the future tax breaks in their building design decisions. Relatively low costs are associated with this recommendation, with most of the expenses related to administration as the program is created. Over the longer term, net benefits to cities, in the form of reduced infrastructure costs, will outweigh the costs of the rebate offered.

Recommendation 27: Direct public subsidies. The state and/or federal government also should consider directly subsidizing housing improvements designed to make affordable homes even more affordable by reducing energy and water expenses, maintenance costs, and transportation costs. The government could pay the difference in the cost for homes that are built to higher standards, for example, or offer no-interest loans for the upgraded portion of the housing price. Federal agencies such as HUD, EPA, or DOE and/or state agencies

would need to establish this program within six months so that they could influence building design decisions as they are made. The costs likely would be high, and would be borne by federal or state agencies responsible for the programs.

New Institutional Requirements

The destruction of homes in South Mississippi necessitated a variety of new institutional roles within the state. To ensure that a sufficient quantity of affordable housing can be rebuilt as quickly as possible, the Commission recommends that the state review each of these needs and either: (a) delegate authority for meeting the need, as well as allocate any additional required funding, to an existing entity; or (b) authorize and fund the creation of a new entity to fulfill the need.

Recommendation 28: Housing Recovery Oversight. The state legislature should immediately create an entity responsible for coordinating the overall effort to rebuild affordable housing within the Katrina-affected counties. The entity would, for example, help oversee the implementation of many of the recommendations provided within this report. This entity should be established immediately to provide continuity on housing issues after the Governor’s Commission has finished its initial work. The cost for this recommendation should be relatively low, requiring funding to pay for salaries and office space for a few staff members. While this may be funded by the state, there may be various additional sources of funding at the federal level or from grant-making foundations available as well.

Recommendation 29: Coordinated Funding Management. An entity should be established to identify, collect, prioritize, and disburse available funding sources for the development and renewal of affordable housing. Specific tasks would include:

- Coordinating different public funding mechanisms, such as HUD funds, CDBG funds, low-income tax credits, and new market tax credits, and facilitating the flow of resources from state and federal agencies to where they are most needed.
- Coordinating the funds and efforts offered by philanthropic and NGO programs such as Habitat for Humanity or the Enterprise Foundation.
- Developing clear criteria for prioritizing the disbursement of funds to affordable housing projects, which might include local demographic factors, business employment needs, safety and efficiency of proposed

Many small contractors are working in South Mississippi with little experience in large-scale projects, and will likely have difficulty competing for contracts against larger, more established firms from outside the region.

development, and consistency with intended design guidelines.

- Coordinating the participation of various entities – public, private, and nonprofit – within specific projects.

The state should establish this plan, though it may be structured as a nonprofit entity so as to gain access to various sources of funding. While this entity should be established as quickly as possible, the complexity of its responsibilities suggests that it may take six to nine months to create. It will require substantial costs in the form of staff salaries and office space. Fortunately, many of the potential funding sources such as new market tax credits may allow for some portion to be dedicated to administrative requirements. Over time this entity should be self-funding with little dependence upon the state.

Recommendation 30: Outreach and Education. Many aspects of the rebuilding process will be either financially complex or technically novel. For this reason, there should be an entity capable of offering educational outreach on a variety of issues to residents, developers and communities. This will be particularly important for assisting low-income, historically-significant areas such as Turkey Creek, Point Cadet, and the Kreole neighborhood of Moss Point. Outreach centers should be spread throughout the Coast and be easily accessible to all communities affected by the hurricane. Specific educational outreach roles would include:

- Developing financial literacy programs to help residents and builders understand financial opportunities that are available for affordable housing. Preexisting credit problems, income disruption, and existing mortgages hanging over families that face significant new debt to rebuild will

be widespread and will create roadblocks for families trying to put their lives back together. Families will be ripe for predatory lending offers that will seem to provide easy outs. A major initiative will be needed to help arm families against this problem, involving credit counseling services, quality loan staff from banks and mortgage companies, housing counselors, community action agencies, Mississippi Cooperative Extension Agents, and FEMA's UMCOR/VOAD contractors. A flexible and sophisticated assistance and advisory system should be established to help them head off trouble. The nucleus of this delivery system already exists in Mississippi.

- Providing "best practices" guidelines for various building technologies designed to make homes safer and more efficient.
- Reviewing design options that support more walkable, vibrant communities. This could include coordination with any established "design centers," as proposed in the Land Use section.

The development of capacity to meet this need would likely be initiated by the state, but the institution may well be structured as a nonprofit entity and established in six to nine months.

This recommendation will be fairly expensive to implement, as it requires staff support along with the development of outreach centers. It will be important to identify as many potential sources of funding as possible, including federal programs and nonprofit foundations.

Recommendation 31: Emerging Contractors Program. Currently, many small contractors are working in South Mississippi with little experience in

large-scale projects, and they will likely have difficulty competing for contracts against larger, more established firms from outside the region. To enable Coast residents, including minority- and women-owned businesses, to take a more active role in the rebuilding process, it is appropriate to develop a program for training local qualified contractors to build quality affordable housing. This near-term training effort will be designed to develop local general contractors and provide individuals with basic construction skills. This program should provide intensive, hands-on management training for small local contractors that will help them grow and enable them to bid for government-backed projects. The state should organize this effort, though it could be coordinated by a nonprofit entity. Branch training centers will be needed throughout communities. Possible technical and financial assistance for such a program could come from the Department of Commerce, the Small Business Administration, or the National Institute of Standards and Technology. These efforts should commence within six to nine months so local contractors can begin to bid upon larger-scale redevelopment projects as they occur. This will require a moderate level of funding, most likely to be provided by the state or federal agencies.

Recommendation 32: Enhanced Building Inspections Capacity. Because the number of housing units that needs to be rebuilt over a short time span far exceeds the prior level of construction efforts within the state, it will be necessary to create an improved capacity for building code officials along the Coast. Possible responses include the creation of a "lend an official" program over the short term along with securing funding

"We don't feel this storm is going beat us. We won't let it beat us. We love the area too much; we're both born and raised here. And that's where we plan on staying."

– Wesley Devers,
Pascagoula.

to hire and train new officials over the longer term. These steps may require efforts on the part of the state as well as local governments. Federal agencies such as HUD or FEMA, as well as CDBG funds, may provide funding assistance, while the National Institute of Standards and Technology is a likely source for technical assistance.

These efforts should be ramped up within three to six months so as to keep pace with rebuilding requirements. It will require a moderate level of funding. Considering the decimated state of local government budgets, state or federal agencies appear to be the most likely source of needed funds.

Recommendation 33: Coordinated Regional Planning. For the greatest level of efficiency, housing decisions should be coordinated with infrastructure planning. A full recommendation regarding regional planning is included in the Public Services chapter of this report.

Recommendation 34: Continuation of the Housing Committee. The Governor’s Commission recommends that its Housing Committee continue its work for an extended three to six months, during which time it will fulfill the responsibilities outlined in the “Housing Recovery Oversight” recommendation described above. When a longer-term entity responsible for the coordination of funding and priorities for housing is developed, the Housing Committee can be disbanded.

Recommendation 35: New State-wide Community Development Entity (CDE). The Governor’s Commission advocates the development of a state-wide, private nonprofit “Community Development Entity” (CDE). At minimum, this CDE would serve the roles described above in the “Coordinated

The havoc and destruction wrought by Hurricane Katrina are unlike anything heretofore seen in American history.

Funding Management” and “Outreach and Education” recommendations. It might also be tapped to coordinate the “Enhanced Building Inspections Capacity” and “Emerging Contractors Program” recommendations as well. Initially, the CDE’s board of directors should consist of members from the Housing Committee, but eventually members could be appointed by the governor. Core competencies to be represented on the board and within the staff would include legal, financial, and administrative expertise in affordable housing, community development, and building codes and technologies. The CDE also should include advisory boards staffed by community representatives from different counties and cities within the state who could provide input on local priorities.

In its first few years of operations, the bulk of the funding would be directed to affordable housing projects within the devastated coastal counties. Over the long-term, however, as restoration progresses, the CDE would devote an increasing share of funding to worthy affordable housing projects in other areas of the state. The CDE initially should be authorized by the governor and state legislature, but would be structured as a nonprofit entity with ties to housing authorities in local communities. The CDE would also work closely with the Mississippi Home Corporation on various funding issues. The CDE should be created within six months. The entity undoubtedly will have a fairly high operational budget. Fortunately, some of the funding opportunities that it will oversee, including the new market tax credits, allow for administrative fees of up to 15 percent. As such, the CDE will not require state funding over the long run.



ECONOMIC DEVELOPMENT

In this section are four committee reports grouped under business and economic development: Tourism; Small Business; Defense and Government Contracting; and Agriculture, Forestry, and Marine Resources.

Obviously, there are many other areas of business and economic development to be nurtured, restored, and welcomed as newcomers to our state. The most important things we can do to make that happen are:

- Tax incentives to encourage investment. Done. Thanks to recently enacted federal legislation. See the full explanation in the Finance Committee report.
- Business loan incentives. Done. Also thanks to the federal package enacted shortly before the end of December, 2005.
- Accelerated workforce training. This is a big challenge for businesses and our educational institutions throughout the country – but especially in Mississippi. As new companies explore partnerships in our recovering economy, one of the first things they’ll ask about is the quality of our workforce. See the Education Committee report.
- Affordable housing. Another national issue worth engaging enthusiastically in our state. As property values rise, especially in popular Coastal areas, the inventory of affordable housing shrinks. We must have 10,000 new units underway or completed within one year. See the Land Use and Housing Sub-Committee reports.

TOURISM

Tourism has long been a central component of the economic, social, and cultural life of Mississippi and particularly of the Mississippi Coast. Prior to 1992, however, the state's tourist industry fought for attention – and dollars – in a highly competitive market. Major destination attractions in Florida, Georgia, Alabama, Louisiana, and Texas draw millions of visitors each year to the South and Gulf Region, but Mississippi's limited tourism promotion budget and unfocused message did not keep pace with its competitors.

The 1992 launch of the gaming industry in Mississippi changed that pace, giving a new identity to the state and making Mississippi the third largest gaming market in the United States. The out-migration of shopping dollars to New Orleans and Mobile was

reversed as more New Orleans and Mobile shoppers came to South Mississippi for a day of shopping and visiting its many attractions.¹ With its existing beaches and family attractions and the addition of casinos, the Mississippi Coast was ideally positioned to fuel a tourism industry that grew to the number two private-sector job generator in the state. Gaming, according to a 2004 survey conducted for the Mississippi Coast Convention and Visitors Bureau (CVB), was the primary draw for 75 percent of visitors.²

Before the hurricane, total state jobs directly connected with tourism were approaching 100,000. Total spending by more than 30 million visitors in 2004 surpassed \$6 billion, and communities most frequented by tourists enjoyed higher rates of employment.³ Unemployment in the Gulfport-Biloxi metro area in 2004 was 4.1 percent,⁴ compared





to the state average of 5.7 percent.

Although the scope of Governor's Commission includes more than 30 counties and the Tourism Committee included members from throughout the affected region, these planning recommendations are directed primarily at the three coastal counties of Hancock, Harrison, and Jackson. Tourism—including the gaming, hospitality, and hospitality-support sectors – employs more people and provides more direct and indirect tax revenue in this three-county area than any other segment of the economy.⁵ The consequences of transforming the Mississippi Gulf Coast into an internationally recognized destination, however, will benefit the other affected counties and entire state.

Katrina not only altered the landscape of the Coast but wreaked havoc on this important sector of the state's economy.

The Damage

Most tourist attractions sit along Highway 90 near the beachfront, and the entire 76-mile beachfront area was inundated with tidal surge. The heavy losses include:

- **Casinos:** All 13 casinos in Harrison and Hancock Counties were destroyed or heavily damaged and may not be fully operational for months. While most casinos have committed to rebuild, not all have announced definite plans and schedules.
- **Hotels:** An inventory of 16,982 available rooms showed that only 4,421 (26 percent) were operating one month after the storm.⁶
- **The Beach:** The shallow waters of the Mississippi Sound and the 26-mile man-made beach, the major tourist attraction in South Mississippi, are

A snapshot of Mississippi tourism before Katrina

In 2004:

- Tourism accounted for 92,400 jobs, 8.3% of all non-farm jobs in the state, and generated an annual payroll of \$1.7 billion.
- Almost 31 million tourists—84 percent of whom came from out of state—spent \$6.1 billion.
- Tourism-related taxes of \$471 million accounted for 10.3 percent of the state's General Fund.

Source:
Mississippi Development Authority,
*FY2004 Economic Impact of
Tourism*. 2004.

littered with debris and will require a major cleanup.

- **Highway 90:** Not only the Coast's major east-west traffic artery, but the only access to most tourist attractions, the beachfront highway was closed across Harrison County due to storm damage. Portions of Highway 90 have reopened, but the two highway bridges connecting Harrison County to Jackson and Hancock Counties were destroyed and remain closed. The Popp's Ferry Bridge connecting Biloxi across the bay opened on Christmas weekend.
- **Museums/Cultural Attractions:** Richard Moe, president of the National Trust for Historic Preservation, called Hurricane Katrina "the worst cultural disaster in U.S. history."⁷ Among the most visited attractions, the Lynn Meadows Discovery Center, the Frank Gehry-designed Ohr-O'Keefe Museum of Art, Walter Anderson Museum of Art, and Maritime & Seafood Industry Museum all suffered major damage. Only the Walter Anderson Museum has reopened. Beauvoir suffered major wind and flood damage and will take well over a year to recover. Grasslawn, the Mardi Gras Museum in the Magnolia Hotel, and Tullis-Toledano Manor were all heavily damaged or destroyed by flood and winds. All but two branch libraries were flooded. The Hancock County Historical Society suffered major roof damage and lost all exhibits. The J.L. Scott Marine Education Center in Biloxi and Marine Life Oceanarium in Gulfport were heavily damaged by tidal surges.

■ **Charter Fishing:** The Gulf Coast Charter Boat Association reports that only 10 percent of fishing boats were lost; however, many public piers and marinas were destroyed. The lack of fuel storage and hotel rooms has kept the industry from quickly rebounding.⁸

■ **Golf:** This \$100 million industry may be the leader of the tourism industry's recovery. Although several courses suffered major damage, and at least two may not reopen, the Coast Golf Association reports 14 courses (nearly 90 percent) will be operational by January 2006, just in time for the "snowbird" season.⁹ The lack of hotel rooms and promotional funds, however, will be a threat to their success.

■ **Mississippi Coast Coliseum and-Convention Center:** This facility suffered major flood and wind damage and expects reopening in six to 12 months, forcing the cancellation of several events including the Mississippi Sea Wolves' hockey season and games of the new Arena Football League team.

■ **Retirement:** The temporary loss of the gaming industry, the destruction of several museums, and the loss of several senior citizen centers will adversely affect the ability to draw the retirees or the senior tourism market for at least a year.

■ **Barrier Islands:** Ship Island and the other barrier islands that have long been popular attractions were washed over by the hurricane. Structures were destroyed, and the islands lost surface area.

■ **Eco-Tourism:** A growing industry in

The Gulf Coast has been a key tourist destination and state economic driver.

■ Of the state's 30.7 million visitors in 2004, 37 percent came to the Gulf Coast.

■ Tourists in the Gulf region spent \$1.9 billion in 2004.

■ Prior to Katrina, experts predicted more than 12 million visitors would spend \$2.5 billion on the Gulf Coast in 2006.

Sources:
Mississippi Development Authority
Mississippi Gulf Coast,
Convention & Visitors Bureau

Mississippi, particularly in the Pascagoula River basin, along the Wolf and Jourdan Rivers, on Turkey Creek, and among the barrier islands, eco-tourism can recover quickly despite noticeable environmental damage from Hurricane Katrina. Opening hotels and Highway 90, however, is necessary before eco-tourists return.

■ **Employment:** Loss of casinos, hotels, restaurants, and attractions helped catapult the coastal counties' unemployment rate from an average of 5 percent before the storm to over 20 percent afterwards. Most industry sectors, including tourism, will face a lack of trained workers because the housing shortage has forced many of them to leave the area.¹¹

Beginning a Comeback

One of the first analyses of Katrina's impact on the South Mississippi economy came in the September 2005 Précis Metro© Report by Moody's | Economy.com, Inc. The report predicted a 48 percent drop in third-quarter employment and a net out-migration of 45,000 people. The report warned that employment in the region might not return to pre-Katrina levels until 2010.¹¹

Much has happened since those reports were written immediately following the storm, and the actual conditions are not as gloomy as the Précis© analysis describes. Unemployment figures for September and October, for instance, are well below the report's estimates, and city sales tax collections are ahead of projections for September and October.¹² Nevertheless, those early, dire predictions will be remembered by the rest of the nation until the Précis© reports are updated in March 2006.

The Mississippi Legislature took the

first and most important step in reducing the “FUD Factor” (Fear, Uncertainty and Doubt) among the investment community when it authorized Coast casinos in Harrison and Hancock counties to move inland, thus reducing the likelihood of complete destruction to those facilities by future hurricanes. The highest hurdle in their recovery has been cleared. The Coast’s hospitality industry—before casinos—was based around the beach and local history and culture. So as the gaming industry prepares its return, the challenge is to recreate this special sense of place.

After almost two months of research, discussion and debate by the Tourism Committee, the Commission recommends the following goal be adopted by local governments on Mississippi Gulf Coast and appropriate tourism agencies:

The Mississippi Coast will become a Tier One tourist destination with a strong sense of place by 2010 and generate an appropriate marketing budget to support this goal.

The Commission sets forth the following principles to guide tourism’s future:

■ **Maintain a Sense of Place.** Much of the Commission’s deliberation was based on natural, cultural, and historic factors contributing to a sense of place – the coastal environment, water access, water-dependent activities, local and regional cuisine, music and art, festivals, and lifestyle. These are the greatest resources. Considering the recommendations from the Mississippi Renewal Forum’s October charrette, the Commission strongly supports capitalizing on these resources as they are uniquely expressed by the design teams for

A top tier tourist designation by 2010.

To attain Tier One status as a tourism designation by the end of this decade the Coast must:

- Enhance air service, increasing flights in and out of the area and developing international links.
- Increase hotel capacity to at least 30,000 rooms.
- Enlarge convention and meeting space to at least 600,000 square feet.
- Better integrate core attractions—including dining, shopping, sports, eco-tourism, special events, fishing, museums, cultural and historical attractions, and major destination attractions. These attractions do not have to be located in the three coastal counties but must be easily accessible from them.
- Boost promotional spending to at least \$20 million annually.

Source: Richer, Steve (Executive Director, Mississippi Gulf Coast Convention & Visitors Bureau) interview. 15 November, 2005.

each of the 11 coastal cities. Specifically, the architecture and design, transportation and transit planning, housing, the style and diversity of retail, and creation of tourism “clusters” or districts will help sustain the special sense of place. Following the Renewal Forum’s recommendations can make each of those cities and communities a stand-alone attraction and destination, almost demanding that visitors extend their stays to include side trips to these downtowns and special districts.

■ **Share the Katrina Experience.** Hurricane Katrina was an experience no one should live through, but South Mississippians did. Like Hurricane Camille, it will be a part of common experience forever. It is something the rest of the world immediately will connect with the Coast and its people. This identity can be an advantage as people from around the world will, out of curiosity, want to see the destruction and witness the rebuilding. The suffering and extraordinary response of residents is a major news story and a major attraction. For the next year or two, “voluntourists” coming to the Coast to aid the recovery will also be a major source of tourism. As tourist attractions return and the Coast moves toward the transformation into a Tier One destination, it should capitalize on the Katrina experience and the interest generated in its consequences. A “Hurricane Katrina Tour” could be a popular attraction—remembering its destructive force at specific sites, seeing high-water marks along the route, touring a Hurricane Museum of Remembrance, visiting Katrina exhibits at the J.L. Scott Marine

Education Center and at Infinity at Stennis Space Center. Hurricane education can become a major draw for visitors and create another identity for the Mississippi Coast.

■ **Historic/Cultural Preservation.** The initial inventory indicates that more than 1,000 historic structures—both publicly and privately owned—were damaged or destroyed by the storm.¹³ Due to lack of funds to rebuild and protracted insurance negotiations, many of the damaged historical and cultural structures are standing unattended. Early estimates suggest a cost of at least \$8.5 million just to stabilize those damaged structures so that they may be repaired or rebuilt in the future.¹⁴ Without restoring or rebuilding those structures, Mississippi and the nation loses much of the history and culture that defines this region and attracts visitors. Addressing historical and cultural preservation is critical to accomplishing the “sense-of-place” goals.

■ **Capitalize on our National Heritage Area Designation.** In 2004, the Mississippi Coast became one of only 27 congressionally-designated National Heritage Areas. The Mississippi Gulf Coast National Heritage Area Management Plan, which covers the six South Mississippi counties, should be completed and approved by the National Park Service, by February 2006. The National Alliance of Heritage Areas’ annual meeting will be held on the Coast in October 2007. A major part of the recovery plan should include supporting and seeking the funding opportunities and other benefits as one of the nation’s few National Heritage Areas.

The Gulf Coast's economy has been particularly dependent upon tourism.

- The 29 state-licensed casinos, prime tourism attractors, provided nearly 30,000 jobs and generated more than \$2.8 billion in revenues.
- Before the hurricane, about 22 percent of all jobs in the three coastal counties were in the leisure/hospitality sector, twice the state average and more than twice the national average.
- In Harrison County in 2004, 28.7 percent of all employment was directly tied to tourism. In Hancock County, 15.3 percent of jobs were in this sector.

Sources:
Bureau of Labor Statistics
Mississippi Tourism Association
Mississippi Development Authority

What We Can Do Right Now

Applying those guiding principles, the Commission recommends the following first steps:

- The Harrison County Sand Beach Department and Mississippi Department of Marine Resources, through its Coastal Cleanup programs, should clean up the beach and adjacent waterways. Before casinos, the beach was the Coast’s primary attraction and instantly can begin attracting tourists again. This also will require cleaning the shallow waters of the Mississippi Sound to remove debris visible at low tide.
- MDOT should rebuild Highway 90 and the bridges consistent with the principles of the Mississippi Renewal Forum. MDOT must be sensitive to regional needs and expectations regarding transportation plans, and should follow the transportation and plans recommended through the Commission.
- The Coast should capitalize on the “Voluntourism” market. In the model of the aftermath of the Mount St. Helens eruption, thousands will visit the Coast to witness the fury of nature and the spirit of renewal of South Mississippi. Many will want to be part of that recovery. The Mississippi Development Authority (MDA) should encourage such attractions to out-of-state markets, and the CVB should market these sites to in-state markets.
- The state legislature should create a coast-wide Tourism Promotion Commission and fund it with new funds and/or grants made available

to MDA. The origin of such an organization may exist in the tri-county partnership recognized by the state. Regardless of the enabling legislation, the area needs a Coast-wide mechanism for managing and funding tourism marketing and promotion. Financial assistance is needed to keep the organizations such as CVB operational until they can recover their own funding. Enacting a 1 percent food and beverage tax may provide much of the necessary funding.

- Local governments should rebuild public piers and marinas according to stronger construction standards and best practices models provided by the Mississippi Department of Wildlife & Fisheries. The Coast must have reliable facilities to attract boaters, fishermen, and charter boats. Funding for these projects may be available through the Water Resource-Planning Assistance to States program.
- The Tourism Promotion Commission should research and test the Tier One destination criteria, including validation of the assumptions and criteria (number of rooms, exhibition space, etc.) and determine the retail capacity needed to attain Tier One

status. Additionally, the Tourism Promotion Commission should quantify the benefits of Tier One status and the methods to market effectively the designation. Funding for this study may be available through grants from the U.S. Chamber of Commerce and/or the federal Economic Development Administration.

- Local governments should raise roadside beautification standards. The area must be maintained as a clean, pristine environment like any major destination attraction. The boards of supervisors in Hancock, Harrison, and Jackson Counties should standardize litter laws and enforce them. Each county's beautification commissions or organizations should implement Keep America Beautiful educational programs to encourage litter control and cleanup.
- Local governments and beautification committees should enhance landscaping in public areas. Hurricane Katrina took thousands of trees, shrubs, flowers, and plants from neighborhoods and roadways.¹⁵ Besides the loss of their beauty, the trees cleaned the air, slowed erosion, and provided wind-breaks from storms. Replacing cen-



tury-old trees will occur over generations, but starting the replanting effort now will add immediate beauty and begin the process of replacing the loss. Appropriate local organizations such as county beautification committees and neighborhood garden clubs should provide volunteers for a massive planning, landscaping, and maintenance effort. Senator Trent Lott has directed the Director of Urban Forestry of the United States Forest Service to visit the Mississippi Coast for an initial assessment of damage to the tree canopy. The Home Depot Foundation is donating \$100,000 to begin restoration, and the U.S. Forestry Service is coordinating other restoration efforts. Local governments should lead this effort of coordinating various public and private resources.

- State and local tourism officials should share the news of recovery and renewal and meet with booking agents, airlines officials, and tourism industry groups to share plans that the gaming industry and other major attractions will rebuild and return bigger and better than before.
- The state legislature should begin the restoration of our cultural and

historic attractions by enacting state Historic Preservation Tax Credit legislation (HB 1604), which would provide state tax credits and go along with federal preservation tax credits to commercial and residential property owners who restore damaged historic resources. The federal Katrina Emergency Tax Relief Act of 2005 (KETRA), H.R. 3768, includes special incentives for individual donors by allowing them to deduct certain cash gifts in amounts up to 100 percent of their adjusted gross income until the end of 2005. KETRA thus suspended, for the remainder of 2005, the rule that typically limits the use of charitable deductions to 50 percent of a donor's adjusted gross income. KETRA also provides that the charitable contribution deduction for such cash gifts will not be treated as an itemized deduction for purposes of the overall limitation on itemized deductions. This one-time incentive for individuals to make year-end cash gifts is not limited to Katrina relief, but can be made to any 501(c)(3) organizations. Congress should extend KETRA to 2007.

- Tourism, heritage, and cultural organizations should consider oppor-



tunities to share resources. For example, the J.L. Scott Marine Education Center and the Maritime and Seafood Industry Museum may be combined into one facility. The city of Biloxi and Board of Trustees of the Ohr-O'Keefe Museum of Art also should focus on soliciting donations and grants from around the world to complete and promote of the Ohr-O'Keefe Museum of Art. The international reputation of artist George Ohr and architect Frank Gehry will garner international attention to this museum's recovery and renewal efforts. The rebirth of the Ohr-O'Keefe Museum should be a symbol of Mississippi's commitment to the arts and culture.

- The Governor's Office and MDA should host planning charrettes on the model of the Mississippi Renewal Forum's design charrette. A similar approach for taking ideas to action can be used to develop strategies for heritage and cultural tourism, for retail businesses, and for other sub-sections of the tourism economy.
- The state and the Mississippi Coast Coliseum Commission should quickly complete the Coliseum expansion

and remodeling. Demand for meeting space will increase as casinos convert their meeting and exhibit space into gaming floors. This should be adjusted as needed based on the results of a study to test Tier One destination resort requirements for convention space.

- Tourism promotion organizations should follow through with the creation of a clearinghouse and one-stop-shop to research and apply for grants, loans, and other support for existing tourism-based organizations. MDA, the Mississippi Main Street Association, Mississippi Heritage Trust, and the Mississippi Department of Archives and History are coordinating the creation and funding of this entity.
- The Tourism Promotion Commission should develop a new marketing plan and slogan for the Mississippi Gulf Coast. South Mississippi has never received this amount of national and international media attention, and tourism officials quickly should develop a marketing theme and brand-building plan to capture this market. The plans should consider and support the goal to reach Tier



One designation.

- Events and festivals should continue. Without such events as Smokin' the Sound, Cruisin' the Coast, Peter Anderson Festival, and Mardi Gras, Coast communities will lose critical tourist dollars. Local festival organizers should seek assistance from MDA and festival organizers in other states. Hotels should receive appropriate resources to open quickly and accommodate visitors to these events.
- Tourism promotion organization should focus on golf and charter fishing. Of 16 golf courses in the region, 14 were open by January 1, 2006.¹⁶
- The Mississippi Golf Association should attract regional golfers and place golfers with available rooms. The dollars spent by golfers may be the quickest avenue for stimulating the tourism market. MDA can help the Golf Association create and finance promotional material and distribute it to golfing markets, letting golfers know that courses are open and hotel rooms available. Promoting the existing Golf Trail and that these courses are open with signage on I-10 would have an immediate impact on tourism. The charter boat industry

also survived the hurricane comparatively well and should be part of the state's short-term tourism promotion.

Planning for the Long Term

- Private development should transition the Coast from the nation's premier Voluntourism market to a Tier One Destination. This includes building additional hotel rooms, meeting and convention space, restoring and/or reconstructing museums/aquariums/learning and visitor's centers, and launching a major nationwide marketing campaign by the Tourism Promotion Commission.
- MDA and the local CVB should create at least one new major attraction in South Mississippi. A NASCAR track, zoo, professional sports facility, and a cruise ship are all possibilities. A new J.L. Scott Marine Education Center, Biloxi Seafood Museum, NASA's Infinity complex and the eco-tourism opportunities along the Pascagoula River can each become major attractions. A new Hurricane Katrina Experience at Infinity could teach about record-breaking Katrina and about hurricanes in general. This could be tied to a coast-wide "high



water mark” tour. Private development targeted with appropriated tax incentives should fund this attraction.

- MDOT and the Mississippi Coast Transportation Authority should link attractions, accommodations, and convention and meeting facilities by trolley, rail, ferryboat, bike and pedestrian paths, and other multi-modal options. These alternatives to car travel not only move people conveniently along our linear market, but could be attractions themselves. Funding sources include grant programs administered by the Federal Transit Authority.
- Tourism organizations should leverage the “mini-brands” of our city centers. The Renewal Forum illustrated methods to capitalize on the individual identities and characters of Coast cities. Developing and promoting those separate identities help create reasons for visitors to stay longer and go to more than one destination. Tourism officials and organizations should highlight these 11 unique identities in their marketing strategy.
- MDA and “eco-tourism” operators should advance “eco-tourism” opportunities. Existing nature trails on

land and waterways are attractive to this market. The Pascagoula River, Biloxi Bay, Turkey Creek, Jourdan River, the National Seashore, and other areas along the Mississippi Gulf Coast provide excellent opportunities for tourists to explore the natural beauty and resources of the Coast.

- Local developers should expand the retail horizons. Shopping is the favorite recreational activity for many tourists, but they want to visit stores not available at home. MDA and local governments should target major retailers like Nordstrom’s, Saks, Target, Crate & Barrel, and Pottery Barn—especially those willing to tailor their store designs to the style and scale appropriate to the Coast. At the same time, encourage local artists and other entrepreneurs to create products that reflect the culture of South Mississippi.
- Local governments and cultural organizations should create more themed “trails.” Possible unique tour paths include a Museum Trail, Golf Trail, Nature Trail, African-American History Trail, a Civil War to Civil Rights Heritage Trail, and Art Trail—each linking similar attractions. An Art Trail,



for example, from the Walter Anderson Museum of Art in Ocean Springs to the boardwalk artists of Bay St. Louis, can be marketed to a targeted interest group, just as a Golf Trail is being marketed to golfers. A Hurricane Katrina “High Water Mark” trail could link hurricane-related exhibits and attractions and lead to the Katrina exhibit at the Infinity visitors’ center at Stennis Space Center.

- Local and CVB officials should work with the state legislature to restructure tourism promotion and funding. The Tourism Promotion Commission should be created and new funding sources considered, such as a 1 percent F&B tax—to hit a goal of a \$20 million annual budget to market South Mississippi tourism.
- The state should use anniversaries of Katrina to call attention to South Mississippi’s renewal. Through advertising and stories in industry/trade publications and associations, tourism official should demonstrate our progress by marking annual hurricane anniversaries.
- The Governor’s Commission should publish and distribute the recommen-

dations of the Commission related to tourism industry stakeholders such as casino owners, hotel owners, airlines, developers who should understand and be encouraged by South Mississippi’s recovery. Before they make the decision to pull out of this market or simply not enter the market, they should recognize these goals and plans and be a part of this unprecedented renewal.



SMALL BUSINESS

Eighty percent of Mississippi's businesses fit the definition of "small business," employing fewer than 20 employees.¹ So when Hurricane Katrina gashed homes and lives, it especially affected a primary engine of the state's economy.

As the data in the boxes on these pages suggest, entrepreneurs and small business owners were on a roll before August of 2005. They were creating jobs faster than larger firms were eliminating them.² Businesses owned by women and minorities were growing, and payrolls were increasing.³ Small business salaries are often better than those in large firms, because so many high-paying professional, financial, scientific, and technical positions fall under this category.

As a highly diversified sector, small business remains particularly vulnerable

to disasters like Katrina, and for one primary reason—small businesses tend to be in smaller buildings less likely to have survived the hurricane. Many are home-based. So when 65,000 housing units are lost in South Mississippi and another 55,000 homes suffer severe damage, small businesses take a disproportional hit.⁴

First, the Governor's Commission made a rough assessment of damage to the sector by inviting chambers of commerce in the affected areas to survey businesses. The Jackson County, Ocean Springs, Hancock County, Picayune and Mississippi Gulf Coast Chamber (including the Biloxi, Gulfport, Long Beach and Pass Christian chambers) worked together to conduct the inventory. An online survey form was created with the help of the Mississippi Development Authority (MDA) and made available on its website, the Mis-



Since so many small businesses are based at home, damage to houses harmed many employees in this category.



Mississippi Economic Council website, and all chamber websites. The survey also was mailed and hand-delivered to as many Coast businesses as possible.

It was estimated that better than half of all South Mississippi small businesses suffered damage from Hurricane Katrina. By late November at least 20 percent remained nonoperational.⁵

Identifying the Challenges

Besides the obvious—the destruction of their facilities—what obstacles face small businesses recovering and resuming healthy growth?

The challenges are divided into seven categories:

Confusion About Access to Help

The Federal Emergency Management Agency (FEMA), Mississippi Emergency Management Agency (MEMA), Small Business Administration (SBA), Mississippi Development Authority (MDA), Mississippi Department of Employment Security (MDES), Mississippi Insurance Department, area Chambers of Commerce and other federal, state and local agencies provide a variety of assistance to small businesses under normal circumstances, and that assistance has increased dramatically in response to Hurricane Katrina. Almost every need of small business can be met or addressed by one or more government agencies or community organizations prepared to help them recover. A major problem, however, is that too many small business owners are not aware of available assistance or how to access it. A misperception also exists that assistance is either unavailable or the bureaucracy involved in receiving support from this myriad of agencies is so complicated that it simply is not worth the

Small businesses play crucial roles in Mississippi's economy

In 2002, the last year complete figures are available, firms with less than 20 employees accounted for 82% of all businesses in Mississippi.

These small businesses provided:

- 173,500 jobs
- \$3.9 billion in payrolls

Source:
2002 Business Census



trouble. This misperception is common and accounts for less than one-third of the FEMA support applications requested by businesses being returned to FEMA.⁶

The Housing Shortage

To restart operations, businesses need employees, and employees need places to live. Small businesses tend to be even more dependent upon their few employees than larger firms because they have so little “bench strength.” The lack of housing is a principal reason for the difficulty facing companies in attracting enough employees to open their business – or to open at full strength. Throughout the Mississippi Coast “Now Hiring” signs are prevalent; most restaurants and other service establishments that are open have “limited menus,” “limited service,” or “limited hours” because they do not have an adequate number of employees to operate at full strength. The problem is particularly acute in the hardest hit, coastal counties.

The Transportation Squeeze

Many small businesses see no advantage to opening quickly because transportation problems deny them customers or employees. As of early December, parts of Highway 90 remained closed. The Biloxi-Ocean Springs and Bay St. Louis bridges are not in operation, and the Poppo Ferry Bridge opened on Christmas weekend. Traffic along Pass Road, the only fully navigable east-west alternative to I-10 in Harrison County for several months after the hurricane, made traveling short distances a daily challenge. Most affected are restaurants and retail outlets, which rely on walk-in traffic. Customers must brave limited road access and increased traffic to shop, and these transportation challenges may

be another reason why some potential employees have not returned to or sought work.

Alternative Income and Benefits

Americans have given generously to South Mississippi since the hurricane. The American Red Cross and a host of non-government agencies have provided free food and clothing as well as emergency shelter. Some are also providing direct financial assistance. FEMA has provided thousands of Katrina victims with cash payments up to \$2,000, and the federal government has liberalized its food stamp program for Katrina victims. Many employers have guaranteed salaries to employees for a period after the hurricane. In addition to all this assistance, MDES expedited the process for unemployment assistance to those who lost or could not find a job. Consequently, many potential workers have little financial incentive to return to work immediately. As these benefits end, and businesses competitively increase their wage levels, more workers should be available to meet demand. Until then, small businesses are finding it especially difficult to attract workers.

Communication Disruptions

There were unusual communications challenges in getting business assistance to those who needed the help. Katrina knocked out all telephone service, and for more than a month wireless communication capability was significantly reduced. In Hancock County and portions of Harrison County, telephone service remains extremely limited. The population has been dependent upon cell phone service since the hurricane, but there is no directory of cell phone numbers available. Internet service to South Mississippi was interrupted and

Many small businesses see no advantage in opening quickly because transportation problems deny them customers or employees.



in the hardest hit areas, Internet service is still not available. Small businesses rely heavily on wireless communications to manage inventory and serve customers.

Access to Capital Issues

Businesses need capital to repair and recover. Insurance payouts can be slow in coming simply because of the sheer magnitude of this record-breaking hurricane season. Additionally, the “flood/wind damage” conflict affects business—especially small business—as much as it does homeowners. Until they receive insurance payments, small business owners have to rely on individual savings to cover personal and business recovery expenses. Those not fully aware of bridge loans and other financial assistance – or those not taking advantage of it – are least likely to reopen soon. Moreover, many small businesses did not have sufficient business interruption insurance coverage, and lost income since August results in limited capital to invest in rebuilding.

Many small businesses are not yet aware of the very helpful tax and low-interest incentives recently passed by Congress and the state. The appropriation gives \$441 million to the Small Business Administration Disaster Loan Program for homeowners and businesses suffering physical damage and economic injury.

Lack of Daycare

Most daycare facilities are small businesses and were either completely destroyed by Katrina or are slow in reopening for the same reasons of other employers. Without daycare facilities, many potential employees who have available housing need someone to care for their children before they can return to work.

Bringing Resources to the Effort

The MDA is making important contributions for funding resources for small businesses affected by the hurricane. Currently, MDA is making loans from a \$25 million loan fund, based on a model implemented in Florida after its recent hurricanes.⁷ The first “bridge” loan applicants are receiving loan pro-

ceeds within 48 hours of loan application for amounts ranging from \$1,000 to \$25,000. To help spread the word, the Governor’s Commission coordinated with the *Sun Herald*, the *Bay Press*, the *Sea Coast Echo*, the *Mississippi Press* and other local newspapers and business journals to publicize these programs and resources

Through the Small Business Com-

mittee, the Governor’s Commission took two specific actions shortly after the Commission was formed. First, at the request of the Commission, the editorial board of the *Sun Herald* agreed to publicize these resources, and second, on November 2, a Small Business and Minority Contractors Forum was held in Biloxi to address concerns about business recruitment and minority partici-

Small businesses are especially sensitive to changes that affect the security and quality of life of all citizens.



pation. A standing-room-only crowd of 300 people met with representatives of government agencies and large prime contractors leading the cleanup effort, including the Government Services Administration, Ashbrite, Bechtel, W.G. Yates & Sons Construction Company, and the U.S. Army Corps of Engineers. The purpose of the forum was to strengthen the network of small business subcontractors available to work with the larger

firms participating in the recovery. The meeting produced results; for example, W.G. Yates & Sons Construction Company committed to awarding 70 percent of its subcontracts to Mississippi-based businesses and/or minority-owned businesses. MDA is conducting and scheduling similar meetings with small and minority-owned businesses.

The Mississippi Gulf Coast Chamber of Commerce is matching business

needs with resources. Recognizing that needs vary with location, the Chamber has created a business questionnaire to identify the needs of businesses in each community.

The Governor's Commission is considering two buildings for use as business incubation centers, and in the near future, the Commission may host networking events for business owners to interact with each other.

2004 Mississippi businesses

Firms with fewer than 20 employees make up the vast majority of businesses in almost every sector except government. A snapshot of 2004 Mississippi businesses by sector shows:

Sector	No. of Units	Units w/<20 Employees	Small Biz %
All Employers	53,746	46,732	86.9
Real Estate/Rental/Leasing	2,051	1,951	95.1
Professional/Scientific/Technical Svcs	4,814	4,553	94.6
Agriculture/Forestry/Fishing/Hunting	1,842	1,719	93.3
Finance & Insurance	2,853	2,604	91.3
Construction	5,594	5,049	90.3
Wholesale Trade	4,096	3,699	90.3
Retail Trade	8,539	8,587	88.9
Admin/Support/Waste Mgt	2,459	2,131	86.7
Utilities	405	349	86.2
Transportation/Warehousing	2,177	1,872	86.0
Health Care and Social Assistance	4,500	3,850	85.6
Arts, Entertainment and Recreation	625	526	84.2
Mining	362	302	83.4
Information	631	578	82.1
Management/Mgt Services	106	84	79.2
Manufacturing	2,750	1,767	74.3
Educational Services	338	236	69.8
Local Government	855	339	39.6
State Government	126	41	32.5
Accommodations/Food Services	3,339	2,437	23.0
Other Services	5,284	5,108	96.7

Source: Mississippi Department of Employment Security, Mississippi Business Population.

Prior to Katrina, small businesses owned by women and minorities were growing at a fast clip.

Growth between 1997 and 2002 in businesses owned by:

- Women: 23%
- Hispanics: 34%
- African-Americans: 42%
- Asians: 22%

Source:
U.S. Department of Labor, Bureau
of Labor Statistics.

Recommendations

Research and discussions with small business employers and employees led to the following recommendations, some of which transcend business-only strategies and include proposals for strengthening the stability of regional infrastructure and social services. Because small businesses are closely connected to the health of communities, they are especially sensitive to changes that affect the security and the quality of life of all citizens.

Create a Mobile Small Business Emergency Recovery Center

The energizing tax incentive plan approved by Congress must be publicized to small businesses. A clearinghouse for all business support assistance can team resources with businesses in need. The Center should be located in a mobile van capable of going on-site in the most devastated areas, bringing the resources to the business owner/manager instead of making the business come to the appropriate resource.

On board should be representatives of appropriate federal, state, and local agencies supporting small business, with wireless Internet and satellite capability so applications can be completed on-site. The Detroit Metro Chamber donated such a mobile communications center to the Mississippi Gulf Coast Chamber to use after Katrina. The Coast Chamber is making this mobile communications van available to any small business. The van can be used as a mobile Small Business Emergency Recover Center, and area Chambers of Commerce should help coordinate the site visits throughout the hurricane-affected area. The primary expense will be towing the mobile center and should be paid for by area Chambers of Commerce if

grant money is not available.

Prepare and Continually Update a Small Business Survival Kit

Katrina taught that the best way for small business to recover is to be far better prepared before the disaster strikes.

Using the American Red Cross' Emergency Preparedness Kits for the Workplace as a model, MDA and area Chambers of Commerce should assemble a complete Small Business Survival Kit that can be provided at minimal cost to every small business owner/manager before disasters occur. If this kit had been in place before Katrina, many problems faced today by small business owners would have been avoided, and they would have been far more prepared to recover after the tragedy.

The Commission recommends that these kits be used as templates to be modified with all local emergency information and then, using the mobile center above, distribute them to the business community.

Create the Position of South Mississippi Small Business Emergency Preparedness Director and Establish the Mechanism to Fund the Position Permanently

Just as MEMA works throughout the year – coordinating with federal, state and local agencies as part of a comprehensive emergency management team – to prepare the population for disasters and their recovery, an emergency management agency and director for small business should be created. The director should not be affiliated with an existing agency with other responsibilities; he or she must be able to devote time preparing and updating Small Business Survival Kits, giving presentations and workshops throughout South Mississippi, and working closely with all federal,

state and local business organizations and agencies to be aware of all small business assistance.

This director should work with Chambers of Commerce in the region to set up classes and training programs. Once the Coast Chamber returns to permanent offices, the mobile communications center donated by the Detroit Metro Chamber should be made available as a Mobile Business Resource Center and rotate from among communities, making it easy for business owners to visit the site, receive Survival Kits, ask questions, and generally prepare their businesses for the future disasters.

The position may be created with a grant from an existing disaster relief program, but the Mississippi Legislature or local county governments should create a mechanism to fund the position permanently.

Secure an Updated Population and Business Censuses

Market data is critical to small business, including population data from the Population Census conducted every 10 years, and business data from the Census of Business conducted in years ending in 2 and 7. Prior to Katrina, an abundance of good population and business data was available, but with several neighborhoods completely obliterated, and populations shifted or displaced, existing data has limited use. Recovery will require accurate data, and developers considering the market will require feasibility studies with better information than those currently available. The United States Department of Commerce should conduct an off-year population census and an off-schedule business census in 2006. The business census would be updated as scheduled in 2007, but data from the national Census of

Business usually takes two years to become available at the county and metro levels. These two, off-schedule censuses would be taken only for the Mississippi Coast and, therefore, data should be available more quickly.

Create a Cellular Phone Directory Service

Katrina highlighted the reliance on wireless communications, especially in the hours and days following a major disaster. Unfortunately, no cellular phone directories exist. Cellular carriers should create a pool of numbers that can be accessed after an emergency, with appropriate privacy protections in place. Of course cell customers should have the option to be excluded from the directory assistance program, but the ability to call an information line for those cell numbers in an emergency would ease some of the desperation following a catastrophe.

Create Business Improvement District Authorities

To encourage small businesses to locate in city centers and to follow the approaches advocated during the Mississippi Renewal Forum, local municipi-

Katrina highlighted the reliance on wireless communications, especially in the hours and days following a major disaster.



palities, pursuant to legislative authority, should create Business Improvement District Authorities (BID) in each city. A BID is a publicly-sanctioned, yet privately-directed organization, that supplements public services to improve shared, geographically-defined, outdoor public spaces. Such organizations subscribe to a self-help doctrine, whereby a compulsory self-taxing mechanism generates multi-year revenue. Bringing shoppers back to downtown – especially in the evenings – will revitalize downtowns and help draw restaurants, art shops, and other attractions to these revitalized business districts. The variety of small business boutiques will also attract tourists downtown.

Rebuild or Restore Historic Downtowns

Local governments and the state legislature should encourage the restoration of historic buildings for commercial or private use to help maintain a sense of place, as well as adding to the charm of downtown. Using the BID concept to encourage downtown businesses and property owners to work together and revive historic elements lost in the hurricane will create an ideal environment that attracts business – especially diverse, small retail, professional, and service businesses – and will attract residents and visitors as customers. An historic district will also establish a consistent theme for new businesses to follow. Revenue from BID assessments

may also be used to market historic and downtown districts.

Conduct a Retail Charrette to Develop More Small Retail Opportunities

The research conducted in preparation for the Mississippi Renewal Forum suggested that South Mississippi is under-served by retailers and too dependent on “big box” discount retailers. MDA should sponsor a retail charrette to develop a plan for attracting a more diverse retail mix to the Coast. Even businesses not considered “small businesses” will create opportunities for more small businesses to support them and traffic to support the existing small businesses near them.



Unemployment: The Katrina Effect

Following is a comparison of South Mississippi's employment levels by county for 2004 (annual average employment), August 2005 (last full month before Katrina) and October 2005 (most recent month reported by MDES):

County	2004 Annual Average	August 2005	October 2005
Forrest	33,900	33,780	32,020
George	7,820	7,650	6,630
Hancock	19,630	19,500	14,230
Harrison	87,620	87,030	81,840
Jackson	57,640	59,780	48,870
Pearl River	20,810	20,860	18,990
Stone	6,530	6,480	4,730
Mississippi	1,248,100	1,253,500	1,175,800

Source: MDES

Meanwhile, according to the October 2005 employment date released by the MDES, unemployment is at record levels across South Mississippi:

Hancock Co.	24.3%	George Co.	9.7%	Forrest Co.	7.3%
Harrison Co.	24.0%	Pearl River Co.	16.5%	Mississippi	9.6%
Jackson Co.	17.4%	Stone Co.	12.2%	U.S.	4.6%

Source: MDES

SOURCES:
Small Business Profile: Mississippi 2002 Report from the U.S. Small Business Administration.
 Employer Firms, Establishments, Employment, Payroll, Annual Receipts by Firm Size and State, 2002 U.S. Dept. of Commerce.
 Mississippi Development Authority.
 Mississippi Department of Employment Security.

AGRICULTURE, FORESTRY, AND MARINE RESOURCES



The numbers associated with losses to agriculture, forestry, and marine resources from Hurricane Katrina illustrate the importance of these industries to Mississippi.

Recovery will cost billions. The effort will take years. The natural bounty of the state and the enterprise of its citizens, however, can return these economic drivers to prominence with specific aid and actions as recommended below.

Forestry

Between 50,000 and 60,000 private landowners have forest damaged by the hurricane. Additionally, the state sustained substantial losses to 16th Section forest lands, which generate revenue for local school districts, and losses were also suffered in lands used as wildlife

management areas by the Mississippi Department of Wildlife, Fisheries, and Parks.

The Commission is concerned that the tens of thousands of private, individual, and family forest landowners who were severely affected will not continue growing timber because of the limited ability to recover or insure their investments. The programs described below are necessary to restore the rural economy, a diversity of forest resources, and the quality of life of South Mississippi. Further, regeneration of destroyed forest lands is imperative to the long-term viability of forest-related species of fish and wildlife, including threatened and endangered species, and the timber economy of Mississippi.

Emergency Forest Restoration Assistance Program

Congress recently approved \$404.1



million for the Emergency Forestry Conservation Reserve Program to assist non-industrial private forest landowners and to assist the states reforestation efforts. To qualify for assistance under this program, private non-industrial landowners should be required to:

- sign a contract with the Mississippi Forestry Commission agreeing to implement a reforestation and forest management plan prepared by the county forester or prepared by a registered forester and approved by the county forester;
- show a loss, caused by Hurricane Katrina, of 35 percent or more of merchantable timber;
- own a tract of forested land of at least 20 acres prior to the declaration of the Presidential Disaster Area.

Oversight of the requirements should be provided by county foresters. Upon approval, landowners would be eligible to receive 60 percent of the value of trees lost as a direct result of Hurricane Katrina. Half of the total compensation due would be paid to the landowner up front and the other half would be paid after completion of the terms of the reforestation plan, which must be completed by March 31, 2010. Compensation would be subject to a \$250,000 limit and be tax exempt. The \$250,000 limit, however, will not apply to 16th Section school trust lands and other qualifying state lands.

Additional Reforestation Programs

To provide further incentive programs to assist the state and private landowners, the Commission recommends the following proposals. To create a reforestation program for 600,000 acres, we suggest the federal government provide:



- \$100 million to fund the Healthy Forests Reserve Program, a program within the Natural Resources Conservation Service, to restore 160,000 acres. The program can provide the greatest benefit to the private landowner by allowing the land-owner to utilize cost-share to restore the forests and utilize an easement payment to help offset income loss.
- \$10 million to the Department of the Interior's Fish and Wildlife's Partners for Fish and Wildlife Program, to restore 30,000 acres.
- \$10 million to the Farm Service Agency's Tree Assistance Program, to restore 30,000 acres. Utilizing the funds appropriated for this program, adequate funding would be dedicated, with waiver of the cost-sharing requirement, for the reforestation of 16th section school lands.
- \$10 million to the Landowner Incentive Program, a program of the Mississippi Department of Wildlife, Fisheries, and Parks, to restore 30,000 acres.
- \$15 million to the Forest Land Enhancement/Stewardship Program, a program of the Mississippi Forestry Commission, to restore 50,000 acres.
- \$6 million to fund the Emergency Restoration Tax Credit Program, a new program which should be authorized by Congress for natural disasters. The funding would go to the Mississippi Forestry Commission and the Mississippi Department of Wildlife, Fisheries, and Parks to restore an estimated 300,000 acres.

Emergency Reforestation Tax Credit

The Commission recommends that Congress enact federal income tax cred-

its, similar to successful programs used in Mississippi and Texas, as an incentive for private investment for the reforestation and wildlife restoration in counties designated as Presidential Disaster Areas. The program would be administered through the U.S. Department of Agriculture, Forest Service's State and Private Forestry Division and implemented by the state Forestry Commission and state Fish and Wildlife Foundation. Under an agreement with the landowner, the appropriate state agency would provide voluntary technical and financial assistance for up to five years to help restore forests and fish and wildlife habitat on the property through the proposed tax credit based program. Any individual, group or association would be eligible to participate in the program.

To be eligible for the tax credit, a landowner must have a restoration plan prepared for the eligible tract by a registered forester or certified fish or wildlife biologist. The forester or biologist would certify, in writing, that the conservation practices were completed and the conservation plan followed. The U.S. Forest Service, in consultation with the state forestry and fish and wildlife agencies, would determine the eligible activities, which could include: forest restoration and debris removal, control or eradication of invasive species, site preparation, tree planting, direct seeding, firebreaks, restoration of hydrology, restoration of wildlife habitat and corridors, fencing for habitat protection, removal of barriers for aquatic species, stream bank stabilization, restoration of threatened and endangered species habitat and corridors, and restoration of rivers and streams.

The Commission recommends that any eligible owner who incurred costs for approved restoration practices on

eligible lands be allowed a tax credit, in an amount equal to the lesser of 75 percent of the actual costs of the approved conservation practices or 75 percent of the average cost of approved practices against the taxes imposed for the tax year in which the costs are incurred. A landowner would be eligible for up to \$50,000 of tax credits per year for a maximum of three years after the presidential declaration with any unused portion of the credit being eligible to be carried forward in succeeding tax years. The Commission also recommends a similar restoration tax credit for homeowners limited to \$1,500 per year for three years to help restore urban and community forests.

Invasive Species Control

Hurricane Katrina spread invasive species of plants into the damaged forests of South Mississippi. In areas with severe wind damage, the removal of the forest canopy would dramatically increase available sunlight reaching the understory and encourage an explosion of many highly invasive species. Without aggressive action, it is extremely likely that these species will "capture succession" across thousands of acres and prevent reestablishment of native forests across ownerships, including an array of ecologically and economically significant public and private lands. It is highly likely that the movement of heavy equipment through infested areas will exacerbate the spread of cogon-grass, an invasive grass spread by wind-blown seeds and underground creeping rhizomes.

The Commission recommends a \$30 million congressional appropriation to fund the Environmental Quality Incentives Program (EQIP) or to provide a direct EQIP appropriation to the Mis-

Hurricane Katrina spread invasive species of plants into the damaged forests of south Mississippi.

Mississippi Department of Agriculture and Commerce (MDAC) to treat 90,000 acres infected with cogongrass, a select number of other species, and to control giant salvia, Chinese tallow trees, privet hedge, and Japanese climbing fern in the Presidential Disaster Area.

Forest-Associated Wildlife and Fisheries Resources

Hurricane Katrina caused injury not only to the forest plant life, but also to animals that will suffer due to habitat destruction. Threatened or endangered species, such as the gopher tortoises, red-cockaded woodpeckers, gopher frog, yellow blotched map turtle, ringed saw-back turtle, and bald eagle have suffered substantial habitat damage. Although the total negative impacts of this storm are incomprehensible, an opportunity exists to restore habitat for bobwhite quail and providing additional economic opportunity for regional tourism.

The Commission recommends a \$10 million congressional appropriation to fund the Wildlife Habitat Incentives Program (NRCS) for species injured by the destruction to the forests caused by Hurricane Katrina.

Fire Prevention

As a result of the hurricane, the amount of debris available for fueling a wildfire is 10 to 20 times the normal levels in South Mississippi, increasing the potential for fire hindering fire fighting efforts. Wildfires occurring in the damaged areas, therefore, will burn more intensely and rapidly. Additionally, the opening of the canopy by Hurricane Katrina will cause native vegetation to grow excessively, adding to the dangerously high fuel levels across the area. Existing fire lanes and forest roads are now blocked with debris, and many

public roads have only small open lanes not wide enough for fire units.

The Commission recommends a \$60 million congressional appropriation to fund the Mississippi Forestry Commission's State Fire Assistance/Hazard Mitigation Program and to provide assistance to local volunteer fire departments. The acquisition of additional fire fighting equipment, contract funding for water drop capability with helicopters and/or small aerial tankers, more water handling capability in the form of slip-on pumper units, larger wildland fire engines for ground attacks, and additional personnel and training to staff the units, are all required. Moreover, further mitigation activities are necessary because dead timber will take years to deteriorate to where it no longer poses a significant fire threat.

Timber Sales/Salvage

Logging/Storage Yards. The unsurpassed volume of downed timber in the affected areas has created complex issues. The amount of available downed

and damaged timber quickly saturated the market, impacting timber prices statewide. It is anticipated that industry-owned lands and large land holdings will be harvested first, leaving the small private, non-industrial forest landowners with timber that cannot be sold. Shipping distances, increased fuel costs, logging restrictions, reduced efficiency of harvest, availability of loggers, housing for loggers, insurance limitations on loggers, weight limits, and lack of rail transportation are other factors affecting the success of harvesting the downed timber.

The Commission recommends that the U.S. Department of Agriculture, Forest Service Economic Action Program be funded with \$4 million to assist loggers with fuel, housing, and the development of wet storage yards.

Salvage Income Tax Exemption.

While much of downed timber will have little value due to splintering of the logs, prompt salvage is needed to capture value and prevent future insect and wildfire outbreaks. The Commission



supports efforts to ensure the preservation of salvaged wood for future manufacturing by a process termed “wet storage.” The forest products industry and small wood dealer businesses have acted quickly to expand the capacity of wet storage yards to keep salvaged timber viable for utilization for as long as two years and increase the value recovered in salvage operations for landowners.

The Commission recommends that income derived from salvage cuts in the affected areas be exempt from federal income tax of up to \$2.5 million for each landowner who has filed reforestation plans by 2010. The capital gain tax also should be limited to 5 percent or 10 percent of the value of the salvaged timber. The Commission also recommends that an additional incentive allow landowners to avoid taxes on salvage income by reinvesting in qualified replacement property, including the cost of restoration and reforestation.

Casualty Loss Reform. While some landowners can write off losses on federal income tax returns, many landowners affected by Hurricane Katrina have little or no basis in timber to provide this option. Long-term landowners and those who received gifted property presumably have little unused basis in it. The Commission recommends a casualty loss be allowed for these landowners when filing federal income taxes, which would allow a loss to be taken on some percentage of market value prior to the disaster, rather than on basis. The program would provide a set rate per unit destroyed and a requirement for professional appraisal to help prevent fraud.

Infrastructure and Public Safety

Infrastructure. In Mississippi, the forest products and agricultural industries must rely on safe and well-engineered

An essential project is the construction of Mississippi Highway 15 from the Coast, north to the Tennessee state line. This road will support the growth of the region and provide a critical hurricane evacuation route.

road systems to transport products to markets and maintain their global competitiveness. New highway construction to encourage economic development and extensive repairs to damaged roads and bridges in South Mississippi are now necessary. An essential project for Mississippi is the construction of Mississippi Highway 15 from the Coast, north to the Tennessee state line. This road will support the economic growth of the region and provide a critical hurricane evacuation route.

The Commission recommends that MDOT implement the following:

- Construct a bypass for Highway 98 that will allow traffic to flow south and west of Hattiesburg. Currently, through traffic must travel through a congested urban area, passing retail, commercial, and residential areas.
- Construct a four-lane highway connecting Mobile, Ala., with McComb, Miss., thereby creating the “Mobile to McComb Highway.” (Route details in the full committee report on www.governorscommission.com.)
- Widen U.S. Highway 26 to four lanes from Lucedale west to the Pearl River Bridge near Bogalusa. This route is a major highway, with heavy truck traffic that has significantly increased over the past 10 years. Every day, 450 to 600 loads of forest-related products travel to various Mississippi and Louisiana mills between Wiggins and Bogalusa.
- Widen U.S. Highway 589 to four lanes from Seminary, adjacent to U.S. Highway 49, south to I-59 at the Purvis exit. This route would provide a safer route and relieve traffic on the north and west sides of Hattiesburg.

Public Safety. Hurricane Katrina has created a significant need for the federal

Agriculture, Forestry, and Marine Resources

Mississippi's stake in agriculture, forestry, and marine resources is enormous.

Forestry and Agriculture

Before Katrina:

- Forestry and forest products had an annual economic value of \$13.4 billion.¹
- A total of 130,000 people, 10 percent of the state's workforce, worked in the forestry industry.²
- The state had more than 5,000 tree farms, the most in the United States; private, non-industrial landowners owned 69 percent of the state's 18.6 million acres of timberland.³
- The poultry industry, the state's largest agricultural industry, had a production value of more than \$2.1 billion in 2004; the state's seven integrator companies contract with 2,000 producers with 7,500 total poultry houses growing almost 840 million birds annually.
- Mississippi's dairy producers had revenues of \$63 million in 2004.

Marine Resources

- The total economic impact of the state's commercial seafood industries in 2003 was over \$900 million with 17,000 employed.⁴
- Recreational fishermen in 2004 took over one million trips from the Coast with an economic impact of \$170 million.⁵
- In 2004, about 184 million pounds of seafood entered Mississippi ports with a value of approximately \$44 million to the fisherman and a total value exceeding \$450 million.
- Prior to Katrina, 35 processing plants in the state and 29 wholesale operations employed 2,700 people.
- The shrimp industry alone is estimated to have an annual economic impact of \$200 million to \$250 million.
- Before the hurricane, there were 500 shrimp vessels employing more than 1,600 individuals.
- Menhaden landings in 2004 were close to 159 million pounds valued at \$9.5 million.

Hurricane Katrina's damage to these industries was staggering.

Sample estimated losses in key industry sectors:

- \$6.3 billion in long-range recovery impact, commercial seafood and marine resources
- \$2.2 billion total, agriculture and forestry ⁶
- \$1.3 billion, timber
- \$144 million, row crops ⁷
- \$102 million, catfish farmers ⁸
- \$70-95 million, beef cattle industry equipment ⁹
- \$21 million, dairy ¹⁰
- \$17-19 million for nurseries, fruits, and vegetables ¹¹

¹ Mississippi State. Mississippi Forestry Commission; Mississippi Forestry Association. *A Response, Recovery, and Renewal Plan for Mississippi's Forest Resource*. 19 Oct. 2005: 2.

² Mississippi Forestry Association. <http://msforestry.net/>.

³ Mississippi Forestry Association. <http://msforestry.net/>.

⁴ Walker, William W., Ph.D. *Expert Views on Hurricane and Flood Protection and Water Resources Planning for a Rebuilt Gulf Coast*. Testimony before United States House of Representatives Subcommittee on Water Resources and Environment. 20 Oct. 2005: 2.

⁵ Walker, Expert Views 2.

⁶ Lester Spell, Jr., D.V.M., *Preliminary Assessment of Damages to Mississippi Agriculture and Forestry from Hurricanes Katrina and Rita*. 30 Sept. 2005: 1.

⁷ Spell, Preliminary Assessment 4.

⁸ Spell, Preliminary Assessment 5.

⁹ Spell, Preliminary Assessment 5.

¹⁰ Spell, Preliminary Assessment 5.

¹¹ Spell, Preliminary Assessment 7.

interstate weight limits to be amended to address safety issues and the increased hauling needs of the forestry industry. States have long set weight limits for their roads and highways. With the advent of the Dwight D. Eisenhower System of Interstate and Defense Highways (the “interstate system”), the federal government established its own weight limits for interstate highways, allowing a gross weight tolerance of 84,000 pounds. A significant number of states, not including Mississippi, have received various exemptions from the interstate highway limits. On state roads, Mississippi allows a 5 percent gross weight tolerance or 84,000 pounds gross weight and no axle limitations with the applicable harvest permit. As a result of the greater state road weight limits, larger trucks are required to traverse smaller congested state roads, rather than the more efficient and safe interstate routes.

The Commission, with support from a coalition of forestry and agricultural organizations, including the Mississippi Forestry Association, the Mississippi Loggers Association and the American Loggers Council, recommends that the state obtain a federal exemption allowing for forestry and agricultural commodities to be hauled on interstate highways with state weight limits and restrictions. The exemption would shift a substantial amount of existing trip mileage from two-lane secondary roads and state highways to interstates, resulting in fewer trips and much improved public safety. (Suggested enabling legislation is contained in the full committee report at www.governorscommission.com.)

Insects and Diseases. Before Hurricane Katrina, approximately 70 million acres of public and private lands nationwide were at serious risk from

26 different insects and diseases, most of which are non-native, with \$137 billion spent annually in control measures. Considering the threat of the southern pine beetle and the black turpentine beetle to already stressed coastal forests, the Commission recommends \$2 million be appropriated to the USDA Forest Service’s Cooperative Lands Forest Health Management Program.

Damage Assessment. Initial damage assessments have provided an overall view of forest damage in Mississippi. Additional assessments are needed to provide detailed information to forest industry and land managers on the resource base and recovery options. These assessments must take place soon to ensure maximum resource utilization and to assist the industry in operational decisions. The additional monitoring of recovery efforts is needed over the long term to ensure restoration of the resource base needed for future industrial operations. The Commission recommends that the Mississippi Institute for Forest Inventory receive \$2 million and the USDA Forest Service receive an additional \$1 million to assess wildlife, fisheries, wetlands, scenic and natural areas, hunting and fishing losses, tourism potential, and related topics.

Forest Resources Assessment, Research and Education. A research and education program must be a fundamental component to the rebuilding effort and will provide the guidance for effective recovery. Programs developed through research and education will demonstrate to local communities their options for building a new Mississippi forest, one designed to accomplish specific objectives for economic development and restoring the environment.

The faculty and staff at Mississippi State University’s College of Forest Re-

A research and education program must be a fundamental component to the rebuilding effort and will provide the guidance for effective recovery.

sources, the Forest and Wildlife Research Center, and Alcorn State University’s Small Farm Development Center and the Extension Program have the expertise and are prepared to provide leadership through research and education to address the long-term restoration of the state’s forestry resources.

The Commission recommends utilizing, in the designated Presidential Disaster Areas, Mississippi State University’s College of Forest Resources and Forest and Wildlife Research Center to: 1) assist the recovery and restoration of Mississippi’s forest, wildlife, fisheries, water, and aquatic resources; 2) assist in the rebuilding and expansion of Mississippi’s forest products and outdoor based recreation and tourism industries; 3) evaluate and assist in recovery of the economic and rural social infrastructure; 4) develop rapid damage detection protocols for natural disasters; 5) develop current geospatial and decision

support systems for industrial and community use of our restored resources; 6) evaluate and assist in developing policies regarding recovery of the natural resources and the resiliency for future natural disasters; and 7) to assist small, disadvantaged farmers and communities access available resources.

The Commission recommends a congressional appropriation of \$10 million to fund the assessment, research and educational efforts.

Agriculture

Row Crop Farming

The high fuel costs and crop damage resulting from Hurricane Katrina has made 2005 the most expensive crop

production year in Mississippi history. Row crop farmers face unprecedented challenges, including rising production costs and limited access to appropriate financing. Farm loans are increasingly difficult to obtain with low commodity prices, global competition for markets, and urbanization. With these current farm economic conditions, the state should enact programs to enable farmers to remain competitive in today's market through tax credits, cost-share programs, low-interest loan programs, and expanded insurance programs. States such as Texas, Nebraska, Oklahoma, North Dakota, Missouri, and many others have initiated similar, successful programs. As a result, the Commission recommends, of the following programs in the desig-

nated Presidential Disaster Areas:

- **Low-interest loans and cost-share programs.** These programs should be available to help with working capital, the purchase of machinery, or the acquisition of renewable farmland. In 1992, the Mississippi Legislature passed, but never funded, a guaranteed loan program for beginning farmers. Recognizing the existing need, the Commission supports its funding.
- **Expansion of national agricultural insurance programs.** Expansion of the federally backed agriculture insurance program would be helpful not only to Mississippi but also to other agriculture producing states by broadening insurance coverage



to a greater number of counties and food crops, including fruits, vegetables, nuts and others. For crops that are ineligible for the federal crop insurance programs, the producers' only option is participating in the USDA's Farm Service Agency's Non-Insured Assistance Program, which provides only minimal or catastrophic risk protection when low yields, loss of inventory, or prevented planting occur due to natural disasters. In the case of disaster, the program covers the amount of loss not greater than 50 percent of the expected production, and the payment is based on 55 percent of the average market price of the specific commodity. Only about 50 percent of Mississippi's commercial food crop producers are currently enrolled. Other pilot programs should be enacted to cover various other food crop producers to allow them to recoup losses.

- **Tax credits.** In Nebraska, tax credits are offered for retiring farmers who lease or sell land to existing or young farmers in order to sustain the agriculture land base already in production. Landowners receive a refundable tax credit equal to 5 percent of the amount of rent received each year, for three years, on each rented asset leased to individuals in the farm sector. Also, farm income tax credits prompted when farm diesel and gas reach predetermined levels could benefit farmers tremendously in years of excessive energy expense. The Mississippi Legislature should authorize similar tax credits for Mississippi farmers.
- **Development of alternative fuel plants.** With new national opportunities in alternative energy, row

crop farmers could help sustain bio-diesel and ethanol production plants within the state. Technology suggests that if on-road diesel fuel contained 1 percent bio-diesel, it would utilize 250 million bushels of soybeans, increasing prices at least \$0.35/bushel, and add more than \$900 million to the gross farm income. Considering the increased production of both forms of fuel and the state's proximity to large fuel usage markets, production of these alternative energy forms should be further analyzed by the state.

- **A crop disaster direct payment program.** Congress should authorize a supplemental direct payment to producers in disaster counties through existing farm bill mechanisms. Eligible Mississippi row crop farmers should receive the following through direct payments: \$89.2 million for cotton farmers, \$19.075 million for rice farmers, \$17.4 million for corn farmers, \$18 million for soybean farmers, and \$190,000 for grain sorghum farmers. This would provide quick assistance to row crop producers in Mississippi.
- **Land, Water and Timber Resources Act.** The Mississippi Land, Water & Timber Resources Act is designed to assist value-added, agricultural projects in the initial startup costs. Since the program's inception in 2000, nearly \$30 million has been invested in 41 projects. It has proved invaluable in creating new and varied opportunities for Mississippi farmers and landowners. Extending and expanding funding for the Mississippi Land, Water & Timber Resources Board will stimulate future development and provide different avenues from which our farm sector

has been absent.

- **Mississippi Development Authority's Agriculture Business Loan Program.** This program was developed in the late-1980s to help agricultural producers add value to their crop through working capital purchases. Prior to the hurricane, the program was financially stressed. Expansion and increased funding is necessary to encourage investment. Congress recently approved \$200 million for the Emergency Conservation Program (ECP) to rehabilitate farmland damage caused by natural disasters and \$300 million through the Emergency Watershed Program (EWP) to remove debris, repair structures, and reshape and protect eroded land.

Poultry

The poultry industry, Mississippi's largest agricultural industry, faces unprecedented economic and environmental challenges. To address them, the Commission recommends:

Direct Compensation. Based upon estimates from Mississippi State University's Poultry Science Department, direct compensation through USDA grant sources is needed to offset the following categories of losses:

- **Fuel.** The Commission and the Mississippi Poultry Association estimate a need of \$6.32 million to offset one-time additional costs of fuel resulting for electrical power loss during times of high temperatures. Of the 7,500 poultry houses in the state, 4,388 will likely require the assistance. FEMA grants may be available to fund this program.
- **Income interruption.** The Commission and the Mississippi Poultry Association estimate needs of \$1.61 million in income interrup-

tion assistance for producers. The amount is based on the loss of 6 million birds, averaging a weight of 5.5 pounds, at a loss of 5 cents per pound. USDA may be an available funding resource.

- **House damage and loss.** While almost all producers have some form of insurance on their poultry houses, due to tax depreciation, many farmers will not receive insurance payouts that approximate their reconstruction or repair costs. The Commission supports the implementation of a cost-share assistance program that would help rebuild poultry houses after insurance settlements, in addition to low-interest disaster loans for the producer. USDA grant opportunities may exist to fund this program.

Advancing environmental issues. Mississippi State University and the Land, Water, & Timber Resources Board are conducting research and demonstration projects that address problems associated with litter disposal. Considering the importance of the industry, a priority must be placed upon finding effective methods for disposal that are environmentally safe, non-offensive to the public, and practical to the farmer. Additionally, the state Department of Environmental Quality is studying a project funded by the Land, Water and Timber Resources Board that involves installing an on-the-farm anaerobic digester to turn poultry litter into methane gas, thereby eliminating odor concerns.

Accelerating port redevelopment. The state should immediately rebuild the commercial components of the port facilities in Pascagoula and Gulfport, which shipped more poultry to Russia than any other port in the United States. Prior to rebuilding the ports, temporary

Poultry—Mississippi's largest agricultural industry—faces unprecedented economic and environmental challenges.



freezer facilities must be secured and installed to allow Mississippi products to be exported to world markets.

Mississippi replacement tax relief. The industry standard tax on replacement parts is 1.5 percent. While Mississippi's tax is 1.5 percent on start-up purchases, replacement parts are taxed at 7 percent. To assist poultry farmers in replacing parts and machinery damaged or destroyed by Hurricane Katrina, the state legislature should lower the state tax on such replacement parts and services to the industry standard.

Beef and Dairy Cattle

FEMA assistance. An estimated 175 dairy farms sustained \$8 million in equipment, materials, labor, and dumped milk losses. It is estimated that farmers spent approximately \$437,500 over normal operational expenses for energy costs alone. The Commission recommends that FEMA assistance be secured to reimburse these dairy producers for up to 100 gallons of diesel fuel per day. Due to milk being considered a "critical food," Louisiana dairy farmers received the payments, and Mississippi dairy farmers should be similarly reimbursed.

Dairy Disaster Assistance Program. Another substantial source of income loss caused by Hurricane Katrina to dairy producers was the dumping of milk because producers were unable to keep it cool or transport trucks were incapable of accessing the farms.

Throughout South Mississippi, grazing opportunities for the fall have been lost due to the loss of fencing, lack of resources to plant rye grass, and reduced grazing capacity because of drought. Moreover, some winter feed supplies were destroyed by hurricanes, and early use of hay and silage supplies will create a short supply. As a result, fall graz-

ing will be minimal, thereby further limiting production. The Commission, therefore, recommends federal funding, which could mirror the provisions of the dairy disaster assistance program set forth in the Military Construction Appropriations and Hurricane Supplemental Appropriations Act of 2005, as follows: (1) farmers should be eligible for 50 percent of repair or replacement of uninsured losses to dairy operations structures at an assistance level not to exceed \$250,000; (2) \$1.5 million to assist dairy farmers in covering production and spoilage losses; and (3) \$13.6 million to assist dairy producers with prolonged production decreases and excessive costs incurred over the next 12 months due to hurricane damage.

Livestock Assistance Program. Feed shortages will be experienced throughout Mississippi in the coming months, causing farmers to incur increased costs to purchase feed. In order to partially recover Mississippi livestock producer feed losses, the Commission recommends federal funding in the amount of \$17 million for the livestock assistance program, which could mirror the provisions of the dairy disaster assistance program set forth in the Military Construction Appropriations and Hurricane Supplemental Appropriations Act of 2005. The program will allow producers with 30 percent grazing/feed loss due to the hurricane to qualify for direct payments.

Catfish Farming

The catfish industry has also been affected by Hurricane Katrina. The weather conditions damaged the levees used to ring the ponds and fostered the development of columnaris, a parasitic condition facilitated by stress-induced factors. Farmers had difficulty in aerat-

ing their ponds in the hot conditions following the hurricane. Other economic losses were the result of increased fuel costs to run generators and the inability of farmers to obtain feed. A total of \$17 million is required to address the needs of the catfish industry. The Commission recommends that USDA appropriate supplemental funds to reimburse catfish farmers for their losses similar to the previously funded Catfish Feed Assistance Program.

Nursery Plants, Fruits and Vegetables

In large part, Mississippi's nursery industry is located in the areas which were most severely affected by the hurricane. Significant portions of Mississippi's nursery sales are directed to local outlets that have been temporarily removed due to hurricane damage. As a result, the Commission recommends the following:

- Using the Nursery and Tropical Fruit Producer Hurricane Relief Act (H.R. 4031) to provide emergency relief to growers suffering losses from the hurricane. The Act codifies the nursery disaster program implemented in Florida due to the impact of three hurricanes in 2004. Nursery producers in designated Presidential Disaster Areas should be similarly eligible to seek reimbursement of costs associated with debris cleanup and removal. The bill also includes a provision for a special inclusion in the Tree Assistance Program for tree nursery growers, Christmas tree growers, and tree seedling producers.
- Expanding provisions set forth in the Florida Vegetable, Fruit and Tropical Fruit Disaster Program authorized with Section 32 funds or

reenacting it to apply to Mississippi fruit and vegetable producers' losses attributable to Hurricane Katrina.

Tree, Vine, and Bush Crops

Hurricane Katrina caused tremendous crop production losses, resulting in a need for replanting. These include products produced on a vine, tree or bushes, including pecans, blueberries, muscadines, and peaches. An estimated \$5.3 million is needed to assist these growers.

The Commission recommends that, through the Tree Assistance Program, authorized in the Farm Security and Rural Investment Act of 2002, Congress provide funds to assist producers. Under this program, producers are eligible for assistance if they suffered at least 15 percent mortality. Eligible producers can be reimbursed for 75 percent of the total cost of replanting with maximum payments of up to \$75,000 under the program.

Marine Resources

Hurricane Katrina dealt a devastating blow to the beautiful Mississippi Gulf Coast, including its fish resources and industries and its highly productive coastal marshes and estuaries. The entire Mississippi coastline was subjected to the most damaging portion of the storm, being situated in the northeast quadrant.

The Category 4 winds battered the coastline for 12 hours, causing an unprecedented storm surge ranging from 15 to 35 feet. The loss of fish and shellfish nursery habitat, fisheries-related jobs, and fisheries infrastructure, including boat dockage, public access, and seafood processing capacity will obviously have a long-term adverse impact to the area's economy. Its economic impact, however, may be shortened with imme-

mediate and decisive involvement of local communities and government support.

The Commission, in cooperation with several marine resource user groups, supports a three-phase approach to improve Mississippi's marine resources for future generations.

Phase 1 addresses immediate action to restore marine resources as quickly as possible. Phase 2 sets a rebuilding schedule for up to five years for restoration of Mississippi's natural storm defenses, flood control capacities, coastal habitats, and commercial and recreational fishing infrastructure to pre-Hurricane Katrina levels. Phase 3 consists of a long-range plan of up to 20 years to return Mississippi's marine resources and water-dependent marine resource industries to pre-Hurricane Camille levels.

The long-range goals address: restoring and creating essential marine habitats; improving living marine resources; providing conditions that will encourage a working waterfront for marine resource industries; and supporting research, education, outreach, and resource management of marine resources and water dependent industries.

The total cost to rebuild Mississippi's marine resources and water-dependent marine resource industries to pre-hurricane Camille levels is estimated to be \$7.53 billion.

The most pressing short-term needs of the marine resources and related industries center on the needs of the commercial and recreational fishing industries. The Commission estimates the cost to address the immediate needs set forth below at \$1.2 billion. While many of the Commission recommendations set forth below have begun, it is imperative that they be completed within the next 12 months:

Restoration of Infrastructure and Resources

Infrastructure. The most immediate need addressed by the Commission was the lack of the essential seafood infrastructure to support the industry and the jobs it provided. Infrastructure was destroyed or heavily damaged, including supporting marinas, harbors, piers, and public launching facilities. Most of the shore-side infrastructure for the recreational fisheries, commercial fisheries, and charter industries that provide fuel, ice, and bait were similarly affected. They must be immediately rebuilt with funds from public and private sector sources, and they must provide for temporary infrastructure while long-term rebuilding efforts are underway.

Debris removal. Numerous large fishing vessels remain aground in a variety of locations, including marshes. Hurricane-related hazards to waterway navigation must be removed. The Commission recommends that the United States Coast Guard and other federal agencies lead this effort.

The establishment of seafood industrial parks. The Commission recommends a joint government-private sector effort, with federal and state incentives, to develop all-inclusive seafood industrial parks. The Commission recognizes one deterrent to the development of seafood parks is pressure on the coastal real estate market. Considering, however, the importance of a diversified economy, tourism, and overcoming environmental concerns, the state should, in a manner similar to other regions of the country, set-aside tracts of land to establish public and privately funded seafood industrial parks in Hancock, Harrison and Jackson counties.

Financial assistance to fishermen. Many commercial fishermen are not

working due to damage to their vessels or the destruction of living marine resources. Some form of direct federal compensation should be provided as a retention incentive.

Restoration of oyster reefs, shrimp nursery areas, and other habitats. Mississippi's oyster reefs suffered catastrophic damage, and important shrimp nursery areas were similarly affected by the hurricane. The oyster reefs were damaged as a result of silting, sediment deposition, and scouring from the hurricane waves. While the original reef structure beneath the sediments is presumed intact, revitalization efforts combining cultch deposition and turning over cultured oysters is needed to restore the reefs to their former levels of productivity. It is believed it will take at least two years to revitalize the oyster beds. Federal funds should be used to restore oyster reefs, shrimp nursery areas, coastal marshes, and other estuarine habitats. The Mississippi Department of Marine Resource should be lead this restoration along with local partners such as the Mississippi-Alabama Sea Grant Consortium, the Nature Conservancy, Coastal Conservation Association, the charter boat industry and other local seafood and sportfishing organizations. Federal partners should include the Army Corps of Engineers, NOAA Fisheries, NOAA Restoration Center, Department of Transportation, Environmental Protection Agency, and Fish and Wildlife Service.

Protecting, restoring, and creating essential ecosystems. Hurricane Katrina's devastation reduced both the total acreage and function of Mississippi's estuarine and vegetative wetland habitat. The Commission estimates the cost of restoring them at \$2.2 billion. The decreased area and fragmentation has led

to a decline in the essential ecological functions provided by these habitats. The Commission supports the use of the Estuary Restoration Act of 2000, which calls for a national strategy with a goal of restoring 1 million acres of estuarine habitat by 2010.

Mississippi's offshore barrier islands include Petit Bois, Horn, Ship and Cat Islands. This island chain, located 12 miles south of coastal Mississippi, provides a natural first line of defense against hurricanes and other tropical storm systems. Unfortunately, these natural barriers have suffered a series of onslaughts – first by Hurricane Camille in 1969, which created a major cut through Ship Island; then by Hurricane Georges, which breached Horn Island; and several years later by Hurricanes Ivan and Katrina, which caused further damage. Hurricane Katrina alone destroyed over 2,000 acres on these four islands and drastically reduced the functionality of the remaining acres.

Rebuilding should focus on restoration and enhancement of riverine floodplains and near-shore resources. Specific activities include de-snagging and streambed reconfiguring of some tributaries to our major river systems to reduce flood potential; to reclaim barrier islands, including Deer Island; and to restore coastal marsh habitats and beaches. The Commission recommends specific restoration efforts including:

- Mississippi Department of Marine Resources should coordinate a survey of the current size of estuarine habitat by using historical side-scan sonar and conventional surveys to document the pre-hurricane Katrina status of the state's oyster reef resources and coastal preserves. Aerial surveys of the coast's marshlands could provide similar measures for

the wetlands. The effort will result in the specific areas where restoration should be focused.

- The Mississippi Department of Marine Resources will coordinate with the U.S. Army Corps of Engineers (Mobile District) to restore Deer Island to its 1900 footprint by reclaiming the recently created

55 acres of marsh on the northeast end damaged by Hurricane Katrina, filling the "gap" created by previous hurricanes, and continuing restoration of additional marsh and beach acreages to essentially double the footprint of Deer Island as it exists today.

- The Mississippi-Alabama Sea Grant

The loss of fish and shellfish nursery habitat, fisheries-related jobs, and fisheries infrastructure, including boat dockage, public access, and seafood processing capacity will obviously have a long-term adverse impact to the area's economy.



Photo: © Linda Saxon Nix

The Fertile Fisheries Crescent is home to a wide variety of estuarine-dependent species, and an area that also supports some of the nation's most productive recreational and commercial fisheries.

Consortium has received a grant to coordinate the development of an adaptable estuarine habitat restoration plan which will describe and prioritize restoration sites. The Mississippi Department of Marine Resources should take the lead in acquiring funding for coastal preserves, acquisition, and management by the public and private sectors.

- Mississippi Department of Marine Resources will coordinate the utilization of bridge rubble from the Biloxi-Ocean Springs and Bay St. Louis bridges to create reefs, erosion control, and wave attenuation structures.

The Commission recommends that the Mississippi Legislature coordinate the following three long-term restoration efforts, including:

- Restoring the Pearl River and tributaries from Jackson to Mississippi Sound; the Pascagoula drainage basin to Mississippi Sound; and other Mississippi Rivers and coastal watersheds to the Sound;
- Using the Mississippi Coastal Area Restoration Initiative for restoration of mainland coastal marshes and beaches, including an estimated 1,890 acres of coastal marshes and forests that were severely damaged or destroyed;

- Using the Mississippi and Louisiana Coastal Studies to guide the implementation of water and silt diversions, reduction in saltwater intrusions, fisheries infrastructure restoration, and related projects.

Improving Living Marine Resources

The Mississippi Sound and the adjoining waters of the open Gulf of Mexico lie in an area long known by fisheries biologists as the Fertile Fisheries Crescent. Home to a wide variety of estuarine-dependent species, the area also supports some of the nation's most productive recreational and commercial fisheries. Specific Commission recommendations to improve living marine resources, estimated to cost \$1.84 billion, include:

- **Rebuilding Oyster Reefs.** Based on preliminary resource surveys, over 11,500 acres of productive oyster reef areas suffered extensive damage with estimated mortalities ranging from 90-95 percent as a result of silting, sediment deposition, and scouring from the waves generated by Hurricane Katrina. The Commission recommends revitalizing reefs through a combination of cultch deposition and turning over covered oysters to restore these reefs

to their former productivity levels. The Mississippi Department of Marine Resources should take the lead in coordinating with the oyster industry the rebuilding and creation of new oyster reefs using funds from NOAA's National Marine Fisheries Service, the NOAA Restoration Center, the Department of Transportation, U.S. Fish and Wildlife Service, and state sources.

- **Restoring Artificial Reefs.** Mississippi's inshore and offshore artificial reefs were extensively damaged by the hurricane. The program created artificial fishery habitat by placing derelict vessels, concrete rubble and other structures at specific locations in federal waters offshore from the state. The areas provided habitat for numerous recreational and commercial fish with an annual economic impact of approximately \$80 million. They must be restored. Mississippi Department of Marine Resources should take the lead in coordinating with the sportfishing industry the rebuilding of artificial reefs using funds from NOAA's National Marine Fisheries Service, the NOAA Restoration Center, The Department of Transportation, U.S. Fish and Wildlife Service, state and local sportfishing organizations.

- **Rebuilding the Sea Trout Hatchery.** Mississippi's spotted sea trout hatchery, a joint venture of the Mississippi Department of Marine Resources and University of Southern Mississippi's Gulf Coast Research Laboratory, was completely destroyed by Hurricane Katrina and must be rebuilt. The Mississippi Department of Marine Resources should take the lead in coordinating with the sportfishing industry the rebuild-

ing of the Sea Trout Hatchery using funds from NOAA's National Marine Fisheries Service, Department of Transportation, U.S. Fish and Wildlife Service, and state sources.

- **Developing an Environmentally Sustainable Marine Aquaculture Industry.** Sustainable marine aquaculture technologies for marine finfish and molluscan aquaculture should be developed to provide job alternatives for the commercial fishing and other marine related industries. The Mississippi-Alabama Sea Grant Consortium will coordinate with the Mississippi Department of Marine Resources, state universities, and local constituents in the development of a sustainable marine aquaculture industry that is geared toward the development of jobs for the seafood industries. Funding should be sought through NOAA.

Establishing Conditions That Will Encourage a Working Waterfront

Cultural Impact. The culture of the Coast, especially in Biloxi, has been shaped to a large extent by shrimpers, oystermen, small boat builders, net menders, and seafood processors. The famed Biloxi Schooner, a symbol recognized throughout the United States, was developed specifically to navigate the shallow waters inside the barrier islands. Among the cultural resources lost or significantly damaged as a result of Hurricane Katrina were the recently restored Ship Island Lighthouse; the Round Island Lighthouse near the mouth of the Pascagoula River, which was undergoing restoration work; Beauvoir, the historic home of Jefferson Davis; the Old Red Brick House; Grass Lawn; Tullis-Toledano Manor; and the Church of the Redeemer. The

Seafood Industry Museum and the J.L. Scott Marine Education Center in Biloxi were also destroyed.

Inland Processing Plants. While the pressure on the coastal real estate market is significant, it is still necessary to set aside some areas in Jackson, Harrison and Hancock counties through zoning to accommodate the commercial fishing industry. The Commission has also studied the possibility of establishing processing plants inland in industrial parks, but ambient air standards and water discharge issues would likely limit the areas where such operations will be allowed. Further, with an inland facility the catch is not unloaded directly from the boat, rather it is loaded onto trucks and then driven to the inland facility, increasing cost and delivery time. There is land at the mouth of the Pascagoula River and along its banks that would be immediately compatible with commercial fishing operations, including processing with virtually zero population density. There have been such operations conducted off and on in this area for decades, including E.G. Purina Pet Food, Gulf Cities Fisheries, and Zapata Haney. While steps should be taken to preserve as much of the industry in existing locales as is possible, new sites also should be explored, so that the industry can grow larger than it was before the hurricane.

The Commission recommends the following, which are estimated to cost \$1.225 billion:

- Implement federal and/or state legislation in support of a working waterfront. The Commission recommends that the state acquire property and designate it for public access and for use by water-dependent industries, including docking and service facilities for Mississippi's

commercial and charter fishing fleet. Pascagoula's Singing River Island, the current site of the homeport, is a potential all-encompassing site. There are also sites up the Pascagoula River in existing commercial areas that would be suitable for such activities and for growing supporting businesses. (Information about existing laws, pending legislation, and proposed measures that address this goal can be found in the complete committee report at www.governorscommission.com.)

- Congressional legislation to increase quotas for migrant workers to support the seafood processing industry.
- Implement smart growth practices and adopt zoning ordinances to foster mixed-use development by the state and local governments.
- Increase congressional funding for the Department of Interior's Coastal Mississippi National Heritage Program, which in 2005 received only \$250,000, to expedite the restoration of historical and cultural resources.
- Adoption by marinas of best management practices, including a Clean Marina Program, which can improve water quality.

DEFENSE AND GOVERNMENT CONTRACTING

As with all physical structures on the Coast, Mississippi's federal and private sector defense and government service facilities were severely damaged by Hurricane Katrina. Some were destroyed. While estimates of physical damage are still being compiled, early projections put the total in the billions of dollars.¹

Compounding the capital loss is the lack of housing for employees in this sector. Immediately following the storm, all production ceased; however, quick action by industry leaders resulted in a resumption of at least some work in a matter of days. Affected operations lost employees who evacuated and were unable to return. Many of those workers remain absent, creating a severe labor shortage. Northrop Grumman, for example, had approximately 15,000 employees at its Pascagoula and

Gulfport operations before the storm. Three months later, only 10,000 returned on a full-time basis. Some were working only part of the week because of the housing shortage.² Some may never return.

The responsibility and the resources for repairing much of the physical damage are relatively clear, especially with those facilities owned and operated by the federal government. More problematic are the connected issues that must be addressed before the military, other federal agencies and their contractors, and local governments can resume and grow their partnership.

Recommendations

Regarding the defense and government contracting sector, the Commission recommends the following:

Housing

While the overall housing issue is ad-



Aerial photo of Naval Station Pascagoula on Singing River Island.



dressed in another chapter, the Commission offers several recommendations that are unique to the needs of the defense and government contracting sector.

- The governor should seek the support of the state’s congressional delegation in requesting that the Department of Defense and other federal agencies permit, where appropriate, the use of government-controlled property as sites for temporary and affordable housing. The lack of available sites for trailers and other manufactured housing has been a major factor in delaying their installation. Perhaps property owned by Stennis may be used for temporary housing in Hancock County.
- FEMA should place larger defense and government contractors in direct control of immediate temporary housing for their own employees, both now and in the future. The Stennis Space Center (Stennis) has demonstrated this arrangement between two governmental entities, NASA and FEMA. The agreement between NASA and FEMA provides that some administrative expense be borne by the defense contractor, but the federal government is responsible for all costs associated with the execution of the temporary housing. Large defense contractors readily have the resources and management systems to reduce significantly the time line in installing temporary housing.
- The larger defense contractors in the region should become financial partners in the transitional housing programs coordinated by FEMA and Emergency Support Function 14 (ESF-14). If necessary, the Mississippi Legislature and United States Congress should grant financial incentives

Federal defense and government contracting in Mississippi represents:

- A \$6 billion state industry, 60 percent of which is focused in the Gulf Coast region hardest hit by Hurricane Katrina.
- More than 30,000 jobs.
- An estimated annual payroll of \$1.5 billion, generating millions in tax revenue to support community services, public education, and infrastructure maintenance.

Commission Research

to encourage this program. The contractor would bear the financial responsibility, but some of the expenses could be offset by governmental subsidies, tax incentives, and rental income. The contractor would realize its bigger return on investment through maintaining a workforce and continuing production.

Addressing the Skills Gap

The lack of workers, especially those with the required technical skills and professional training, directly affects the ability of companies to meet contract production schedules. This situation threatens not only current contracts but also those they may compete for in the future. Given the contributions of this sector to the state economy, the skilled labor shortfall is a significant economic development issue.

The Commission recommends that the boards of trustees of the community colleges immediately assess current and future training needs and establish programs to fill the gap. State funds exist for skill training and should be matched by the community colleges to specific needs of these industries.

Putting Retired Federal Facilities to New Uses

The Mississippi Army Ammunition Plant (MSAAP) at Stennis and Naval Station Pascagoula (NSP) are among facilities designated for transfer or closure by the Department of Defense and Congress as a result of the recent round of Base Realignment & Closure (BRAC) studies. For all practical purposes, both have been closed for some time. The ammo plant has been mothballed for years, and ships previously home-ported at Naval Station Pascagoula either have been decommissioned

or reassigned to other areas. The federal government should accelerate the ownership transfer process to assist efforts in stimulating the economy.

NASA is prepared to accept MSAAP at its Stennis location, and the official closing of NSP would allow Pascagoula to move forward with existing plans to incorporate that land in its economic development plan.

The governor and the Mississippi congressional delegation should urge the Department of the Army and the Department of Defense to transfer immediately the facilities with federal funding necessary to transition the facilities for other jobs creating opportunities at Stennis. NASA has identified programs that could utilize the facilities.

MSAAP sits on about 4,200 acres and approximately 1.7 million square feet of space, with a large portion of the facility available for growth. This square footage would almost double the square footage of Stennis; however, a recently completed facility assessment of the buildings at MSAAP found them to be in poor to fair condition with repair needs totaling \$49.2 million.³

NASA's concern with assuming ownership is the liability of approximately 1 million square feet of buildings that have been unoccupied and poorly maintained for over 15 years. This liability may be reduced by the recent announcement of an expansion of Pratt Whitney Rocketdyne operations, as well as expansions of other enterprises at the installation. There remains,

Fishing pier at Naval Station,
Pascagoula.



however, over 600,000 square feet that requires \$30.2 million in work, and NASA would have to meet the financial burden of this transfer without affecting obligations to its other missions.⁴

If NASA acquires the facility, it should use its established procedures and contractors to operate the facility consistently with the operations of Stennis. NASA should realize efficiencies in most of its operations, further enhancing the competitive position of the region. Stennis' impact on the regions is underscored by the state of Louisiana's reliance on the facility. Approximately 25 percent of Stennis' employees are from Louisiana, and the state passed legislation that allows it to spend its own economic development funds in Mississippi and at Stennis.⁵ Congress recently appropriated \$349.8 million to repair and harden NASA facilities that sustained hurricane damage.

The same uncertainty that plagued planning for MSAAP following its inclusion on the BRAC list also has complicated life for workers and officials at

Naval Station Pascagoula. This uncertainty of future use could adversely affect job-creation, and, like the MSAAP, the NSP land has significant potential for serving the recovery of South Mississippi's business base. The Commission, therefore, recommends an expeditious transfer of Department of Defense assets of the United States Navy and personnel from Naval Station Pascagoula on Singing River Island, and from the Lakeside Naval Support Facility (also in Pascagoula), so as to allow for the immediate, public/private redevelopment of the island site and associated real property and facilities.

The Commission further recommends the immediate reversion of both Naval Station facilities and associated properties to the state of Mississippi. The reversion should be executed with the federal government waiving compensation so as to lighten revenue expenditures of the state during its recovery from Hurricane Katrina.

If this transfer/reversion occurs in the manner prescribed, the City of Pas-

cagoula, Jackson County, and the state of Mississippi should immediately begin working with the Department of Homeland Security (DHS), the United States Coast Guard, and other federal/state agencies to develop a suitable reuse of Singing River Island. The reuse should serve both national security missions and appropriate private-sector development. The federal government also should consider transferring the Veteran's Hospital property in Gulfport to the city for better public utilization of the property.

Securing Our Opportunities to Compete

Considering the intense, competitive national and international business environment, local, county and state government entities should aggressively support the defense and government contracting industry. The Commission highlights the necessity of preserving and implementing incentives that allow this sector of the state economy to grow. Despite Katrina's severe blow to the tax base of the communities, all levels of government should be sensitive to the potential negative consequences of increasing the tax burden of defense and government contractors. Congress approved \$1.69 billion to ensure continuation of Naval shipbuilding activities on the Gulf Coast.





HUMAN SERVICES

The reports that follow from the Health and Human Services, Education, and Non-Governmental Organizations committees describe the most complicated and fragile systems that connect all Mississippians. In the best of times, the individuals and organizations responsible for these services are overwhelmed and underfinanced. In a time of national disaster, their capabilities are strained to the breaking point.

What has Katrina taught us about how we may better manage health, education, and social services?

- First, we must admit that the demands we place upon these systems are only likely to increase. There will be more storms. There will be more pressure from the effects of population growth, especially in the coastal region and especially for services to our most vulnerable residents – the very young, the very old, and the least affluent.

The sense of urgency a hurricane brings should help us focus on key goals.

We must:

- Replace crucial infrastructure. Help is coming. The recent federal appropriation will help hospitals, schools, and other institutions partly recover from the hurricane. Mississippians owe a debt of gratitude to Governor Barbour, Senators Cochran and Lott, and other members of the state's congressional delegation for securing those dollars.
- Seek value in collaborations and connections. Throughout this Commission report, you'll see advocacy for forming regional coalitions to reduce waste and increase effectiveness. That approach will be especially rewarding for cash-strapped nonprofits and government social services.

EDUCATION

While Hurricane Katrina dealt a devastating blow to all institutions of learning in the state, Mississippi now has a unique opportunity: It may analyze where it was before the hurricane, the losses sustained from it, and the future the state should chart as the recovery process continues. To grow a thriving economy and high quality of life for its citizens, Mississippi must have a strong education system — one that prepares children to become thoughtful, productive adults.

The recovery from Hurricane Katrina presents the opportunity to implement progressive measures that profoundly improve education in both South Mississippi and across the state. Education proponents should use the destruction of Katrina to strengthen their resolve to transform the state's education system

on a large scale. Starting with affected counties and moving toward a statewide network, it is possible to partner, lead and innovate the way to a better future.

The Damage

Not only did Katrina damage and destroy school structures, it also damaged and destroyed materials acquired by teachers over many years of service and destroyed intellectual property garnered by universities from years of research.

The hurricane levied a tremendous toll on students, parents, teachers, and administrators, uprooting them from their homes and lives and giving them a new set of challenges. More than 15,000 students and hundreds of teachers and administrators were left homeless along the Coast. Immediately following Katrina, 10,000 displaced students from throughout Mississippi and from other states enrolled in school districts that



Elementary school in Bay St. Louis

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By the Numbers	Number	Total	% of Total
School Districts with Damage	79	149	53%
Schools Damaged	263	1005	25%
Schools Totally Destroyed	16	1005	1.5%
School Buses Damaged	159	7031	2.3%

Source: Mississippi Department of Education; Mississippi Department of Education. Annual Report, Reporting School Year 2003-2004. 2005.

were not their own. Other states have requested the records of approximately 1,400 Mississippi students who have transferred, at least temporarily.¹

The funding stream for the schools has been severely compromised. Local school districts may wait years before ad valorem tax revenue returns to pre-Katrina levels. In addition, the gaming industry on the Coast, which generated a significant portion of the local tax revenue for schools, was significantly derailed in Katrina's path. The time required for the gaming industry to repair and rebuild will be very costly to the Coast's school districts. The Mississippi Department of Education (MDE) estimates that tax revenue from gaming would have been over \$300 million to school districts but lost due to the hurricane.

Colleges and universities also sustained significant damage. The administration building at the University of Southern Mississippi, Gulf Park campus was damaged beyond repair. The first floor of all front buildings, including Administration, Lloyd, Hardy, and Elizabeth Halls, was completely washed out. The new library and the Advanced Education Center were built to modern codes but sustained damage, including water on the first floor. The Cook building, Provost's home, and Cox Library were destroyed.

The Marine Education Center Building located at Point Cadet in Biloxi is condemned. The marine research site of the Gulf Coast Research Lab, which produces between \$12 and 14 million in work per year, lost significant intellectual property such as specimen collection and research data. Ten community colleges suffered damage from the hurricane. Damage to facilities totaled over \$68 million, while replacement costs for textbooks, instructional materials, career tech, computer and science labs and library/media holdings totaled \$1.75 million. Faculty and staff housing provided by the colleges suffered damage totaling \$500,000.²

By December, enrollment in the districts hardest hit by the hurricane returned to at least 75 percent of pre-Katrina levels. Several districts have returned to full pre-hurricane enrollment, but much work lies ahead to rebuild Mississippi's education systems.

Where We Are Now

With regard to early childhood care, many facilities that have reopened are facing shortages of food and hygiene supplies for ongoing programs. Those not licensed by the Head Start program may face a funding shortage. When the state's waiver of the usual certification requirements for state aid expires, some children enrolled after the hurricane

may not remain eligible. The question of where those children will receive services if parents otherwise provide them looms large.

In K-12, the immediate crisis has passed, and schools have reopened. FEMA-provided portable classrooms have helped bridge the gap and provide instructional space until new buildings are built and damaged buildings are repaired. Schools now must decide how and where to rebuild. Many families will not face the risk of another major hurricane and will move inland, adding site selection and design capacity to the list of mounting concerns for districts repairing and rebuilding.

The funding issue is crucial. School districts have relied heavily on reserve funds to reopen. With ad valorem revenue dropping dramatically, the Governor's Office and state superintendent have successfully pursued federal funding to make up for the loss. School districts will need the best estimates of cash flows from state and local sources to offset the loss of tax base and the shifts in enrollment after the hurricane. This new federal funding must be carefully shepherded and allocated appropriately.

In higher education, an immediate challenge is to accelerate our institutions' abilities to develop graduates whom the post-Katrina recovery period demands. The Mississippi Department of Employment Security estimates that there is a shortage of 20,000 skilled workers on the Coast. The state's workforce development programs must play an important role in meeting these needs, and high school vocational and technical centers and community colleges should be utilized as skilled workforce training centers. Grants from the U.S. Department of Labor or the U.S. Department of Agriculture's Rural En-

terprise Grant program may be available to fund this workforce training.

Two months after Katrina, more than 25,000 workers remained unemployed. State funding sources for workforce development are depleted, so additional resources must be found elsewhere to increase training programs and prepare existing workers for new kinds of jobs.

Recommendations

The Commission proposes the following:

Early Childhood

- DHS and the Governor's Office should oversee implementation of state proposals to assist in the recovery of programs on the hard-hit Coast and form an advisory group of early childhood program directors and teachers, community college early childhood staff, public school officials, child care resource and referral staff, representatives from the early childhood program at Keesler Air Force Base, and the Governor's Office.
- The Mississippi Legislature should enact legislation that would require DHS to transfer no less than 20 percent of Temporary Assistance for Needy Families (TANF) grant funds into Child Care Development Funds (CCDF) each year.
- The Mississippi Legislature should enact legislation that would require the DHS to meet matching fund requirements that would maximize the state's access to federal CCDF funds each year.
- DHS and the Governor's Office should apply for aid from the Bush/Clinton Relief Fund to extend for 12 months the aid qualifying families can receive for childcare.

- DHS should waive for 12 months its current policy requiring a parent to apply for child support or to establish paternity in order obtain child care funded with CCDF funds.

- DHS and the Governor's Office should release emergency hurricane funds to school districts to pay incentives to teachers who hold appropriate credentials in licensed



Top: St. Martin Middle School in Jackson County; Bottom: Middle school in Ocean Springs.

early childhood programs.

- Private corporations should use as models successful approaches such as: the Chevron Daycare Recovery program, which operates in Jackson County with 23 daycare centers;

military programs for supporting family childcare; and efforts by the gaming industry to develop early childhood and childcare programs with flexible schedules to accommodate workers on all shifts.



Top: Elementary school in Long Beach; Bottom: Elementary school in Pass Christian

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K-12

- The U.S. Congress appropriated funds to offset property tax and gaming revenue losses. Congress authorized \$1.4 billion to aid K-12 schools that were damaged or are serving students in the affected states.
- The Mississippi Legislature should appropriate funds to build wireless Internet access along the Coast. Following a disaster like Katrina, wireless infrastructure would provide a better avenue for communications and recovery of business operation.
- MDE and local school districts should offer additional on-line learning opportunities by opening high school computer labs at night. Offering online courses in the evening will provide flexibility to students who must work during the day.
- MDE should hold Coast school districts harmless on average daily attendance (ADA) and property value worth when calculating Mississippi Adequate Education Plan (MAEP) allocations for the next two years. The MAEP formula utilizes property value and ADA to calculate an appropriation for each district. Using pre-Katrina numbers is necessary to ensure financial stability in those districts.
- Local school districts should collaborate with FEMA to ensure new buildings are designed to mitigate future wind and water damage.
- Local school districts should mitigate future damage by relocating schools further inland when possible.

Higher Education

- The Institutions of Higher Learning (IHL) and the State Board for Community and Junior Colleges should use existing funds to create the Advanced Partnership for Higher Education (APHE), a partnership between the University of Southern Mississippi, Mississippi Gulf Coast Community College, and Pearl River Community College designed to meet the educational and economic development needs of the Gulf Coast. APHE’s purpose would be to foster new levels of collaboration to promote economic development, design new degree programs, integrate current degree programs, and improve the cost-effectiveness of higher education on the Coast.
- Community Colleges have requested federal appropriations to offset property tax and tuition revenue losses. About one-fifth of the budgets of community colleges on the Coast are dependent on local tax support.
- IHL and the Governor’s Office have requested federal appropriations to provide financial tuition assistance to homeless/displaced postsecondary students. Students who have experienced great financial loss would not otherwise be able to continue their education. MDE estimates that at least 25 percent of students in higher education on the Coast postponed college plans after the hurricane and 7,500 college students were displaced or homeless. Congress appropriated \$200 million to the U.S. Department of Education to assist institutions of higher education and students. These funds should be appropriated carefully.
- IHL and MDE should expand dual

Katrina cost the state school system three-quarters of a billion dollars.

Estimate Cost of:

School Bus Replacement	\$9.4 million
School Repairs/Reconstruction	\$321.2 million
Furniture/Equipment Replacement	\$22.5 million
Technology Replacement	\$40.7 million
Textbook Replacement	\$39.6 million
Instructional Materials	<u>\$235 million</u>
TOTAL	\$668.5 million

Sources: Mississippi Department of Education.

enrollment opportunities. Dual enrollment allows high school students the opportunity to gain college and high school credit for the same course. This will alleviate future financial burdens for students who desire to attend post-secondary institutions.

Workforce Development

- The state should utilize high school and community college vocational centers at night for skilled construction labor training centers. The Governor’s Office should request reimbursement for these expenditures from the U.S. Department of Labor grants.
- IHL and MDE should collaborate with the state legislature and the U.S. Department of Labor to offer free tuition for students in courses of study in industry-identified areas of need.
- The Mississippi Legislature should create tax incentives for employers to hire students in career and technical programs.
- Community colleges and univer-

sities should expand “English as a second language” community programs to integrate Hispanic citizens into the Coast community.

HEALTH AND HUMAN SERVICES

The economic impact of Hurricane Katrina on the health care and human services industries is staggering. According to Commission research, hospitals sustained an estimated \$453 million in physical damage and operational losses.¹ The Mississippi Department of Mental Health reports its facilities suffered more than \$23 million in damage to physical facilities.

The impact on the industry's ability to recruit and retain health and human services workers is equally dramatic. Almost every provider interviewed by Commission members reported some loss of personnel, including physicians, nurses, and other healthcare workers. In almost every case, their principal concerns were the continuing out-migration of workers because of the housing shortage, spousal employment, or

worries about the region's economic future.

Workforce retention issues are exacerbated by the national shortage of physicians, nurses, pharmacists, and other healthcare professionals. Clearly, recruiting to fill positions in such a competitive environment will become a more significant long-term challenge, and unless the challenge is addressed immediately, personnel losses could reduce the quality of care.

As the state moves from recovery to renewal, health and human services and its skilled professionals will become more vital to a healthy and prosperous Mississippi. The tens of thousands of construction workers rebuilding homes and businesses will increase the demand for health care. As South Mississippians move through their personal stages of recovery, there will be unprecedented demand for mental health services.



A Caesarean delivery performed during the height of Hurricane Katrina.

Photo: Keesler Air Force Base



Moreover, the demands on human services will grow at unpredictable rates.

How does Mississippi address the current need, plan for future disasters, and lay the foundations for a premier health and human services system?

Disaster Planning

The Commission recommends that future disaster planning be coordinated between all health and human services providers, state and federal agencies, including first responders, using a unified communication system. The HHS Disaster Recovery Director, as suggested below, should create a written plan which would set out the responsibilities of the various providers and agencies before, during and after a disaster. The plan should include the following:

■ **A Health and Human Services Disaster Director.** The director, who would serve in the Office of the Governor, would facilitate the development and execution of the plan and would be responsible for effective communication between providers and governmental agencies immediately before, during and after a disaster. The director would be responsible for coordination of evacuation decisions affecting health and human-service providers and their patients; coordination of patient transfers before and after disasters; facilitating communications between providers and governmental agencies; stockpiling, delivering and ensuring the security of mission-critical supplies such as diesel fuel, gasoline, food, water, drugs, and tetanus shots to providers; coordinating volunteers; ensuring the availability of backup morgues; planning for on-site security to health care providers where medications, food, and water are held for patients to prevent

Besides the crucial services it provides, the health and human services sector:

- represents 12 percent of the state's economy
- employs more than 110,000 people, 7.6 percent of the state's work force (2001)

Source:
Doeksen, Gerald A.
The Business of Caring: the Economic Impact of Mississippi's Hospital's on the State's Economy, 2004.

disruptions to patient care; and serving as a clearinghouse for facility assessments.

- **A Unified Communications System.** This would connect all health care providers, state and local agencies, the law enforcement community and first responders.
- **Uniform Protocols for Patient Transfers.** The protocol would identify the types of patients to be transferred, the locations for the transfers, and the assistance available to facilitate the transfer. The protocol would assist providers, including mental health facilities, in ensuring patients are transferred to a facility that can best meet their needs and in returning those patients to the originating facility at the appropriate time.
- **Uniform Facility Assessments.** To avoid duplication of multiple federal and state post disaster assessments, regulations should be changed to mandate that the HHS Disaster Director, working with the Department of Health, conduct one all-inclusive survey. The survey would be conducted as needed and be made available to all state and federal agencies on a timely basis.
- **Coordination of Mental Health Network.** There should be a single source network that coordinates access to mental health providers that is current and permanently maintained. The Director should ensure the network is maintained and includes information from the private, public, state facilities and clinics, independent practitioners, and volunteer organizations that provide mental health care services. This coordination will have responsibility for rapid and efficient mobilization of providers in times of disaster, ensuring that patients have

access to appropriate levels of mental health care at all times.

■ **Special Needs Shelters.** When a disaster is imminent, special needs shelters for oxygen-dependent, dialysis, and non-hospitalized patients who require ongoing care should be identified in every county. A written plan for these shelters should specify locations, management, staffing, security, and eligibility. The plan also should specifically address shelters for mental health patients who are being treated in outpatient programs.

■ **Plans for Assisting Health and Human Services Workers.** There should be predetermined arrangements to ensure that transportation, fuel, housing, and child care are available for those expected to perform in unusual circumstances. Provisions to expedite emergency credentialing procedures for temporary health workers and licensed child care facilities should also be in place and routinely reviewed to ensure effectiveness. Funding may be available from the Social Services Block Grants for which Congress recently appropriated \$550 million.

The Commission recommends that a comprehensive and coordinated disaster plan, including all of the recommendations set forth above, be adopted prior to June 1, 2006. Costs would include compensation for the director and perhaps one support position and, during a disaster, the staffing of an operations center. The cost of the positions should be minimal when compared to the efficiency gained in patient safety and the organized delivery of services.

Technology Development

To take full advantage of advances in health systems technology, the Com-

In 2003, hospitals in Mississippi:

- spent \$10.3 billion through the state economy
- maintained a \$2.4 billion payroll
- spent \$665 million on capital improvements
- created almost 120,000 new jobs because of operational expansion construction

Source:

Doeksen, Gerald A.

The Business of Caring: the Economic Impact of Mississippi's Hospital's on the State's Economy, 2004.

mission recommends establishing:

■ **A Geographical Information System (GIS).** GIS uses computer software to plot data points on a high-tech map with speed and accuracy. By viewing information as layers, the GIS allows for the solving of real world problems such as managing governmental services, and, in the case of health care and human services, tracking special needs patients, shelters and emergency resources.² Home health, hospice, durable medical equipment companies, and personal care facilities should be allowed to submit demographic and health data for patients to allow for interface with GIS. By January 1, 2008, the state should implement a GIS that improves services offered by the Department of Human Services, Department of Health, and others. The GIS efforts in the state are coordinated by the Remote Sensing/GIS Coordinating Council, which was established in 2003 by House Bill 861.³ To ensure technology is effectively utilized, the legislature should amend the statute to include on the Council the State Health Officer and the Director of the Department of Human Services.

■ **A Regional Health Information Organization.** As the infrastructure of the medical community is rebuilt, an opportunity exists to extend health information technology such as Electronic Health Records (EHRs) to all providers. The EHRs should be linked to a Regional Health Information Organization (RHIO), which in turn connects fragmented units of information stored in hospitals, physicians' offices, labs and clinics. This information then can be captured in a unified, longitudinal patient record.

The Commission recommends that a committee of health care providers be appointed by the governor to determine the feasibility of a RHIO accessible to all participating providers. After addressing appropriate security clearance and privacy issues, which would require patient preapproval and adherence to privacy laws, health care providers, in the event of a disaster, would have to access the patient's current medication profile, medical history, treatment plans, and other records to ensure continuity of care.

The appointed committee should explore grant availability, preview existing prototypes, and perform an assessment of potential provider and patient participation. At a minimum, a coordinated pharmacy database for retail pharmacies should be created so providers can improve continuity of care and patient safety and reduce the potential for mistakes and system abuse during times of emergency. South Mississippi providers should coordinate their efforts with various national initiatives to develop more efficient health information technology infrastructure.

A related long-term goal is to create a "one-stop shop" for human services delivery. Creation of this system would be aided by converting paper-based processes to digital files and using developing technology, including Internet-based systems, for auditing and tracking. It will be possible to consolidate data bases, eliminate duplication of services, and provide clients multiple access points to services regardless of the agency or program enrolling them.

Workforce Retention and Recruitment

■ **Physician Retention.** One of the most significant issues that will affect the

short-term revitalization of the medical community is the retention and recruitment of physicians who currently serve or will serve the coastal communities. Among the challenges is encouraging providers to remain in the area. While the displacement of the patient community in some areas has had a profound impact on the financial viability of physician offices, an understanding of the renewal efforts underway in South Mississippi, many of which are outlined in this report, should encourage physician families to be a part of the recovery process and lead to other physicians to come to the Coast and be a part of its recovery. As plans for the future materialize, the state's recovery accomplishments should be formally communicated to the medical community. Opportunities on the Gulf Coast should be aggressively marketed to healthcare providers nationwide to ensure that physicians fully realize the revitalization efforts underway and the accomplishments achieved. Establishment of a formal residency program at one or more Coast hospitals also may enhance recruitment and retention efforts. Hospitals are encouraged to evaluate residency programs, identify potential funding sources, and work for the development of a program.

■ **Incentives for Serving Low-Income Patients and Disaster Victims.** The Commission recommends that the state submit a state plan amendment to the Center for Medicare and Medicaid Services (CMS), modeled on those recently approved in other states, to establish a supplemental physician retention payment based upon average commercial payor rates. Physicians practicing in designated Presidential Disaster Areas would be eligible for

the program.

■ **Nurse and Other Health Care Worker Retention.** Educational opportunities should be broadened for potential nursing students, including providing additional resources to community colleges and universities to increase capacity and to recruit students to their programs. Consideration should also be given to a coordinated marketing of health care careers to high-school students with a long-term objective of promoting careers in the industry.

■ **State Insurance Pool.** The Commission recommends that the Commissioner of Insurance consider the establishment of a State Insurance Pool for health care providers for business interruption coverage in the event of a disaster. The pool would be established exclusively for salary/wage continuation to affected healthcare workers in order to foster employee retention.



The pool may be created in at least two ways. First, the Mississippi Employment Security Commission could use a portion of unemployment taxes paid by providers to fund the program. Alternatively, the Commissioner of Insurance could create a new program that would provide for the voluntary collection of premiums from health care providers to fund a reserve for employee wages for business interruption resulting from a disaster.

- **Medical Liability.** The cost of malpractice insurance is a major factor in the financial viability of a physician's practice, thereby significantly affecting retention efforts. While recent tort reform efforts should be continued, the governor and legislature should monitor malpractice premiums trends and insurance options to ensure the availability of affordable insurance for health care providers.



The Economic Environment for Health Care

The impact of Hurricane Katrina has presented new and significant challenges to all health care providers, particularly those which serve as the safety-net for the indigent and uninsured. Ensuring health care coverage for patients most negatively affected by Hurricane Katrina will assist in protecting the economic viability of all health care providers.

The Commission supports federal legislation that would provide health-care coverage for displaced individuals and those who have lost incomes as a result of this disaster. The Commission also supports federal legislation that assists health and human services providers in obtaining funds to compensate partially for the devastating impact of Hurricane Katrina on their operations. A logical way to compensate some providers for increased costs and reduced revenues would be to establish a "floor" for the wage index for providers in the affected areas equal to 1.0. This would result in a modest increase for most providers, thereby assisting in the retention and recruitment of nurses, technicians, and other health care workers.

Medicaid

The Section 1115 and Section 1135 waivers approved by the Department of Health and Human Services (HHS), waiving certain statutory Medicaid requirements, have been beneficial in expanding access to healthcare services to many individuals affected by the storm.⁴ There are a number of issues that can only be addressed by federal legislation, such as:

- Increasing the federal government's share of reimbursement available for

Medicaid costs associated with serving hurricane victims. This would likely include waiving/amending provisions of federal Medicaid law related to the federal medical assistance percentage (FMAP) and other federal Medicaid reimbursement rates.

- Passing legislation that holds all states harmless for any scheduled reduction in a state's FMAP for fiscal years 2006-2007.
- Passing legislation that holds all providers harmless for any changes to programs such as Upper Payment Limit, Disproportionate Share, and wage index for fiscal years 2006-2007.
- Ensuring that disaster relief funds are available for mental health services for residents and first responders.
- Ensuring that legislation recognizes that the impact of the disaster on healthcare providers will last for many months and should provide for coverage for affected individuals for a period of at least 24 months.

The viability and strength of Mississippi's Medicaid program is vitally important to all healthcare providers. The program has struggled with budgetary issues in recent years, and the burden of increased enrollment that will result from Hurricane Katrina will only add stress to the program. In the long-term, the significant number of "baby boomers" needing long-term care could overwhelm the Medicaid program if modifications are not made to existing eligibility rules and to provide alternatives for financing care. The White House Conference on Aging recently

The impact of Hurricane Katrina has presented new and significant challenges to all health care providers, particularly those which serve as the safety-net for the indigent and uninsured.

published its *Proposed Resolution to Enact the Consumer Directed Long Term Care Reform Act*, which advocates the preservation of Medicaid for the truly needy, providing incentives for private savings for long-term care, and providing for consumer choice in long-term care. The Commission supports legislation that would protect Medicaid's viability.

Hospitals and other health care providers need further education about how to utilize the "uncompensated care pool" created in the Section 1115 waiver granted for Mississippi. The Commission makes the following recommendations:

- The pool should cover services provided for dates of service through at least the next two years;
- Reimbursement from the federal uncompensated care pool should be defined as uncompensated care provided to any individual from a designated disaster area; and
- Services provided by all health care providers which are not covered in a Medicaid beneficiary's home state should qualify for the uncompensated care pool.

The Commission supports measures that are available to protect and strengthen Mississippi's Medicaid program, including the support of federal legislation to provide 100% federal funding for all Medicaid expenditures for individuals who are Katrina survivors and for associated administrative costs.

Certificate of Need

Many health care facilities that received extensive damage during Hurricane Katrina are addressing a myriad of issues to restore operations so they can meet the health care needs of the com-

munities they serve. Certificate of Need (CON) regulations currently require that providers go through an application process to determine need before committing to any capital expenditure in excess of \$2 million.

The CON program has been, and continues to be, an invaluable tool in helping Mississippi protect access to services in underserved areas and by controlling health care costs by preventing overutilization of services. The process, however, including requested hearings and appeals, is time-consuming and expensive. Moreover, the current emergency CON statute was not designed for a disaster of this scale and should be amended and updated.

The Commission recommends that:

- The Mississippi State Department of Health (DOH) adopt a CON exemption or waiver for rebuilding after certain qualifying disasters. The exemption should be subject to careful review by the DOH and should carry strong limitations as to expended amounts, location of reconstruction, and additional capacity. This process should be public, subject to review by the DOH staff to ensure a request does not contemplate capacity or services not existing before the disaster, and expedited. Any health care provider wanting to add capacity or services not existing prior to the disaster should be required to go through the CON process as currently structured.
- The DOH should adopt a policy that allows for an expedited CON review for expenditures related exclusively to future disaster planning. The process should be public and subject to staff review, and receive an expedited review following its submission for approval. The applications should be clearly related to disaster planning and

should not include any expansion of services or capacity. Issues that may be addressed by such a policy include the expansion or creation of on-site power plants and the development of means to ensure an adequate water supply.

The Mississippi Trauma Care System

There are many challenges facing Mississippi's trauma system, including inadequate funding, insufficient physician coverage in certain specialties, the inherent disincentive for hospitals to upgrade trauma levels, and poor coordination and allocation of resources. Accordingly, the Commission recommends a thorough outside assessment of the trauma system, in cooperation with and funded by DOH. DOH is encouraged to work with hospitals, physicians, ambulance providers, and members of the Mississippi Trauma Advisory Board to develop plans to improve the system. The assessment should determine current strengths and weaknesses and identify opportunities for improvement. Necessary changes and incentives should be priorities to ensure the necessary trauma care infrastructure is in place.

Mental Health

The delivery of mental health services to patients has been severely affected by the damage to the infrastructure that is critical to providing care. The Commission recognizes that a new infrastructure must be developed with a goal of promoting and enhancing cooperation and communication among mental health providers throughout the state to ensure the delivery of the appropriate level of care in the least restrictive environment possible. In doing so, the Commission

believes the state will see improvement in the daily quality of care of some of its most vulnerable patients.

The Commission proposes an independent assessment of mental health needs by an outside consultant to provide recommendations to better align the delivery of services and develop the infrastructure it requires. The assessment – which has been estimated to cost \$130,000-\$194,000 – should be organized to consider such key questions as:

- What are the best strategies for resource allocation throughout the state?
- How are overlaps in services eliminated and gaps identified?
- How will shifting labor markets and wage regulations affect the competition for workers?
- Considering federal restrictions, can state agencies be given the autonomy to change wage rates, within their budgets, to remain competitive with the private sector?
- How can the state's commitment law be more uniformly applied across the state and provide for patients' timely access to care?

The Commission also recognizes that access to mental health care must be on the same level as access to other kinds of medical care and, therefore, supports state legislative action that ensures mental health beneficiaries enjoy parity with all other medical beneficiaries. Several national studies by different groups have been published that support an increased premium cost range of 1-1.5 percent, with the cost being shared between employers and employees. The studies indicate, however, that parity substantially increases worker productivity and also offers many other long-term benefits.⁵

Thorough preparation for future disasters, the utilization of technology, and the creation of a health care environment conducive to the recruitment and retention of health care providers, the physical, social, and mental health needs of the citizens of Mississippi will be met.

Child Care

Preparation for future disasters should include plans for operational child care facilities that help alleviate workforce shortages caused by school and day care center closures in the days and weeks following a disaster. The Commission recommends that such a plan be coordinated by the HHS Disaster Director and funded by local businesses, medical providers, and/or local and state governments.

The Commission supports the continued use and maximum funding of the Child Care Development Fund (CCDF) for income-eligible children; the continued funding of the 4 percent Quality Training Programs across the

state; and the development of a new quality rated system that compensates child care providers who provide appropriate early childhood educational activities. The state should also evaluate the potential for incentives to encourage the private sector to develop child care facilities, or partner with existing providers, in order to make available the child care our workforce needs. Child care programs should be responsive to the needs of working parents while meeting the developmental needs of children.

Case management programs will become particularly important in the coming months as families are displaced for extended periods. Community-oriented case management plans should

address housing, employment, transportation and education, with the primary goal of self-sufficiency.

Case management should also focus on children under state custody and ensure that displaced parents with child support obligations meet their responsibilities. They are and should remain the responsibility of DHS. DHS should also continue to work closely with the state Department of Employment Security to promote job development and job placement to assist Mississippians in reaching self-sufficiency. Child care programs may also be eligible for funding from the Social Services Block Grants for which Congress recently appropriated \$550 million.

Damage at Hancock Medical Center in Bay St. Louis.

Photo: Mississippi Hospital Association.



The Elderly

Many of South Mississippi's oldest citizens were hard hit by the hurricane and are physically unable to meet the current challenges. This short-range concern, which is likely to exist for the next few years, is exacerbated by a larger, long-range problem. The Baby Boom Generation, the largest in the nation's history, is nearing its retirement years and will make the senior population the fastest growing segment in communities.

The Commission recommends that DHS develop a resource center for the aged that would provide information and services including home-based services, independent living services, volunteerism, physical activity and wellness programs, vocational training, housing options, long-term care planning, and information related to the Medicare and Medicaid programs. Based upon the experience of the DHS Division of Aging, it is estimated that the resource center would require an annual budget of approximately \$350,000, which would be funded by the United States Department of Human Services' Administration on Aging and only requires a 5 percent state match.

The Commission also supports the development of senior wellness centers that are designed to be hubs of activity for the senior community. The centers could be designed to efficiently convert to special needs shelters during a disaster. The anticipated cost of construction is \$1.5 million per center and might be available through a Community Development Block Grant or Social Services Block Grants for which Congress recently appropriated \$550 million. The centers should be developed by the DHS Division of Aging in partnership with local governments.

Other Recommendations

- The Commission proposes that appropriate state legislative committees regularly review regulations involving the reporting of diseases, isolation, and quarantine laws contained in Mississippi Code Annotated Section 41-23-1, et seq., specifically with regard to their effectiveness in natural disasters, bioterrorism events, and pandemic disease.
- Because of the extensive damage done to the South Mississippi Regional Center, which serves all six coastal counties, the Commission suggests the Department of Mental Health consider establishing a permanent facility north of I-10. If constructed, the facility could also serve as a special needs shelter for other mental health patients in the event of a disaster. The Commission recommends that the Department of Mental Health and the governor's office seek congressional funding for the centers.
- The importance of health education for the children of Mississippi cannot be overemphasized. The Commission strongly supports expansion of public health education in the classroom and recommends substantially increasing our school children's access to public health education through the development of a statewide curriculum. The long-term goal is to prevent bad dietary and other habits which cause secondary disease that are prevalent in Mississippi. The Commission recommends that the DOH and Department of Education work together to prioritize funding for this critical initiative, which can offer substantial long-term health and financial benefits to the state.
- The Commission also recommends that all hospitals regularly review their

bylaws to ensure that appropriate physician coverage will be available in-house during future hurricanes. These plans should address physician coverage in the days and weeks that follow such a disaster, with the emphasis being on long-term needs when major disasters strike.

The Commission's objective with regard to health and human services was to make recommendations that would restore and improve quality health services. Through preparation for future disasters, the utilization of technology, and the creation of a health care environment conducive to the recruitment and retention of health care providers, the physical, social and mental health needs of the citizens of Mississippi will be met.

NON-GOVERNMENTAL ORGANIZATIONS

Non-governmental organizations (NGOs) are often the first line of defense and the last recourse for people in need. They bring cultural and arts programs to local communities, provide a variety of social services to all age and income groups, and give voice to the concerns of those citizens they serve.

Nationally, NGOs employ more than 11.7 million people and accounts for more than 10 percent of the economy.¹ Mississippi consistently has led the nation in per capita contributions to charitable causes; however, services per capita provided by NGOs in Mississippi fall far short of those in neighboring states.

In South Mississippi, the aftermath of Katrina has demonstrated the critical role these organizations play in keeping the social fabric of communities intact. Despite general awareness of the con-

tributions by the NGO sector, many South Mississippians, have a limited understanding of the organizational structure and daily operations, partly due to the broad variety of organizations. NGOs include the local PTA to the community foundation.

Although South Mississippi is served by a variety of NGOs, the sector does not have a common clearinghouse that reflects the services they provide and measures the management and effectiveness of each organization. Further, while area NGOs generally have wide community support and are led by strong leaders, there remains lacking a clear and united voice among NGOs. These deficiencies result in communication gaps and inefficient delivery of services.

These concerns were amplified by the hurricane. Many organizations were not operating under business models



NGOs are often the first responders.



Photo: United Way of South Mississippi

necessary to compete successfully in an increasingly crowded funding environment. The Commission expects that the next several months will show that Katrina taxed some NGOs beyond the limits of long-term sustainability. NGO facilities were destroyed or significantly damaged, and organizational records and equipment were lost. Reduced staffs have struggled to keep pace with increasing needs. Without immediate aid and support, many organizations may lose their abilities to provide programs critical to keeping the social service infrastructure intact.

Recommendations

The Commission makes the following recommendations based on the research and discussions of the NGO Committee:

■ **Immediate funding assistance.**

Lost revenue is the most immediate issue for most of these organizations. Many were able to repurchase or borrow computer equipment and find temporary space for operations and administrative functions. Numerous entities, however, have depleted the limited reserves and are not equipped to coordinate with national organizations for fundraising. The Commission, therefore, is assisting in the placement of grant writing teams to work with NGOs in applying for funding from sources that previously have been undiscovered. Many services provided by these NGOs are eligible for funding through international organizations. This grant writing assistance should help relieve immediate problems, as well as aid in drafting intermediary budgets, providing templates for future grant opportunities, and

The Commission expects that the next several months will show that Katrina taxed some NGOs beyond the limits of long-term sustainability.

boosting local leaders' experience in national networking. The Commission is coordinating efforts with the Association of Fundraising Professionals and the American Society for Association Executives. At the conclusion of "fund-raising season," these associations will begin recruiting their members as volunteer grant writers. NGOs should be aware that Congress recently appropriated \$550 million in social services block grants to furnish special assistance for the disabled, counseling, child care, and employment in the affected states.

■ **Greater representation in recovery planning.** Without a donors' forum, local NGOs find it difficult to have a common voice and, therefore, have not been fully integrated in recovery discussions. The Commission recommends that the governor or

other designated state or local official appoint a member of the nonprofit community to serve on future committees or commissions tasked with long-term recovery.

■ **A Non-Profit Clearinghouse.**

The Commission recommends that the Mississippi Center for Non-Profits engage with organizations on the Gulf Coast including United Way and Gulf Coast Community Foundation to form an entity that creates lasting support for nonprofit organizations in the area. This entity, the Gulf Coast Non-Profit Clearinghouse, should be the cornerstone institution providing business and professional development and key links with national organizations, such as the National Center for Philanthropy, for grant research. The Clearinghouse should be the central communications point among NGOs during disasters and an information clearinghouse in recovery. The entity also may provide grant search resources and temporary working office space for NGOs. Funding should include partnerships with regional and national organizations, such as Volunteer Organizations Active in Disasters (VOAD), AmeriCorp, Living Cities, America's Promise, and the Knight Foundation. The Commission is working closely with strategic local and national partners such as Gulf Coast Community Foundation, United Way, Living Cities, and America's Promise to ensure that the success of the Clearinghouse makes it a model for regional grantors and grantees.



SPECIAL REPORTS

W here do we go from here?
The following two reports help us direct our next steps. One helps answer the question that is on everyone's lips: How do we pay for our rebuilding ambitions?
The other report is a guide for keeping our most important promise to ourselves – to build back, not only better than ever, but safer than ever.

Here is what we must do:

- Connect the needs in each of the hurricane-affected communities with resources available from federal and state government agencies and from the nonprofit and private sectors. With the governor's appointment of an implementation group to coordinate and assist local communities' rebuilding efforts, he is taking a crucial step in that direction.
- Commit to rebuilding approaches that acknowledge the realities of living in a hurricane zone. Already local governments in the affected cities and counties are discussing building and zoning codes to better protect lives and property, and some have already made changes to make citizens safer.

FINANCE

In the days following Hurricane Katrina's landfall, many Mississippians understood that even the most dramatic images broadcast on television around the world failed to deliver the reality of the challenges before them. While those directly affected returned to the Coast to face the most immediate challenges, many began to ask the crucial questions: "How much will it cost to rebuild?" and "Where will the money come from?" The answer to the first question will be elusive, perhaps for years. A grand total is less useful for families, businesses, and government and nonprofit institutions than knowing the hurricane's effects on their own properties or enterprises. Victims of the hurricane include municipal, county, and state governments; schools and universities; medical facilities; small and large private businesses; and individual residents.

By providing some answers to the second question, however, the Governor's Commission hopes to present a chance for many to see more immediate benefits.

Public Entities

Local government budgets will face great pressure from the cost of rebuilding their communities, as well as long- and short-term erosion of their tax base. In anticipation of capital investment needs in connection with redevelopment, local governments may look to existing financing authority under Mississippi law. Fortunately, the Mississippi Legislature already has provided a number of financing tools to address the needs of local governments. Among them:

■ **Lease Financings.** Lease revenue bonds are secured by lease payments made by the party leasing the facili-

ties financed by the issue, in this case the local government. Typically, lease rental bonds are used to finance construction of facilities, such as schools or office buildings, used by a state or municipality, which leases the facilities from a financing authority. In many cases, lease payments may be subject to annual appropriation or will be made only from revenues associated with the facility financed. In other cases, the leasing state or municipality is obligated to appropriate moneys from its general tax revenues to make lease payments.

■ **Revenue Bonds.** These are payable from identified sources of revenue and do not permit the bondholders to compel taxation or legislative appropriation of funds not pledged for payment of debt service. Pledged revenues may be derived from operation of the financed project, grants and



excise or other specified non-ad valorem taxes. Generally, voter approval is not required prior to issuance of such obligations. The rating and cost of capital varies greatly on the quality of the revenue source and the level of projected debt service coverage.

■ **General Obligation Bonds.** General obligation bonds are secured by the full faith, credit, and taxing power of an issuer. General obligation bonds issued by local units of government are typically secured by a pledge of the issuer's ad valorem taxing power. Ad valorem taxes necessary to pay debt service on general obligation bonds are not often subject to the constitutional property tax millage limits (an "unlimited tax bond"), although in some cases such limit may exist (a "limited tax general obligation bond"). Such bonds constitute debts of the issuer and often require approval by election prior to issuance. In the event of default, the holders of general obligation bonds have the right to compel a tax levy or legislative appropriation. This generally is the lowest borrowing cost for local governments.

■ **State Moral Obligation Bonds (Mississippi Development Bank).** Moral obligation bonds are issued by a state agency or authority that is secured by a non-binding covenant that any amount necessary to make up any deficiency in pledged revenues available for debt service will be included in the budget recommendation made to the state legislature or other legislative body, which may appropriate moneys to make up the shortfall. The Mississippi Development Banks issues such debt in the state. The legislature or other legislative body, however, is not legally obligated to make such an appropriation.

Mississippi's Current Financial Situation

While the state faces no liquidity concerns in the near term, it expects to lose approximately \$300 million in revenue over four months. The Bureau of Buildings has reported losses at state universities and community colleges to be approximately \$176 million. Damage to other state-owned buildings is estimated to be \$345 million. Even after reimbursement from the FEMA, the state expects to require \$400 million for infrastructure repairs.

Source:
Mississippi Department of Finance and
Administration. Bureau of Buildings, 2005.

■ **State General Obligation Bonds.** Issued by states, these bonds are generally based upon appropriations made by the state legislature for the purposes specified. The state's general obligation credit, rated in the "AA" category, is very attractive to credit-sensitive investors and can be sold with a very low cost of capital.

Public Entity Possibilities Post-Katrina

■ **Mississippi Development Bank Hurricane Katrina Relief Program.** Local governmental units affected by Hurricane Katrina—such as counties, municipalities, school districts, utility districts, public hospitals—may be eligible to participate in the Mississippi Development Bank Hurricane Katrina Relief Program. Currently this Program has approximately \$100 million in available funds to offer in loans. These loans offer a variable interest rate with no principal or interest payment for two years (capitalized interest), and loans may be prepaid at any time with 30-days notice. There is a mandatory redemption for such loans at the end of two years. The loan proceeds may be used to finance capital projects, equipment, working or operating capital, and debt service needs. There is no requirement for a bond issue at the local level, but the local governmental unit executes the loan agreement pursuant to a resolution adopted by the governmental entity approving the loan and tax intercept agreement. This program is designed to take one week to complete the process from the local action to the closing of the loan and delivery of proceeds.

■ **Advance Refunding.** Congress has passed legislation that will in part al-

low an additional advanced refunding for bonds issued by the state, a local government or any political subdivision if such bonds were issued to finance facilities located within the Gulf Opportunity Zone. This allows any eligible governmental entity an opportunity to take advantage of lower interest rates.

■ **FEMA Loan Programs.** In addition to the 500 plus programs currently offered by FEMA, the FEMA Community Disaster Loan Act of 2005 was signed by the President on October 7, 2005, authorizing up to \$1 billion in direct loans to local governments. The Community Disaster Loan Program provides operational funding to help local governments that have incurred a significant loss in revenue due to a federally declared national disaster that has or will adversely affect their ability to provide essential municipal services.

- Local governments must show a substantial loss (greater than 5 percent) of tax and other revenues for the current or succeeding year as a result of a major disaster.
- The disaster must have adversely affected the level of essential municipal services previously provided.
- State law must not prohibit local governments from incurring indebtedness resulting from a federal loan.
- The loan amount cannot exceed the lesser of 25 percent of the applicant's operating budget for the fiscal year of the disaster, or a cumulative estimated revenue loss for the fiscal year of the disaster and the subsequent three fiscal years.
- Capital outlays and debt service (interest and principal) for capital

items will be excluded in the calculation of the applicant's operating budget.

- The term of the loan is five years, and can be extended to 10 years, with the applicant selecting the payment schedule.
- The interest is the rate for five-year maturities as determined by the Secretary of the Treasury on the date the promissory note is executed. If an applicant can demonstrate unusual circumstances involving hardship, the Associate Director may approve a rate equal to the five-year maturity rate plus 1 percent, adjusted to the nearest 1/8 percent, and further reduced by one-half.
- FEMA will execute a promissory note to the applicant cosigned by the state. If the state cannot legally cosign the note, the local government must pledge collateral security. Funds will be dispersed in accordance with the terms of the note.

- Funds must be used to carry on existing local government functions of a municipal operation character or to expand such essential functions to meet disaster-related needs.
- FEMA will provide technical assistance to expedite the application and approval process.
- To initiate the process, the local government should complete the Certification of Eligibility for Community Disaster Loan form and submit it to the governor's authorized representative.

Private Entities

Existing Authority and Incentives

Industrial Development Bond Programs. The Mississippi Business Finance Corporation (MBFC) serves as a statewide financing source, which allows companies to consider financing and incentive alternatives through a single



contact. MBFC is a public corporation of the state organized pursuant to Miss. Code Ann. Sections 57-10-167 and 57-10-201 et seq. MBFC administers several financing programs including Small Enterprise Development Finance Program (SED), the Industrial Development Revenue Bond Program (taxable and tax-exempt), and the Equipment Lease program.

■ **SED Program.** Under the SED Program, eligible companies may borrow up to \$2 million from MBFC to finance capital projects. MBFC provides companies an opportunity to participate in the SED Program by making long-term loans to eligible companies at tax-exempt interest rates. To participate in the SED Program, the company must be approved by MBFC and provide an irrevocable, direct pay letter of credit from an approved bank and additional collateral as required by MBFC.

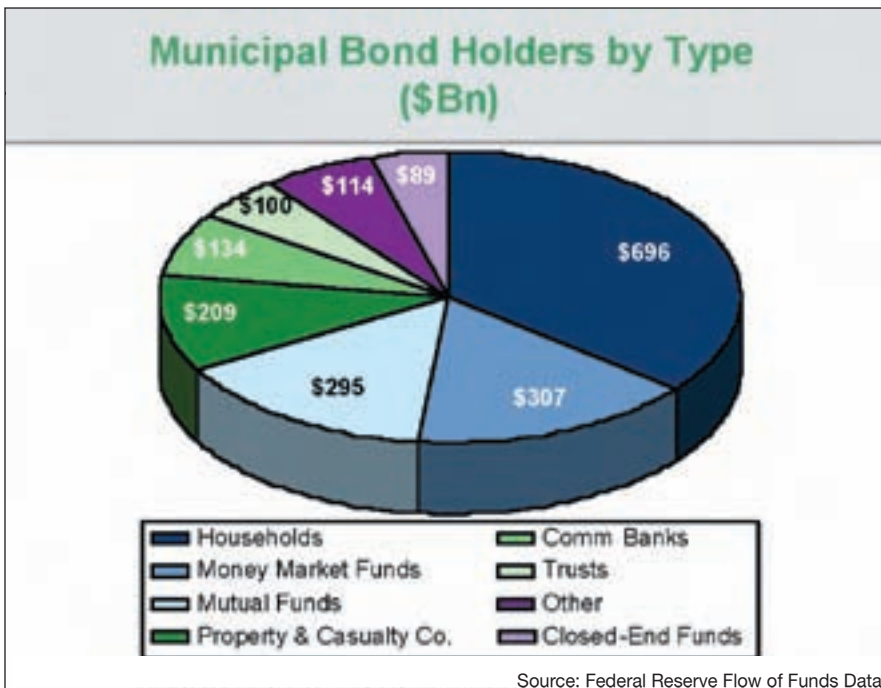
■ **Industrial Development Revenue Bond Program—Tax-Exempt.** Through its

tax-exempt IRB Program, MBFC provides long-term financing for manufacturing or processing companies at tax-exempt interest rates. The bond issue may be structured as a fixed interest rate or variable interest rate financing. As security for the bonds, MBFC may require a letter of credit from a qualifying bank or other collateral.

■ **Industrial Development Revenue Bond Program—Taxable.** MBFC may issue its taxable Industrial Development Revenue Bonds for commercial businesses approved by MBFC for a term not to exceed 30 years. As security for the bonds, MBFC may require a letter of credit from a qualifying bank or other collateral.

■ **MBFC Equipment Lease Program.** Under the MBFC Equipment Lease Program, qualifying companies may lease manufacturing equipment through a major leasing company at tax-exempt interest rates (variable rate or a fixed rate). The company's obligation under the lease is secured by the machinery/equipment, which is financed under the lease agreement.

Chart 1. Segmentation of the municipal bond market by type.



Economic Development Incentives through MBFC

Companies may be eligible to finance manufacturing facilities, certain warehouse or distribution centers, and telecommunications and data processing centers through MBFC's finance programs and also receive income tax credits on Mississippi corporate income taxes. Credits for eligible companies are computed on the company's annual debt service for the project financed subject to the limitations discussed below. For eligible projects financed through MBFC programs, companies may also receive sales or use tax exemp-

tions for project expenditures. This exemption would include a sales/use tax exemption for equipment purchases or building material purchases made by the company as part of an eligible project. Companies are also eligible for a 10-year ad valorem tax exemption for project expenditures at the discretion of the county and/or the city where the project is located.

■ **Rural Economic Development Assistance Program (“RED”).** Companies may receive income tax credits on Mississippi corporate income taxes pursuant to Miss. Code Ann. Section 57-10-401 et seq. Eligible companies, including manufacturing facilities, certain warehouse or distribution centers, and telecommunications and data processing centers; may receive credits on Mississippi corporate income taxes. Credits are computed on the company’s annual debt service for the project financed through the MBFC Industrial Development Bond Program. The income tax credit taken each year cannot exceed 80 percent of the company’s income tax liability. Annual debt service for a project includes all costs associated with the issuance of bonds, letters of credit, annual service fees, and principal and interest payments. The income tax credits may be carried forward for three years after the date the credit is earned.¹

■ **Exemption for Eligible Purchases.** Mississippi Code Ann. Sections 57-10-255 and 57-10-439 provide an exemption for all purchases required to establish the enterprise which are financed by proceeds of MBFC revenue bonds. This exemption would include an exemption from sales/use taxes for project purchases for the enterprise financed. Project purchases

include equipment purchases and building material purchases made directly by the borrower as part of the project financed.

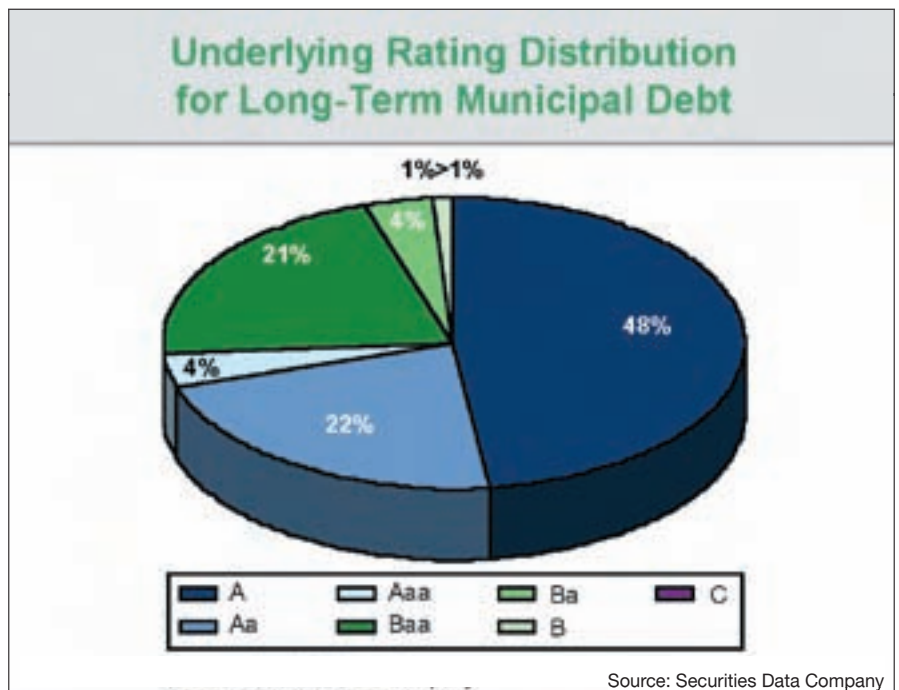
■ **Ad Valorem Tax Exemption.** As provided in the MBFC guidelines, any ad valorem tax exemption granted in connection with the Rural Economic Development Assistance Program shall be initiated by a local political subdivision. The school tax portion of the ad valorem tax exemption shall not be granted. A resolution from the political subdivisions authorizing any ad valorem tax exemptions for a period up to 10 years shall be submitted to MBFC prior to closing the bond financing.²

Loan Programs and Other Finance Programs

The Mississippi Development Authority (MDA) provides a number of finance programs to encourage economic development:

■ **MBIA Loan Program.** The Mississippi-

Chart 2. Segmentation of the municipal bond market by underlying rating distribution.



pi Business Investment Act Program is established under the direction of MDA for the purpose of making loans to local governments for financing projects necessary to complement industrial investment by eligible private companies and to create and maintain new full-time jobs within the state. A private company must: create and maintain at least one new full-time job for every \$15,000 loaned; make a private match of at least \$3 for every \$1 of state assistance; create and maintain a minimum of 10 new full time jobs.

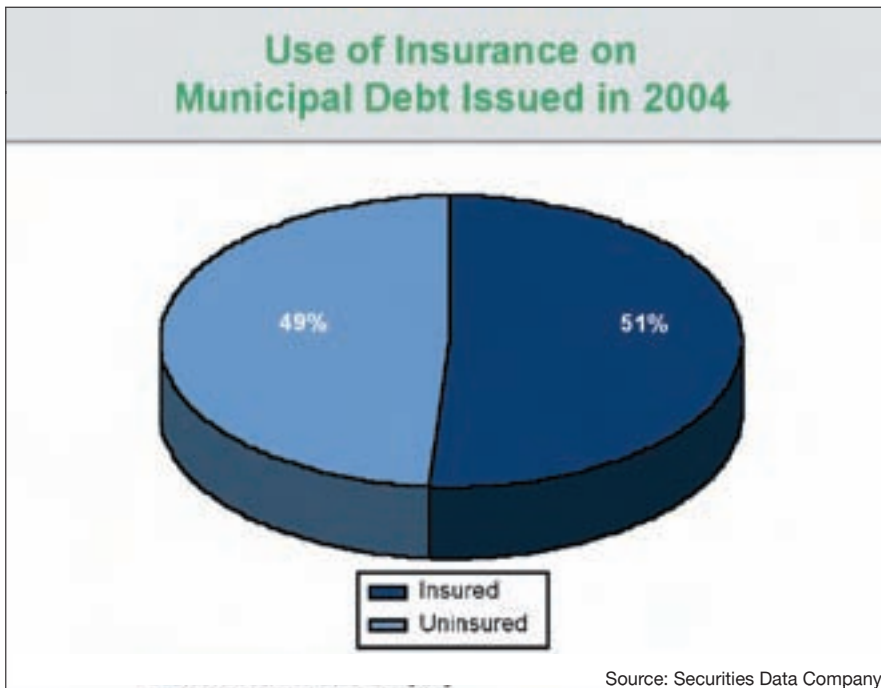
■ **CAP Loan Program.** The CAP Loan Program is administered by MDA for the purpose of assisting counties and municipalities in making capital improvements pursuant to Miss. Code Ann. Section 57-1-301 et seq. The maximum loan amount under the program is \$500,000 during a calendar year. Loan proceeds may be expended for public infrastructure and the construction, renovation, or purchase of

industrial buildings as provided under the enabling act.

■ **Mississippi Small Business Assistance Program.** This assistance is available to manufacturers, wholesalers, retailers, and service providers that meet the requirements for a small business under the enabling act. Proceeds may be used for land/building, machinery/equipment, working capital, and start-up expenses. The maximum loan under the program is limited to 50 percent of project cost or \$100,000, whichever is less.

■ **Mississippi Major Economic Impact Authority.** Pursuant to Miss. Code Ann. Section 57-75-1, this program authorizes the state to issue general obligation bonds to assist local governments in developing major capital projects. Proceeds of the bonds may be used to provide for transportation, education, recreation, and medical facilities surrounding the project site. In addition, public infrastructure improvements may be eligible for financing. Eligible projects include new projects or expansions to existing facilities having a minimum investment of \$300 million by the private enterprise or the U.S. government. Eligible projects under the enabling act include industrial or commercial facilities, research and development, warehousing or distribution facilities, transportation facilities, processing facilities, mining establishments, U. S. government projects, and tourism projects. The Advantage Mississippi Initiative, which was enacted by the state legislature in August 2000, amends the Major Economic Impact Act to apply to an industrial enterprise with a capital investment not less than \$150 million and 1,000 net new full-time jobs, or with 1,000 net new full-time

Chart 3. Segmentation of the municipal bond market by use of insurance on municipal debt.



jobs paying 125 percent of the average annual state wage. The Mississippi Major Economic Impact Act was also amended to authorize the Mississippi Major Economic Impact Authority to negotiate a fee-in-lieu of franchise tax on an eligible project, which may not be less than \$25,000 annually. The amendment also allows the State Bond Commission to issue general obligation bonds in a limited amount for additional purposes which include the cost of providing for recruitment, selection, and training of employees and related activities.

■ **Mississippi Loan Guaranty Program (Guaranty Loan).** Under the Guaranty Loan Program, the state of Mississippi provides loan guarantees for borrowers approved by the Mississippi Business Finance Corporation. The guarantee reduces the lender's risk, which enables the borrower to obtain financing for eligible projects. Eligible parties include manufacturers, wholesalers, retailers, and service providers. Proceeds may be used for land/building, machinery/equipment, working capital, and start-up expenses. The maximum loan amount is \$500,000. The maximum guarantee is 75 percent of the loan amount or \$375,000, whichever is less.

■ **Minority Business Enterprise Loan Program (Minority Loan).** Under the Minority Loan Program, MBFC makes loans to qualified minority businesses. Eligible businesses include manufacturers, wholesalers, retailers, or service providers that meet the requirements for a minority business under the enabling act. Eligible expenditures include land/building, machinery/equipment, working capital, and start-up expenses. The maximum loan under the program is \$500,000,

with a minimum loan of \$2,000. For loans over \$15,000, the state funds up to 50 percent while for loans of \$15,000 or less, the state funds up to 100 percent.

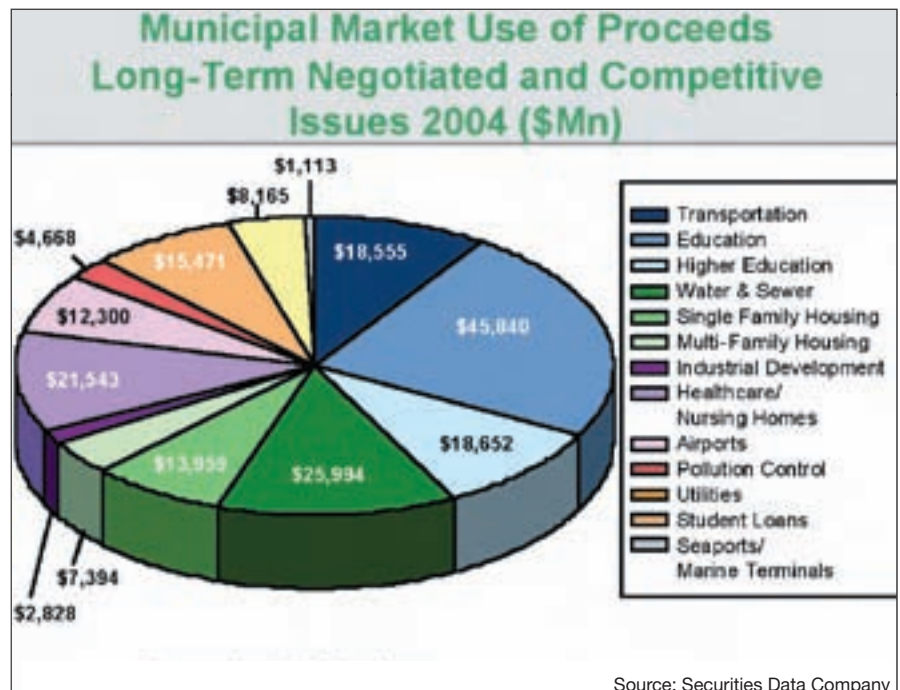
■ **Community Development Block Grant Program (CDBG).** The CDBG Program makes grants available to cities and counties that show a genuine need for specific projects and can meet the program's state and federal eligibility requirements. All Mississippi counties and cities are eligible for CDBG funds. The cities of Jackson, Biloxi, Gulfport, Hattiesburg, Moss Point, and Pascagoula are "entitlement cities" and may receive CDBG funds directly from the federal government instead of applying through the state. The primary criteria for receiving CDBG funds is to provide jobs for persons of low and moderate income. MDA accepts applications for communities in subcategories: (1) Economic and Development Public Improvement funds improvements such

as the provision of water, sewer, and access roads within a community; and (2) Economic Development Program that provides for-profit businesses the ability to promote economic development by creating and retaining jobs primarily for low- and moderate-income families.

Tax Increment Financing (TIF)

Tax increment financings (also known as a "tax allocation bonds") are payable from the incremental increase in tax revenues realized from any increase in property value resulting from capital improvements benefiting the properties that are financed with bond proceeds. Tax increment bonds often are used to finance public infrastructure improvements in connection with redevelopment projects without the necessity of issuing general

Chart 4. Segmentation of the municipal bond market by municipal market use of proceeds.



Source: Securities Data Company

obligation bonds. Under the enabling act, the local government shall prepare the tax increment financing plan, which describes the public infrastructure improvements to be financed and the economic development project to be constructed by the private company.

Public Improvement Districts (PID)

Pursuant to Miss. Code Ann. Section 19-31-35 et seq., private developers in Mississippi also may take advantage of a significant economic incentive for the financing of basic project infrastructure through the creation of a public improvement district, commonly referred to as a “PID.” Once established by a local government, a PID offers private developers the opportunity to have tax-exempt revenue bonds issued for the purpose of financing qualified infrastructure. A PID allows a local government in Mississippi to offer an effective

economic development incentive through financing public improvements with a lower, tax-exempt interest rate. Special assessments levied on the land and improvements within a PID serve as collateral for the bonds issued by the PID. Additionally, such special assessments may be used to satisfy the debt service of the PID bonds. Interest rates, maturity and terms and conditions of any bonds issued by a PID will be based on the borrowing strength of the private developer, the type of development and the specifications of the bond purchaser.

Private Activity Bonds

Tax-exempt bonds can be used for a variety of private purposes designated by the federal government. These tax-exempt government bonds may be used to finance certain projects, including but not limited to airports, water treatment plants, facilities for certain private businesses such as manufacturing, and

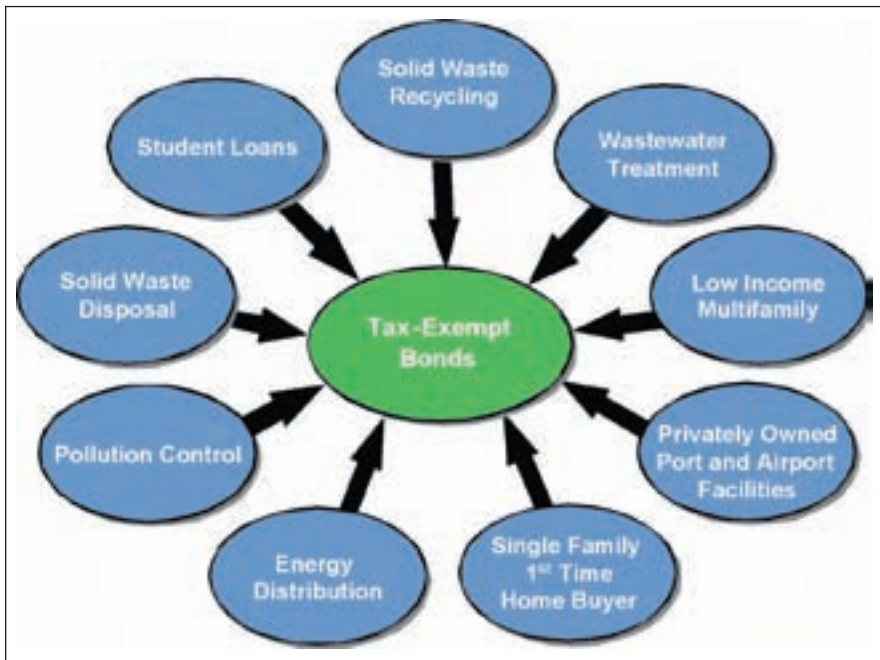
redevelopment in certain designated areas. The amount that can be issued is limited to an annual cap for each state.

Federal Appropriations

Congress recently approved a \$29 billion measure for hurricane disaster assistance in the affected states. The measure, led by Senators Thad Cochran and Trent Lott, the state’s congressional delegation, and Governor Barbour, includes funding for the Community Development Block Grant (CDBG) program, assistance for education needs, and funding for state and local law enforcement. Twenty-four billion dollars will be provided through previously appropriated FEMA funds, and an additional \$5 billion will come from a slim, across-the-board cut to discretionary spending. Bill highlights include:

- **CDBG.** \$11.5 billion for relief efforts and mitigation activities, including housing assistance, infrastructure development, and assistance to public services.
- **State and Local Law Enforcement.** \$125 million for funding law enforcement activities in hurricane damaged areas, including the hiring of additional officers in areas that have experienced a sudden population increase due to hurricane evacuees. Funding also may be used to replace equipment that was damaged, lost, or destroyed by the hurricane.
- **U.S. Army Corps of Engineers Levee Restoration.** \$2.89 billion will be used to accelerate completion of authorized levee projects around New Orleans, restore levees damaged by Hurricane Katrina, and complete Louisiana and Mississippi studies on increased hurricane protection for Category 5 protection.

Chart 5. Permissible uses of tax-exempt bonds for private activities.



Source: Goldman, Sachs & Co. Memorandum to Governor’s Commission, Committee on Finance, Nov. 2005.

- **Small Business Administration Disaster Loan Program.** \$441 million in funding will provide loans to homeowners and businesses suffering physical damage and economic injury and to cover the costs associated with administering these loans.
- **Federal Highway Administration.** \$2.75 billion will allow the affected states to repair roads and bridges.
- **Social Services Block Grants.** \$550 million provides funding to furnish social services tailored to the needs of the affected states. Services may include special assistance for the disabled, counseling, child care, and employment services.
- **U.S. Department of Education.** \$1.6 billion is provided for education assistance to K-12 schools that were damaged or serving students affected by the hurricane. Another \$200 million is available for assistance to higher education institutions and students.
- **Shipbuilding.** \$1.69 billion will ensure continuation of Naval shipbuilding activities on the Gulf Coast.
- **National Institute of Standards and Technology.** \$4.5 million is included for the Manufacturing Extensions Partnership Program to provide consulting to businesses and manufacturers whose productivity and workforce were affected by 2005 hurricanes.
- **Veterans Affairs.** \$685.5 million includes \$619.7 million for the Department of Veterans Affairs and \$65.8 million for the Armed Forces Retirement Home.
- **Military Construction and Family Housing.** \$1.378 billion is provided for the Army National Guard to help rebuild Jackson Barracks in Louisiana and replace readiness centers across Mississippi and Louisiana. Funding will also be used to help rebuild Sten-

nis Space Center, Keesler Air Force Base, and provide Navy and Air Force family housing.

- **United States Department of Agriculture.** \$1.1 billion will provide a variety of assistance. The Emergency Forestry Conservation Reserve Program will receive \$404.1 million to help provide assistance for forest landowners in hurricane-affected counties; \$200 million is provided for the Emergency Conservation Program (ECP) to rehabilitate farmland damage caused by natural disasters; \$300 million is provided through the Emergency Watershed Program (EWP) to remove debris, repair structures, and reshape and protect eroded land.
- **Rural Development Programs.** \$45 million is provided for the Rural Community Advancement Program to provide grants to communities to reestablish water, waste disposal, and wastewater facilities. Another \$65 million is provided to the Rural Housing Service and will be made available to low-income families to purchase and repair single-family homes.
- **Training and Employment Services.** \$125 million provides job training opportunities for dislocated hurricane victims.
- **NASA.** \$349.8 million will provide necessary repairs and hardening for NASA facilities that sustained hurricane damage. These facilities are critical to the mission of NASA and are integral to the shuttle program and for future manned space activities.
- While officials continue to determine amounts ultimately allocated to Mississippi, the appropriations described above will provide a major component to the state's recovery.

The Municipal Market

Today there is approximately \$2 trillion of tax-exempt debt outstanding issued by over 50,000 state and local issuers in the United States. Retail investors are the major participants in the municipal market, either through funds or direct holdings. The vast majority of municipal bonds are low-risk, investment-grade credits. Tax-exempt bonds provide the major source of state and local government funding as well as providing funding access for certain private activities, some of which are illustrated in Chart Five.

Gulf Opportunity Zone Act

In addition to these generous appropriations, Congress has passed the Katrina Emergency Tax Relief Act of 2005 (H.R. 3768). This new law gives Hurricane Katrina victims, both individuals and businesses, temporary tax breaks.

The most significant legislation, however, may be the federal legislation establishing a Gulf Opportunity Zone (the "Zone") where businesses located in the Zone would enjoy certain tax benefits and incentives, similar to those offered in lower Manhattan in 2002. These business incentives certainly are critical to rebuilding the Coast and are essential for the areas affected by Katrina to regain some sense of normalcy.

There is no doubt that the vast majority of money that is going to rebuild the Mississippi Gulf Coast must come from the private sector; that is, largely private investments. Gulf Opportunity Zone Legislation provides tax incentives without requiring the direct appropriation of funds by the federal government.

It is expected that up to 50 Mississippi counties, essentially those south of the line from Vicksburg to Columbus, will qualify for at least some of the anticipated redevelopment incentives. A brief outline of the significant incentives contained in the proposed legislation follows.

- **50 Percent Bonus Depreciation.** The first incentive relates to certain property bought after August 28, 2005, that is used in a trade or business. Generally, this incentive will allow an additional deduction for depreciation of 50 percent the year the purchased property is placed in service. Property that is eligible for this bonus depreciation deduction includes most types of depreciable real property. Of particular importance is the fact that, unlike the legislation passed post-September 11, it is expected that the bonus depreciation will be available not only for costs incurred on rebuilding projects but also new projects as well.
- **Tax-exempt Bonds.** The second incentive would allow the state of Mississippi to issue a limited amount of tax-exempt, private activity bonds to finance the development of a wide array of commercial projects in the Zone after August 29, 2005.
 - Bonds would be available to almost all business sectors (gaming is excluded).
 - Bonds would be tax exempt which should result in savings of up to 200 basis points in interest costs per annum.
 - As under current law, an applicant will not have access to both the 50 percent bonus depreciation and the tax-exempt bonds.
- **Net Operating Loss Carryback.** The last incentive would allow an extended carryback period for net operating losses by businesses with preexisting operations in the Zone. Such an extension may assist taxpayers to more quickly convert operating losses (including any resulting from the tax benefits discussed above) into tax refunds.
- **Other Important Provisions.** The legislation contains a number of other important incentives and relief provisions that are important to businesses considering an investment in the Mississippi Gulf Coast, including:
 - **Increase in Qualified Rehabilitation Credit.** The credit for qualified expenditures for an historic structure was raised to 26 percent and for other qualified structures to 13 percent.
 - **Expensing Rules for Demolition and Clean-up.** Ordinarily demolition and site clean-up costs must be capitalized. Special rules permit expensing of up to 50 percent of such costs incurred through 2007.
 - **New Market Tax Credit Authority Increased.** The allowable credit is equal to 39 percent of qualifying investments in low-income communities. To qualify, the investment must be made by an authorized community development entity. An additional \$1 billion in authority was granted for the years 2005 - 2007.
 - **Reforestation Incentives for Small Timber Owners.** The cap on the deductibility of reforestation costs was doubled to \$20,000 per year through 2008 and a special five-year NOL carryback for small timber operations was authorized. To qualify, the timber owner must own less than 500 acres of timber
 - **Low-Income Housing.** The Act authorizes almost \$40 Million in additional low-income tax credits for Mississippi. Additional provisions will increase the credits available to investors for new construction and rehabilitation expenditures.
 - **Expensing of Qualified Environmental Clean-up Costs.** The deductibility of environmental clean-up costs incurred on qualifying sites was extended for two years and applies to the clean up of petroleum products. To qualify, costs must be incurred from August 27, 2005, through 2007.

RECOVERY RECOMMENDATIONS

Introduction

The purpose of this section is to describe specific disaster-recovery policy issues and provide recommendations where warranted. First, a list of 10 guiding principles for long-term community recovery has been developed. The principles are intended to offer state and local officials with a broad framework for action. It is by no means a mandate, but rather a series of suggestions that may be used to help frame ongoing decisions faced by state and local officials as they work towards making the Coast better than it was before the disaster. Next, emphasis has been placed on the identification of existing recovery assistance, including funding, policies, and technical assistance that impact the ability of individuals, families, businesses, and communities to recover. The section concludes with a discussion of various organizational models that may be used to implement the long-term vision of the Governor's Commission and help communities across Mississip-

pi recover from Hurricane Katrina in a way that makes them better than they were before the disaster. Appendix A: Disaster Recovery Assistance describes key federal, state, and nonprofit recovery assistance, including its applicability to the State of Mississippi. Appendix B: Identifying Post-Disaster Recovery and Reconstruction Funding, Assistance, and Implementation Strategy, outlines the steps needed to successfully procure funding, change or create policy, and obtain technical assistance necessary to help in the implementation of a long-term disaster-recovery strategy. These appendices may be found at www.governorscommission.com.

Recommendations

The following recommendations are intended to summarize key issues identified early in the overall long-term recovery process. These and additional recovery issues should be addressed by both the existing network of federal, state and local government officials; community groups (some of which may have emerged following the disaster); nonprofit and private sector partners;

as well as the office created to manage the state's long-term recovery effort. The recommendations noted here were not prioritized in terms of their importance. Rather, they represent an initial list to consider as the network of recovery groups move from response and early recovery activities to long-term recovery and reconstruction. These recommendations also are intended to stimulate dialogue among other stakeholders, many of whom have focused their efforts on assisting those who most often fall through the cracks following a disaster, namely the disenfranchised and less powerful. These recommendations may spur future discussion and the formulation of new recommendations or the modification of those presented here. In many cases these recommendations cut across issue-specific committee recommendations offered elsewhere in this report. In order to frame current and future actions, therefore, a series of guiding principles are offered below.

Guiding Principles for Rebuilding the Mississippi Gulf Coast¹

- Economic Vitality. Actions should reflect the need to rebuild and sustain a diverse, vibrant economy. As with all principles, building a strong economy should complement, rather than contradict others listed below.
- Protect Environmental Quality. Disaster-recovery policies and reconstruction practices should respect how decisions enhance or degrade environmental quality. Preserving natural systems, such as wetlands and barrier islands, which are often located in known high-hazard areas, provides an additional benefit of protecting adjacent property from flooding and coastal storm surge.
- Promote Social and Intergenerational Equity. Improve social conditions to include assisting the most socially vulnerable populations and taking actions that enable future generations to live, work, and play in a place that is better than the conditions of the past.
- Maintain and Enhance a High Quality of Life. Recovery and reconstruction activities should improve the way in which people live, work, and play. Specific factors include: enhanced recreational, health care, educational, and employment opportunities.
- Institutionalizing Hazard Resilience. Identify and implement a comprehensive strategy that protects lives and property from the damaging effects of natural hazards. Actions may include land-use, codes, public education, and the hardening, retrofitting, or relocation of at-risk structures.
- Aesthetics and Historic Preservation. Encourage the preservation of historic structures and sites as practical and consider the reconstruction of structures in a way that captures the historic vernacular and local community aesthetic.
- Public Participation. Incorporate public participation practices into recovery decision-making processes. Participatory actions may include, but are not limited to, public education, participatory planning, notifying people of relevant issues,

policies and funding opportunities, referenda, representative policy-making, open meetings, and hearings.

Next, a series of recommendations are offered, including a summary of their relevance, followed by potential challenges to their successful implementation.

Recommendation 1:

Maximize the use and dissemination of available data and research findings that may be used to enact policy change, affect reconstruction practices, and prepare better for future events. Data and research findings may include those created before and after Hurricane Katrina. Following major disasters, including Katrina, FEMA and other federal agencies routinely conduct numerous studies that are relevant to recovery and reconstruction activities. Other organizations, including colleges and universities, state agencies, environmental groups, and others may conduct studies and perform a range of activities.

For example universities and colleges perform multiple research efforts to address complex policy issues. A special effort should be made to reach out to Mississippi colleges and universities. This may involve the identification of specific research questions that must be answered following Katrina.

In many cases, this information is not widely disseminated nor effectively used to shape meaningful policy and programs. The ability to collect and disseminate this information is not normally assigned to a particular agency. To use this information to affect meaningful policy decisions, therefore, this data should be organized and widely disseminated to citizens (as appropriate),

local, state and federal officials tasked with recovery; policymakers (including members of the Mississippi Legislature and congressional delegation); members of key associations and nonprofit organizations and agencies. Specific examples include, but are not limited to:

- Mitigation Assistance Team final reports
- FEMA High Water Mark Study
- FEMA Advisory Flood Recovery Elevation Maps
- University and college research projects

One option involves the creation of an information clearinghouse that collects and displays relevant written and digital information in an easily accessible location. This proposed approach is complementary to the suggested creation of design centers along the Coast. In some instances, the data and studies may be analyzed by members of the larger recovery network, including local officials, members of state and federal recovery planning teams, state officials tasked with identifying unmet disaster-recovery needs, and hazard scholars who are trying to answer assigned research questions. The collection of data, for example, could also be used to help coordinate and direct the actions of the proposed design centers. Data should be displayed and analyzed using a Geographic Information System (GIS) where practical. Specific data layers may include, but are not limited to:

- Level of damages sustained by parcel

“In 1965 The Beatles released a song, ‘In My Life.’ Some of the lyrics fit how people along our Gulf Coast feel about the changes caused by Katrina as well as our historical losses. The song begins with ‘There are places I’ll remember all my life, though some have changed, some forever not for better, some have gone and some remain, all these places have their moments with lovers and friends.’”

– Edmond Boudreaux, Biloxi

- SmartCode transects
- Advisory Flood Elevation Maps
- Orthophotos of coastal Mississippi
- Proposed design vernacular (based on *A Pattern Book for Gulf Coast Neighborhoods*)
- Demographic information
- Types and amount of disaster assistance provided

Finally, and perhaps most important, this information could be tracked over time in to provide tangible and measurable indicators of the degree to which recovery has occurred.

Policy Implementation Challenges: Requires a well coordinated effort to first identify, and then link data and research findings to appropriate policymakers and those tasked with their implementation.

Recommendation 2:

Maximize the wise and coordinated use of multiple recovery assistance tools, including funding, technical assistance, and policy initiatives, to ensure that affected municipalities and counties are able to address local needs and recover in a way that takes advantage of the post-disaster window of opportunity to build back communities that are better places to live, work and play than they were before the disaster.²

Successful disaster-recovery requires the clear identification of local needs and the type of federal, state, regional, nonprofit, and private sector assistance available. In the case of disaster-recovery, assistance generally can be broken down into three categories: funding,

technical assistance, and policies. The programmatic requirements associated with differing levels of assistance varies greatly. Generally, as funding moves from federal to private sector aid, the amount of “strings attached” to funding, policy and technical assistance decreases. As a result, communities should strategically use differing types of assistance. Developing a well thought-out recovery assistance strategy increases the likelihood that a wide array of local needs is met. Alternatively, local governments may target the use of those funds or technical assistance with the fewest policy constraints as a means to address the hardest to meet local needs that cannot be satisfied by other, more proscriptive sources of aid.

Technical assistance is provided in various forms by of differing groups. Examples may include conducting education and outreach efforts for disaster victims or local governments, recovery and reconstruction workshops, assisting in the development of a disaster-recovery plan, the provision of policy guidance, the listing of funding available, and the writing and implementation of grant programs. The development of a comprehensive recovery and reconstruction education, training, and outreach program will be discussed in the following recommendation.

Identifying important policies and how they may affect recovery efforts is a key, but often overlooked part of developing a meaningful recovery strategy. The best plans may prove ineffective if existing or proposed policies run counter to identified objectives. If policies hinder the ability of the state, counties, and local communities to recover and rebuild in a way that makes them better places that they were before the disaster, then those policies should be challenged

and potentially changed. Similarly, the adoption of new policies such as hazard mitigation that can help speed recovery, address identified needs, and better protect lives and property cannot only facilitate the long-term recovery process, it also represents a way to make sure the state, counties, communities, businesses, families, and individuals are better prepared to confront the challenges of recovery in the event of another disaster.

Policy Implementation Challenges:

The ability to coordinate effectively the number of differing and sometimes conflicting assistance programs is a major challenge. Developing a coordinated “assistance distribution network” is critical to taking advantage of the post-disaster window of opportunity to facilitate a comprehensive recovery effort that includes the most vulnerable and least likely to recover populations.

Recommendation 3:

Identify the means to build and sustain local and state long-term recovery capacity. Long-term recovery requires a sustained commitment of state and local officials in order to be effective. Identifying local needs and procuring the assistance needed to meet them pre- and post-disaster necessitates a trained network of local elected officials, local and outside professionals and disaster-recovery experts, nonprofits, and private sector leadership. Maintaining a capacity to recover from disasters is an important function of local and state governments.

A major challenge facing local and state governments following major disasters is the ability to hire and maintain the qualified staff needed to administer federal grant programs, conduct lo-

cal training programs, and assist local governments to plan and implement a comprehensive recovery strategy. Possible approaches include:

Maximizing the Use of State Management Costs for Hazard Mitigation and Public Assistance Programs. Following federally-declared disasters, FEMA provides federal funds to the state that officials can use in the administration of federal grant programs. These funds are typically used to pay for additional temporary disaster-based staff, equipment, and materials needed to aid local governments implement these programs. In Mississippi, MEMA plans to use two primary approaches to address mitigation and public assistance program management. The Mitigation Section plans to hire mitigation staff and place them within planning and development districts in order to assist local governments complete hazard mitigation plans that will contain a series of identified hazard mitigation projects, develop hazard mitigation grants, and ultimately implement the grants once approved by FEMA. Contractors may be used to supplement this assistance as necessary. The Public Assistance Section has chosen to hire contractors to supplement state staff. Specific tasks will include the writing and review of project worksheets. Contractors will also assist the state with project closeouts as requested. MEMA, working with FEMA, has developed joint Mitigation/Public Assistance teams, tasked with the identification of 406 mitigation opportunities (for a more detailed discussion of the importance of integrating hazard mitigation into recovery, see the recommendation on maximizing the use of mitigation in long-term recovery).

“We don’t need that extra-high, extra-wide bridge between Biloxi and Ocean Springs. I think they should listen to the Ocean Springs residents who want a smaller, more attractive bridge.”

-- Brenda Finnegan, Ocean Springs

Policy Challenges:

This approach represents a good way to hire recovery staff focused on the administration of the Hazard Mitigation Grant Program and the Public Assistance Program. It does not provide the means to hire staff to focus on the broader long-term recovery process. Since the funds are intended to be used for the administration of two specific programs, the staff hired using this method must be released once the programs are completed. As a result, the state is unable to retain trained staff following the completion of the programs, unless other funding mechanisms are identified. This represents a major challenge to state emergency management agencies across the country.

Establishing Local and Inter-State Disaster-recovery Networks. Following major disasters like Hurricane Katrina, major financial constraints are placed on local and state governments. Further, these governments are often unprepared to address the policy challenges, including broad economic and social recovery challenges. In order to provide assistance to local officials, who are often stretched to provide daily public services, a locally-created assistance “network” is necessary. These networks may take the form of a standing disaster-recovery task force or other organizational structure that meets on an ongoing basis to address issues, offer solutions, and convey local needs to state and federal officials. The creation of local recovery task forces should be the driving force behind the creation of a local recovery plan, many of which are in the initial stages of development. Similarly, a common recommendation of a recovery task force is to develop a comprehensive recovery and reconstruction plan that identifies local issues and needs and

outlines the steps necessary to address them.

Maximizing the Use of Existing State and Federal Contract Vehicles to Bring in Long-Term Recovery Experts to Assist the State and Local Communities. In addition for the need to draw from local expertise, others from within the state or from across the United States have a great deal of disaster-recovery expertise, much of which has been learned first-hand. The ability to draw quickly from this expertise is possible, but often not effectively utilized. This is particularly true in the case of long-term community recovery. The Emergency Assistance Compact (EMAC), for example, provides a tested vehicle to provide state and local experts. Those called, however, often are focused on the administration of the three primary FEMA programs (Hazard Mitigation Grant Program, Public Assistance, and Individual Assistance) rather than those individuals who have experience in local community recovery planning and the administration of multiple federal, state, nonprofit and private sector funding streams.

The Governor’s Commission recommends that the EMAC, working in concert with the Governor’s Office, MEMA and FEMA, identify and deploy a cadre of long-term community recovery planning experts who can be called on to assist directly the state and local governments with the range of issues that occur as part of long-term recovery activities. An emphasis should be placed on those who have extensive backgrounds in the development and implementation of comprehensive recovery strategies to include planning for post-disaster-recovery and reconstruction as well as the identification and implementation of the resources needed to achieve a sustainable recov-

ery. FEMA can also provide experienced recovery experts through the use of two existing contracts, the Technical Assistance Contract and the Hazard Mitigation Technical Assistance Program (HMTAP) Contract. At this time the NISTAC contract has been used to bring on staff who works within FEMA's Long-Term Community Recovery team, often referred to as Emergency Support Function 14 (ESF-14). The National Response Plan includes 15 Emergency Support Functions, all or some of which can be called upon to assist following presidentially-declared disasters. The HMTAP contract has been used to perform a number of activities, including the assessment of how structures performed following Hurricane Katrina, documenting high water marks, creating Flood Advisory Maps, and assisting local governments develop hazard mitigation plans and mitigation grant program implementation strategies. To meet the needs of local governments and disaster victims effectively, the state, working in cooperation with FEMA should conduct a local personnel needs assessment and determine the best way to identify and deploy those with the requisite experience, skills and abilities to identified communities.

Developing Trained Local and State Cadre of Disaster-Recovery Planning, Policy and Grants Management Experts. As noted in the previous recommendation, staff expertise in disaster-recovery planning, policy, and grants management are crucially important. It is also important to hire staff for an extended period of time as local recovery will last for at least five years, if not longer. EMAC and FEMA contractors represent a valuable source of assistance but will not be present throughout the entire recovery process. The State of Mississippi, therefore, co-

ordinating with the Governor's Office, the Mississippi Development Authority, Mississippi Emergency Management Agency, Mississippi State University, Coastal Planning Development Districts, and FEMA; will provide planners, recovery policy specialists, and grants management experts to the six southernmost counties and affected municipalities.

The Governor's Office will provide long-term recovery policy analysts and staff to help coordinate the state's implementation of long-term recovery planning efforts. This staff will be located in Jackson as well as the Coast. Emphasis will be focused on the implementation of a long-term recovery strategy, including the creation of recovery policy, the identification and resolution of policy issues, as well as directing the overall long-term recovery planning, policy, and grant implementation efforts. A series of federal state and regional agencies and organizations will be working with the Governor's Office to assist in the implementation of recovery objectives.

Mississippi Development Authority should provide the following services:

- Provide financial and technical grants management and recovery planning assistance to counties and municipalities. This assistance is contingent on counties and municipalities agreeing to develop initial plans that identify how to improve planning for future growth particularly in Pearl River, Stone and George Counties, and develop recovery plans that describe a strategic plan of action identifying specific policies and projects that they will implement.

“We have the chance to make the Coast a wonderful place for tourists, vacationers, and both poor and rich residents.”

– Charlie Swanson, Diamondhead

Members of the Congress for the New Urbanism should provide the following services, as requested by the state:

- Assist in developing reconstruction plans for the 11 municipalities severely affected along the Coast; and
- Conduct ongoing technical assistance for local governments, operating out of on-site design centers located along the Coast.

FEMA's Long-Term Community Recovery (ESF-14) staff should provide the following services, as requested by the state:

- Bring together federal agencies tasked with the provision of recovery aid to support identified initiatives of the state;
- Assist municipalities and counties with development of long-term community recovery plans, as assigned;
- Assist municipalities and counties in identifying appropriate federal, state, nonprofit, and private sector funding sources to implement the projects identified in long-term community recovery plans;
- Provide technical assistance to municipalities and counties to include recovery planning workshops, disbursement of recovery self-help guides, and other recovery assistance as agreed to by FEMA, the Governor's Office, and MEMA;
- Provide, as appropriate, disaster assistance information that can be

used by the state to assess unmet disaster needs.

MEMA should provide the following planning and grants management services:

- Identification of hazard mitigation projects;
- Writing hazard mitigation plans;
- Writing Hazard Mitigation Grant Program applications;
- Notifying other planning partners about proposed and pending Hazard Mitigation Grant Program applications and Public Assistance projects;
- Providing ongoing technical assistance to local governments, including guidance on the implementation of hazard mitigation grants and Public Assistance projects.

Planning and Development Districts should provide the following planning and grants management services:

- Writing of hazard mitigation plans and implementing local mitigation strategies;
- Writing and implementing disaster-recovery grants; and
- Assisting local governments with integration of hazard mitigation and recovery plans into existing comprehensive plans.

Establishing a Permanent State Disaster-Recovery Task Force. The state should consider establishing a state-level disaster-recovery task force to address

the massive challenge of coordinating the array of disaster-recovery assistance programs available following Hurricane Katrina. To be prepared for future disasters, this model should be formally established and continue to meet after the recovery and reconstruction from Katrina is complete. Primary tasks also may include raising issues and creating recovery policy issues that serves the needs of disaster victims and impacted communities. A similar recommendation has been proposed by the Governor's Commission in the land use chapter.

Developing an Ongoing Recovery Training and Outreach Program. Long-term disaster-recovery represents the least understood aspect of emergency management by federal, state, and local emergency management practitioners. It is incumbent on the state and FEMA, therefore, to do a better job of training local, regional, state, and federal officials as well as contractors and other members of the recovery network about issues such as long-term recovery planning, the writing and implementation of recovery grants, and how to better take advantage of the unique circumstances following a disaster of the magnitude of Hurricane Katrina that provide communities with an opportunity to enact meaningful improvements and change. Training and outreach efforts also may include regular discussions with local officials regarding the benefits of adopting building codes, joining the National Flood Insurance Program (NFIP), joining the Community Rating System and the development of hazard mitigation and recovery plans. Specific actions should include conducting disaster-recovery assistance workshops where differing agencies and organizations who provide assistance can brief local gov-

ernment officials. Topics should include: the level and type of technical assistance they can provide, available funding programs they administer, and a discussion of the policies they implement.

It is also important to reach out to disaster victims. The current emphasis on the Disaster Recovery Center (DRC) as the means to achieve this goal is not enough. In addition to the use of DRCs as a vehicle to disseminate information, FEMA, MEMA, and other relevant aid agencies should conduct extensive community-based outreach activities. Emphasis should be placed on public meetings with disaster victims to describe programs that offer assistance.

A better job needs to be done to train and educate insurance agents, lenders and the public about NFIP. Specific topics should include an overview of the program, why it is important to purchase flood insurance, and the need to consider purchasing flood insurance regardless of whether you are in a mapped flood hazard area. Following Hurricane Katrina thousands of homeowners and business owners sustained flood damage but did not maintain flood insurance, either because they were not in a designated floodplain, their insurance agent told them it was not necessary, they believed it was too expensive, or they believed that their homeowner's policy covered flood-related damages. In order to make sound financial decisions, lenders should become more familiar with the flood program and consider advising, or requiring, individuals who take out a loan to finance the construction or purchase of a home or business to purchase of a flood policy if located within the new mapped Advisory Flood Elevation or the historic flood of record, Hurricane Katrina.

"I am writing to you from Hattiesburg. I was able to hear live audio of the presentations made at the Forum on my local Mississippi Public Radio station and was so excited to hear it as it happened! What a momentous time for our state!"

– Jennifer West, Hattiesburg

“As we decide how best to go about rebuilding the Mississippi Gulf Coast, it is critical that we make plans which squarely address the central issue of the community: ‘What sort of quality of life do we, the citizens, wish to enjoy during our lives and pass on to our descendants for them to enjoy after we are gone?’”

– Donald Newcomb, Long Beach

Consider the Development of State Enabling Legislation. The Mississippi Legislature may consider the adoption of enabling legislation that codifies how the state will recover from a major disaster. Specific actions may include, the creation and funding of state programs designed to address shortfalls in the Stafford Act and traditional supplemental funding packages, the possible creation of a state disaster-recovery fund, and the development of a state long-term recovery organizational model. This fund should emphasize the hiring of permanent state staff members who are experts in long-term recovery planning and policy. This expertise should include a thorough knowledge of recovery processes and programs beyond those administered by FEMA and noted in the Stafford Act.

Policy Implementation Challenges:

Coordinating the collection of programs and developing a strategy that meets identified needs will require a great deal of cooperation across federal, state and local recovery partners. Meeting as a group on a regular basis, preferably as part of a widely recognized organization with political standing, is key to success. Members of the group should also be willing to assign the staff and resources needed to make policy decisions and implement proposed action over a long period of time.

Recommendation 4:

Maximize the use of mitigation in long-term recovery. Under ideal circumstances, communities have developed and implemented a comprehensive strategy to reduce the impact of natural hazards before a disaster occurs. In reality, policies and implementation of specific projects are often adopted

following a disaster. This is due to several factors, including a willingness to alter the status quo based on a better understanding of hazard risk, the presence of federal mitigation funding, and an educational effort to demonstrate the merits of adopting hazard mitigation practices. Specific hazard mitigation strategies should include, but are not limited to:

- Hardening or relocating vulnerable community infrastructure. An emphasis should be placed on the use of 406 Public Assistance funds to rebuild damaged infrastructure whenever possible.
- Investigating nontraditional mitigation funding sources. Numerous federal agencies, nonprofits and the private sector may be able and willing to pay to implement hazard mitigation measures.
- Adoption of building codes. The adoption of building codes represents one of the most far-reaching and effective options available to local governments. The success of building codes depends on the development of an effective enforcement program.
- Develop local hazard mitigation plans. Hazard mitigation planning involves the identification of a long-term strategy to reduce the vulnerability of communities to identified natural hazards. Several communities, including some on the Gulf Coast, have not completed local hazard mitigation plans. The completion of these plans is necessary to remain eligible for post-Katrina Hazard Mitigation Grant Program funding. The recommendations in these plans should be integrated

into the actions sited in local comprehensive plans, plans being developed by the Center for the New Urbanism, and the recovery plans being developed by ESF-14 teams.

- Local communities should consider adopting FEMA's Advisory Flood Elevation Maps for reconstruction purposes. The maps represent the best available information regarding coastal flood hazards. Rebuilding to the pre-Katrina Flood Insurance Rate Maps will result in communities exposing people and their property to an unnecessarily high flood risk.
- Consider the adoption of zoning, impact fees, and other land use techniques to reduce the impacts of natural hazards. Local governments should consider how their existing land-use practices increase or decrease overall vulnerability to hazards.
- Educate citizens, local officials, business owners, lenders, insurance agents, and others about the natural hazard risk faced by coastal communities in Mississippi. Arming those who may be affected by future disasters, including those who provide financial assistance to disaster victims, allows them to make better decisions that reduce their physical vulnerability or financial risk.
- Encourage the purchase of flood insurance. Hurricane Katrina caused flooding outside of the boundaries of local Flood Insurance Rate Maps.

Recommendation 5:

Expedite disaster-recovery processes, recognizing that federal, state and local governments must make decisions that are wise in the long run. The rapid provision of assistance is often hindered during a major disaster. Federal, state, and local officials are typically overwhelmed. In the case of Hurricane Katrina, the magnitude of damages is unprecedented, requiring new and innovative approaches to distribute assistance, emphasizing the importance of relying on a broad recovery network suggested in an earlier recommendation.

Expedite federal and state recovery policy as appropriate. The adoption of federal and state policies related to hazard mitigation, and disaster-recovery in general, should be expedited. Major policy issues must be resolved prior to beginning outreach, training, grant writing, and other implementation actions. At the state and local level, this can be achieved through regular meetings of state and local recovery task forces who possess the authority to make policy and assign staff required for their implementation. Coordinating regular meetings between the state task force and local recovery task forces also is important to resolving local policy issues that necessitate state and federal guidance or interpretation. This approach also allows the state to gain a greater understanding of local needs and create or amend weakened policy as appropriate. Specific policy issues may include, but are not limited to, the provision of non-federal match requirements for mitigation and other recovery grant programs, and the development of specific measures to speed up the delivery of assistance. The state of Mississippi should consider the

use of "global match" whenever possible, in order to stretch the use of federal mitigation assistance. Global match involves the documentation of specific non-federal mitigation-related activities that may be used as a match to federal funding. Examples may include the funds used to implement the Mississippi Renewal Forum and the Governor's Commission.

A ROAD MAP TO ACCOUNTABILITY

RECOMMENDATIONS		Responsible Entities and Funding Sources
LAND USE		
1	Land use ordinances should include mixed alternatives which promote walkability.	Local governments
2	Residential and mixed use developments should encourage a specified percentage of affordable housing which is compliant with building standards.	Local governments
3	Land use and economic development decisions should accommodate and be sensitive to the protection of existing natural areas including watersheds, wetlands, urban forests, and natural habitats.	Local governments
4	Local governments should consider the feasibility of shared water and sewer systems while maintaining a sense of community identity.	Local governments
5	Highway 90 should not become six-lanes. It should become a slower-moving, pedestrian friendly boulevard that allows safe pedestrian crossing to the beach. Railroad traffic should be moved north of the bays, allowing the vacant CSX right-of-way to be redeveloped as a tree-lined avenue with light rail down the center connecting the 11 communities of the Coast.	MDOT and local governments
6	The state should enact legislation authorizing and encouraging the adoption of the SmartCode by communities.	State legislature
7	Each city and county should adopt the SmartCode as a model code for new zoning.	Local governments
8	Local governments should adopt the <i>Pattern Book</i> as a compliment to its building code so as to provide local officials, developers, and homeowners a tool to build or renovate residences and commercial buildings in a manner that is sensitive to the architectural heritage of the Gulf Coast.	Local governments
9	Local governments immediately should adopt the revised advisory flood maps and begin assessment and revision of their flood zone management ordinances and building requirements.	Local governments
10	The state should adopt the latest versions of the International Building Code (IBC) and International Residential Code (IRC) with appendices as a model code.	State legislature
11	Cities adjacent to Highway 90 should cooperate to develop a model ordinance for this transportation corridor. The ordinance should include consistent development requirements, setbacks, architectural specifications, and building requirements. The ordinance should also incorporate the SmartCode for properties adjacent to the Highway 90 right-of-way.	Local governments
12	The Mississippi Renaissance Advisory Council should be created to facilitate access to key decision makers, provide a forum for local and state officials to address land-use decisions with federal and state government policy makers, prepare advisory standards for land-use, and orchestrate training and technical assistance for building and zoning offices of local governments.	Governor's Office.
13	A central Design Center should be created to offer technical assistance and expertise to local governments.	University Research Center, state universities, Renaissance Advisory Council. Funded by University Research Center and state universities.
14	Local Design Centers should be created to provide local zoning and building officials, as well as private developers, with practical, technical assistance from land use planners, code experts, architects, and engineers provided through government agencies, universities, and volunteer organizations.	Mississippi Development Authority (MDA), local governments, Renaissance Advisory Council. Funded by MDA.
15	Temporary, multi-disciplinary permitting authorities, or "Housing Resource Centers," should be established. They should provide residents with more efficient and timely access to all necessary approvals for permitting, utilities, and licensing.	The central Design Center and local design centers
16	The legislature should create the Mississippi Renaissance Corporation, a for-profit, state corporation with the public purpose of marshalling capital, planning projects, and assisting private developers and local governments in public-private partnerships in smart development consistent with the core land use values stated in this report.	State legislature

INTERMODAL TRANSPORTATION

1	The CSX right-of-way should be acquired by the state.	Governor and Mississippi congressional delegation. Federal funding sources available.
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RECOMMENDATIONS		Responsible Entities and Funding Sources
2	Highway 90 should be returned to a pedestrian-friendly beach boulevard that reduces vehicular traffic and increases opportunities for bike paths, pedestrian walkways, and public transit. It should remain four lanes and incorporate a Gulf Coast bikeway that extends the entire length of the coast.	MDOT and local governments
3	A new east-west transportation thoroughfare should be established.	MDOT and local governments
4	Transportation and traffic engineering studies should be conducted to address the traffic volume and congestion that will be generated by a six-lane Biloxi-Ocean Springs bridge that feeds into the present four-lane Highway 90.	MDOT
5	MDOT should redesign the I-310 connector to accommodate and support the following Commission recommendations: (1) a new east-west thoroughfare, (2) the Highway 90 conversion to a pedestrian-friendly boulevard, and (3) Port of Gulfport activities which are evolving into a mix of commercial businesses and gaming.	MDOT, Gulf Regional Planning Commission, and Federal Highway Administration. Funding available through federal highway appropriations and State of Mississippi
6	A transportation and traffic engineering firm should be retained to study, evaluate and produce a transportation master plan for the Mississippi Gulf Coast, including the six South Mississippi counties. Such plan should be designed to: (1) provide a pedestrian-friendly multi-modal transportation network that improves traffic flow and provides for bikeways, jogging paths, pedestrian walkways and trolleys, and (2) improve east-west and north-south travel for the central and northern parts of the coastal counties and George, Stone, and Pearl River Counties.	Gulf Regional Planning Commission, MDOT, Federal Highway Administration, and the Renaissance Advisory Council. Funding available through FEMA, Federal Highway Administration, and MDOT
7	CTA should apply for all available federal funding to compensate for the revenue shortfall resulting from Katrina, and to repair and replace capital facilities and vehicles.	Coast Transit Authority
8	An experienced and qualified transportation engineering firm should be contracted to undertake a comprehensive inter-modal transportation plan, including public transportation. The plan should focus on providing public transportation that affords a pleasant and cost-effective means of traveling to work, visiting casinos, sightseeing, and shopping for residents and tourists. It also should encourage less reliance on the car for daily use.	Coast Transit Authority
9	CTA should obtain funding for a feasibility study addressing the construction and operation of an electric trolley/cable car system along Highway 90 and other innovative approaches to increasing ridership in conjunction with the land-use and intermodal transportation recommendations. The Mississippi Department of Transportation should coordinate Highway 90 design and rebuilding plans with CTA to provide for a track bed location which supports a trolley cable car system.	Coast Transit Authority
10	Casinos, condominiums, and retail developers, particularly those located along Highway 90, should work and coordinate with CTA in the design and development of rider pickup stations for rubber-tire trolleys and rail trolleys.	Coast Transit Authority
11	The Governor should establish a Coastal Port Council to work directly with the Mississippi Development Authority (MDA) to study and evaluate the role and mission of the Port of Gulfport and the Port of Pascagoula. Also, an experienced, qualified consultant should conduct a study of these two ports and develop a master plan designed to maximize the growth potential of each port and minimize duplication of operations and services.	Governor
12	Property should be acquired north of Highway 90 and developed as an inland port or staging facility in preparation for shipment of unloaded cargo to its final destination.	Governor, Harrison Co., MDA, Jackson Co.

TOURISM

1	The Harrison County Sand Beach Department and Mississippi Department of Marine Resources, through its Coastal Cleanup programs, should clean up the beach and adjacent waterways. This also will require cleaning the shallow waters of the Mississippi Sound to remove debris visible at low tide.	Harrison County Sand Beach Department and Mississippi Department of Marine Resources
2	MDOT should rebuild Highway 90 and the bridges consistent with the principles of the Mississippi Renewal Forum.	MDOT
3	The Coast should capitalize on the "Voluntourism" market. Mississippi Development Authority (MDA) should encourage such attractions to out-of-state markets and the CVB should market these sites to in-state markets.	MDA and Mississippi Coast Convention and Visitors Bureau
4	The state legislature should create a coast-wide Tourism Promotion Commission and fund it with new funds and/or grants made available to MDA. Enacting a 1% Food & Beverage tax may provide much of the necessary funding.	State legislature
5	Local governments should rebuild public and private piers and marinas according to stronger construction standards and best practices models provided by the Mississippi Department of Wildlife & Fisheries.	Local Governments. Funding available through Water Resource-Planning Assistance to States.
6	The Tourism Promotion Commission should research and test the Tier One Destination criteria, including validation of the assumptions and criteria (number of rooms, exhibition space, etc.) and determine the retail capacity needed to attain Tier One status. Additionally, the Tourism Promotion Commission should quantify the benefits of Tier One status and the methods to effectively market the designation.	Tourism Promotion Commission. Grants available from the U.S. Chamber of Commerce and/or the federal Economic Development Administration.

RECOMMENDATIONS	Responsible Entities and Funding Sources
7 Local governments should raise roadside beautification standards.	Local governments
8 Local governments and beautification committees should enhance landscaping in public areas. Appropriate local organizations such county beautification committees and neighborhood garden clubs should provide volunteers for a massive planning, landscaping, and maintenance effort.	Local governments and local organizations
9 State and local tourism officials should share the news of recovery and renewal and meet with booking agents, airlines officials, and tourism industry groups to share plans that the gaming industry and other major attractions will rebuild and return bigger and better than before.	State and local tourism officials
10 The state legislature should begin the restoration of our cultural and historic attractions by enacting state Historic Preservation Tax Credit legislation (HB 1604) which would provide state tax credits and go along with federal preservation tax credits to commercial and residential property owners who restore damaged historic resources. The U.S. Congress should extend KETRA to 2007.	State legislature and U.S. Congress
11 Tourism, heritage, and cultural organizations should consider opportunities to share resources.	Local organizations
12 The Governor's Office and MDA should host planning charrettes on the model of the Mississippi Renewal Forum's design charrette. A similar approach for taking ideas to action can be used to develop strategies for heritage and cultural tourism, for retail businesses, and for other sub-sections of the tourism economy.	Governor and MDA
13 The state and the Mississippi Coast Coliseum Commission should quickly complete the Coliseum expansion and remodeling.	State of Mississippi and Mississippi Coast Coliseum Commission
14 Tourism promotion organizations should follow through with the creation of a clearinghouse and one-stop-shop to research and apply for grants, loans and other support for existing tourism-based organizations.	MDA, the Mississippi Main Street Association, Mississippi Heritage Trust, and the Mississippi Department of Archives and History
15 The Tourism Promotion Commission should develop a new marketing plan and slogan for the Mississippi Gulf Coast. The plans should consider and support the goal to reach Tier One designation.	Tourism Promotion Commission
16 Events and festivals should continue. Hotels should receive appropriate resources to open quickly and accommodate visitors to these events.	Local festival organizers. Funding sources include MDA and festival organizers in other states.
17 Tourism promotion organization should focus on golf and charter fishing.	CVBs, Chambers of Commerce
18 The Mississippi Golf Association should attract regional golfers and place golfers with available rooms. MDA can help the Golf Association create and finance promotional material and distribute it to golfing market. The charter boat industry also survived the hurricane comparatively well and should be part of the state's short-term tourism promotion.	MDA and Mississippi Golf Association
19 Private development should transition the Coast from the nation's premier voluntourism market to a Tier One destination. This includes building additional hotel rooms, meeting and convention space, restoring and/or reconstructing museums/aquariums/learning and visitor's centers, and launching a major nationwide marketing campaign by the Tourism Promotion Commission	Private corporations
20 MDA and the local CVB should create at least one new major attraction in South Mississippi. A NASCAR track, zoo, professional sports facility, and a cruise ship are all possibilities. A new J.L. Scott Marine Education Center, Biloxi Seafood Museum, NASA's Infinity complex and the eco-tourism opportunities along the Pascagoula River can each become major attractions. A new Hurricane Katrina Experience at Infinity could teach about record-breaking Katrina and about hurricanes in general. This could be tied to a coast-wide "high water mark" tour.	MDA and local CVB. Funded by private development with appropriated tax incentives.
21 MDOT and the Mississippi Coast Transportation Authority should link attractions, accommodations, and convention and meeting facilities by trolley, rail, ferryboat, bike and pedestrian paths, and other multi-modal options.	MDOT and Mississippi Coast Transportation Authority. Funding available through Federal Transit Authority grant programs.
22 Tourism organizations should leverage the "mini-brands" of our city centers.	Tourism organizations
23 MDA and "eco-tourism" operators should advance "eco-tourism" opportunities.	MDA
24 Local developers should expand the retail horizons. MDA and local governments should target major retailers like Nordstrom's, Saks, Target, Crate & Barrel and Pottery Barn — especially those willing to tailor their store designs to the style and scale appropriate to the Coast. At the same time, encourage local artists and other entrepreneurs to create products that reflect the culture of South Mississippi.	Local developers and MDA
25 Local governments and cultural organizations should create more themed "trails." Possible unique tour paths include a Museum Trail, Golf Trail, Nature Trail, African-American History Trail, a Civil War to Civil Rights Heritage Trail, and Art Trail.	Local governments and cultural organizations
26 Local and CVB officials should work with the state legislature to restructure tourism promotion and funding. The Tourism Promotion Commission should be created and new funding sources considered, such as a 1% F&B tax - to rework a goal of a \$20 million annual budget to market South Mississippi tourism.	Local and CVB officials and state legislature

RECOMMENDATIONS		Responsible Entities and Funding Sources
27	The state should use anniversaries of Katrina to call attention to South Mississippi's renewal.	Governor's office
28	The Governors Commission should publish and distribute the recommendations of the Commission related to tourism industry stakeholders (casino owners, hotel owners, airlines, developers).	Governor's Commission

DEFENSE AND GOVERNMENT CONTRACTING

1	The Governor should seek the support of the state's congressional delegation in requesting that the Department of Defense and other federal agencies permit, where appropriate, the use of government-controlled property as sites for temporary housing.	Governor
2	FEMA should place larger defense and government contractors in direct control of immediate temporary housing for their own employees, both now and in the future.	FEMA
3	Large defense contractors in the region should become financial partners in the transitional housing programs coordinated by FEMA and ESF-14. If necessary, the Mississippi Legislature and United States Congress should grant financial incentives to encourage this program.	Defense contractors
4	The boards of trustees of the community colleges should immediately assess current and future training needs and establish programs to fill the gap.	Community colleges. State funds exist for skill training and should be matched by the community colleges.
5	The Governor and the Mississippi congressional delegation should urge the Department of the Army and the Department of Defense to immediately transfer MSAAP to NASA with federal funding necessary to transition the facility for other jobs creating opportunities at Stennis.	Governor and Mississippi congressional delegation
6	Department of Defense assets of the United States Navy and personnel from Naval Station Pascagoula on Singing River Island, and from the Lakeside Naval Support Facility (also in Pascagoula) should be transferred so as to allow for the immediate, public/private redevelopment of the island site and associated real property and facilities.	Department of Defense
7	Both Naval Station facilities and associated properties should revert to the State of Mississippi. The reversion should be executed with the federal government waiving compensation, so as to lighten revenue expenditures of the state during its recovery from Hurricane Katrina.	Department of Defense
8	If this transfer/reversion occurs in the manner prescribed, the City of Pascagoula, Jackson County, and the State of Mississippi should immediately begin working with the Department of Homeland Security (DHS), the United States Coast Guard, and other federal/state agencies to develop a suitable reuse of Singing River Island. The reuse should serve both national security missions and appropriate private-sector development.	City of Pascagoula, Jackson County, and the State of Mississippi
9	Local, county, and state government entities should aggressively support the defense and government contracting industry.	Local governments, MDA

SMALL BUSINESS

1	A mobile Small Business Emergency Recovery Center should be created.	Area Chambers of Commerce. Van donated by Detroit Metro Chamber.
2	A Small Business Survival Kit should be prepared and continually updated.	MDA and area Chambers of Commerce
3	The position of South Mississippi Small Business Emergency Preparedness Director should be created.	State legislature or local county governments
4	Population and business censuses should be updated.	U.S. Department of Commerce
5	A Cellular Phone Directory service should be created.	Cellular carriers
6	Business Improvement District Authorities should be created.	Local governments
7	Historic downtowns should be rebuilt or restored.	Local governments
8	A retail charrette should be conducted to develop more small retail opportunities.	MDA

EDUCATION

1	DHS and the Governor's Office should oversee implementation of state proposals to assist in the recovery of programs on the hard-hit Coast and form an advisory group of early childhood program directors and teachers, community college early childhood staff, public school officials, child care resource and referral staff, representatives from the early childhood program at Keesler Air Force Base, and the Governor's office.	DHS and Governor
2	The Mississippi Legislature should enact legislation that would require Department of Human Services to transfer no less than 20% of Temporary Assistance for Needy Families (TANF) grant funds into Child Care Development Funds (CCDF) each year.	State legislature

RECOMMENDATIONS		Responsible Entities and Funding Sources
3	The Mississippi Legislature should enact legislation that would require the Department of Human Services to meet matching fund requirements that would maximize the state's access to federal CCDF funds each year.	State legislature
4	DHS and the Governor's Office should apply for aid from the Bush/Clinton Hurricane Relief Fund to extend for 12 months the aid qualifying families can receive for childcare.	DHS and Governor
5	DHS should waive for 12 months its current policy requiring a parent to apply for child support or to establish paternity in order to obtain child care funded with CCDF funds.	DHS
6	DHS and the Governor's Office should release emergency hurricane funds to school districts to pay incentives to teachers who hold appropriate credentials in licensed early childhood programs.	DHS and Governor
7	Private corporations should use as models successful approaches such as: the Chevron Daycare Recovery program which operates in Jackson County with 23 daycare centers; military programs for supporting family childcare; and efforts by the gaming industry to develop early childhood and childcare programs with flexible schedules to accommodate workers on all shifts.	Private businesses
8	The U.S. Congress should appropriate requested funds to offset property tax and gaming revenue losses.	U.S. Congress
9	The Mississippi Legislature should appropriate funds to build wireless Internet access along the Coast.	State legislature
10	MDE and local school districts should offer additional online learning opportunities by opening high school computer labs at night.	MDE and local school districts
11	MDE should hold Coast school districts harmless on average daily attendance (ADA) and property value worth when calculating Mississippi Adequate Education Plan (MAEP) allocations for the next two years.	MDE
12	Local school districts should collaborate with FEMA to ensure new buildings are designed to mitigate future wind and water damage.	Local school districts
13	Local school districts should mitigate future damage by relocating schools further inland when possible.	Local school districts
14	The Institutions of Higher Learning (IHL) and the State Board for Community and Junior Colleges should use existing funds to create the Advanced Partnership for Higher Education (APHE), a partnership between the University of Southern Mississippi, Mississippi Gulf Coast Community College, and Pearl River Community College designed to meet the educational and economic development needs of the Gulf Coast.	IHL and State Board for Community and Junior Colleges
15	Community colleges should request federal appropriation to offset property tax and tuition revenue losses.	Community colleges
16	IHL and the Governor's office should request federal appropriation to provide financial tuition assistance to homeless/displaced postsecondary students.	IHL and Governor
17	IHL and MDE should expand dual enrollment opportunities.	IHL and MDE
18	The state should utilize high school and community college vocational centers as night skilled construction labor training centers.	
19	IHL and MDE should collaborate with the state legislature and the U.S. Department of Labor to offer free tuition for students in courses of study in industry-identified areas of need.	IHL and MDE
20	The Mississippi Legislature should create tax incentives for employers to hire students in career and technical programs.	State legislature
21	Community colleges and universities should expand "English as a second language" community programs to integrate Hispanic citizens into the Coast community.	Community colleges and universities

NON-GOVERNMENTAL ORGANIZATIONS

1	Grant writing assistance should be provided to supply immediate funding.	Governor's Commission with the Association of Fundraising Professionals and the American Society for Association Executives
2	A member of the non-profit community should be appointed to serve on future committees or commissions tasked with long-term recovery.	Governor
3	Mississippi Center for Non-Profits should engage with organizations on the Gulf Coast including United Way and Gulf Coast Community Foundation to form the Gulf Coast Non-Profit Clearinghouse that creates lasting support for non-profit organizations in the area.	Mississippi Center for Non-Profits

HOUSING

1	A detailed housing needs assessment should be conducted on a county-by-county and community-by-community basis	State and Local government. Funding available through a combination of private and public sources, such as USGS and FEMA.
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RECOMMENDATIONS	Responsible Entities and Funding Sources
2 A best practices assessment should assess building technologies, model codes, and zoning ordinances, and management practices that could be applied on the Coast.	State government. Funding available through a combination of private and public sources, such as HUD's Partnership for Advancing Technologies in Housing, the Building and Fire Research Program in the National Institute of Standards and Technology, and the Department of Energy's Building American Program
3 A barriers assessment should analyze, at a detailed level, existing code and zoning provisions within individual counties and cities in the affected region in order to identify potential barriers to the creation of a sufficient supply of safe, efficient, and affordable housing.	State government. Funding available through private and public sources, including philanthropic organizations and federal sources such as HUD's Partnership for Advancing Technologies in Housing.
4 A former HUD housing site that was destroyed during the hurricane should be developed into a new high density, mixed use affordable housing project.	Coordination between HUD, the state government, a local housing authority, one or more private developers, and one or more lending institutions. Funded by HUD, for the affordable housing component, and a private developer for the other housing and other components, such as retail.
5 A small-scale program should be developed to pilot some of the proposed financial mechanisms that provide incentives to go beyond basic building codes.	The state government should ask for assistance from the Department of Energy's Building America Program and EPA's Energy Star Building Program. Funding provided by EPA and the DOE. Large insurance companies and/or Fannie Mae may also provide assistance
6 A housing pilot should be developed that involves the development of modular, permanent housing on a site that is currently being used for temporary housing.	State government, FEMA, Mississippi Home Corporation. Funded by FEMA and private developers.
7 Cities and counties should immediately adopt – and grant expedited permits under – temporary codes that combine FEMA's interim base flood elevation advisories with Florida's stringent coastal hurricane resistance building standards.	Local governments
8 Over the long term, cities and counties should establish stringent minimum building safety codes based on the latest International Building Code (IBC) and International Residential Code (IRC) as well as hurricane and flood resistance codes.	Local governments
9 Cities and counties should consider reviewing their building codes to make sure that new modular and panelized housing technologies are permissible within their jurisdictions.	Local governments
10 Communities should ensure that their zoning codes allow for dense, mixed-use development, including ample multi-family housing.	Local governments
11 Areas near airports, shipping ports, and other heavy industrial sites should be strictly zoned solely for compatible industrial or commercial purposes.	Local governments
12 Local governments should be required to set and maintain permanent affordable housing goals.	State government
13 Developers of certain projects, as part of the permitting process, should be required to develop a minimum percentage of affordable housing.	Local governments
14 In place of, or in addition to, affordability requirements for developers, cities and counties can create incentives to encourage developers to incorporate a greater percentage of affordable housing within their projects, as well as to make their housing units safer and more efficient.	Local governments
15 Federal and state funding should be allocated to pay a portion of the lost property taxes of affected local governments for 2006 and 2007.	Congress, federal agencies such as HUD or FEMA, state government
16 Programs should be developed which address population segments with known difficulties in recovering their pre-Katrina housing situation.	The state, potentially acting through the Mississippi Home Corporation or the "New Statewide Community Development Entity"
17 CDBG disaster relief and HOME funds should be used as forgivable second mortgages to make home ownership affordable and to help residents build equity.	The state, potentially acting through the "New Statewide Community Development Entity" and with HUD
18 A percentage of units in all LIHTC projects should be dedicated to very low income families.	State government
19 Local housing authorities, acting in concert with "New Statewide Community Development Entity," should explain the process of qualifying for a mortgage loan to their voucher holders. The "New Statewide Community Development Entity" (CDE), acting in cooperation with HUD, should develop an initiative that would support this effort.	"New Statewide Community Development Entity". Funded through FEMA and/or HUD.
20 The state should help educate businesses on the advantages of providing financial assistance to support affordable housing and create the appropriate institutional mechanisms to funnel corporate housing assistance in the most efficient manner.	The state, local governments, and private corporations

RECOMMENDATIONS		Responsible Entities and Funding Sources
21	Private finance initiatives should be developed whereby the government provides an annuity stream to private concerns to help them undertake development efforts that would not otherwise be profitable.	HUD, state and local governments, the Mississippi Home Corporation, the CDE, and private developers. Funded through federal, state, or local governments, or by non-profit foundation grants.
22	Public and private funds should be used to create non-profit community land trusts (CLTs) that would maintain land for affordable housing.	State and local governments. Funding available through federal agencies such as HUD, the State, local governments, NGOs, developers, and local businesses
23	Fannie Mae should combine energy-efficient mortgage programs and location-efficient mortgage programs, along with a housing durability component, into a single housing efficiency mortgage product.	The state and Fannie Mae. Funding available through Fannie Mae, Department of Energy, and EPA.
24	Private mortgage companies should be encouraged to reduce their lending rates for affordable housing that is efficient with respect to long-term maintenance needs, water usage, energy usage, and location.	The Mississippi Home Corporation, the CDE, and private companies. Funding available through Fannie Mae, Department of Energy, and EPA.
25	Insurance companies should be encouraged to reduce their risk premiums for housing that exceeds basic water and wind safety codes.	Mississippi Department of Insurance
26	Local governments should offer lower property tax rates after 2008 for all homes that reduce their needs for infrastructure.	The Mississippi State Tax Commission, working in conjunction with the Mississippi Public Service Commission and the Mississippi Development Authority
27	The state and/or the federal government should consider directly subsidizing housing improvements designed to make affordable homes even more affordable by reducing energy and water expenses, maintenance costs, and transportation costs.	Federal agencies such as HUD, EPA, or DOE and/or state agencies. Funding would be provided by federal or state agencies responsible for the programs.
28	The state legislature should create an entity responsible for coordinating the overall effort to rebuild affordable housing within the Katrina-affected counties.	State legislature. Funded by state and federal sources.
29	An entity should be established to identify, collect, prioritize, and disburse available funding sources for the development and renewal of affordable housing.	State government. Funding available through state and federal funding mechanisms.
30	An entity should be created capable of offering educational outreach on a variety of issues to residents, developers, and communities.	State government or non-profit entity. Funded by federal programs and non-profit foundations.
31	A program should be developed for training local, qualified contractors to build quality affordable housing.	State government or non-profit entity. Funded by Department of Commerce, the Small Business Administration, or the National Institute of Standards and Technology.
32	An improved capacity for building code officials along the Coast should be created.	State and local governments. Funded by federal agencies such as HUD or FEMA.
33	Housing decisions should be coordinated with infrastructure planning.	Local governments
34	The Governor's Commission Housing Committee should be extended for three to six months, during which time it will fulfill the responsibilities outlined in the "Housing Recovery Oversight" recommendation.	Governor's Commission
35	A statewide, private non-profit "community development entity" (CDE) should be developed.	Governor and state legislature. Funding through state and federal funding sources.
36	A regional planning authority spanning the six counties most affected by Katrina should be created.	State government

PUBLIC SERVICES

1	The state legislature should create a regional utility authority for the purpose of managing sewer, water, storm water, and other utility services across the six southern counties.	State legislature. Funded by state and USDA.
2	The state should not only require regional plans where appropriate but should consolidate grant funds into a Regional Services Fund.	State government
3	The governor, or his designee, should use all appropriate influence to insist that state and federal agencies use their grant resources to support regionalism.	Governor
4	When seeking improvements and replacements to the emergency communications systems within South Mississippi, local governments should work with the Wireless Commission as it seeks to develop a statewide system and improve interoperability.	Local governments
5	The Wireless Commission should issue a request for proposals to develop a statewide wireless communication system.	Wireless Commission. Funded by federal grants, user fees, and state bonds.

RECOMMENDATIONS	Responsible Entities and Funding Sources
6 Local governments should be able choose their own system and vendors so long as the system and equipment are compatible with the state's interoperability plan.	Wireless Commission
7 Immediate voice and data communications among first responders (local, state and federal) should be coordinated, even if they are outside the normal system coverage or jurisdiction of the lead agency responding to the incident.	Wireless Commission
8 The Wireless Commission should develop survivability standards for design and construction of new and replacement wireless communications equipment and systems, and enforce those standards to local governments	Wireless Commission
9 If the Wireless Commission contracts for design and construction of a statewide wireless communications system, the area most severely affected by Hurricane Katrina should be the first area placed in full operation, especially with respect to improvements to interoperability.	Wireless Commission
10 The Wireless Commission should include in the RFP a requirement for portable wireless units, towers, and other infrastructure to be deployable as needed in the event of another disaster.	Wireless Commission
11 The Wireless Commission should take the lead in development and implementation of a plan to coordinate public and private communications resources and assets during major natural disasters and emergencies.	Wireless Commission
12 Recognizing the severe impact of Katrina on Coastal governments' revenue and expenses, the Wireless Commission, the Governor's Office, the state legislature, and all other relevant public officials and agencies should avoid placing the cost of these measures on local governments.	Wireless Commission, Governor's Office, state legislature, and public officials and agencies. Funding available through state and federal funding, FEMA, Department of Homeland Security.
13 Before issuing the RFP, the Wireless Commission should update the RCC report regarding current state agency communications assets, needs, costs, and projected expenditures.	Wireless Commission
14 Evacuation maps should be prepared for the southern six-county region.	The Corps of Engineers, Gulf Regional Planning Commission
15 The Mississippi Civil Defense and Emergency Management Association (MCDEMA) should be funded to provide a formal regional disaster plan for the six counties.	State government
16 The state legislature should fund MCDEMA to construct a storm-worthy operations center.	State legislature
17 An ad hoc task force should be created by the Governor which requires participation by entities providing statewide disaster planning services.	Governor
18 The state should retain qualified and experienced consultants to study the feasibility and effects of consolidation of the school districts, law enforcement agencies and fire departments in the six southern counties.	State government. Funded by local planning and development districts and/or the state.
19 A GIS task force, composed of members of the appropriate government agencies, should be created.	State government
20 A six-county public services cooperative should be created to purchase common items, train personnel, and perform maintenance of facilities.	Governor

AGRICULTURE

1 Private non-industrial landowners should be required to meet certain qualifications for assistance under the Emergency Forestry Conservation Reserve Program.	County foresters
2 A reforestation program for 600,000 acres should be created.	Federal government
3 Congress should enact federal income tax credits as an incentive for private investment for the reforestation and wildlife restoration in counties designated as Presidential Disaster Areas.	U.S. Department of Agriculture, Forest Service's State and Private Forestry Division and implemented by the state Forestry Commission and state Fish and Wildlife Foundation
4 Congress should appropriate \$30 million to fund the Environmental Quality Incentives Program (EQIP) or to provide a direct EQIP appropriation to the Mississippi Department of Agriculture and Commerce (MDAC) to treat 90,000 acres infected with cogongrass, a select number of other species, and to control giant salvia, Chinese tallow trees, privet hedge, and Japanese climbing fern in the Presidential Disaster Area.	Congress
5 Congress should appropriate \$10 million to fund the Wildlife Habitat Incentives Program (NRCS) for species injured by the destruction to the forests caused by Hurricane Katrina.	Congress
6 Congress should appropriate \$60 million to fund the Mississippi Forestry Commission's State Fire Assistance/Hazard Mitigation Program and to provide assistance to local volunteer fire departments.	Congress
7 The U.S. Department of Agriculture, Forest Service' Economic Action Program should be funded with \$4 million to assist loggers with fuel, housing, and the development of wet storage yards.	U.S. Department of Agriculture

	RECOMMENDATIONS	Responsible Entities and Funding Sources
8	Income derived from salvage cuts in the affected areas should be exempt from federal income tax of up to \$2.5 million for each landowner who has filed reforestation plans by 2010.	Federal government
9	A casualty loss should be allowed for landowners with no basis in timber, which would allow a loss to be taken on some percentage of market value prior to the disaster, rather than on basis.	Federal government
10	MDOT should construct a bypass for Highway 98 which will allow traffic to flow south and west of Hattiesburg	MDOT
11	MDOT should construct a four lane highway connecting Mobile, Alabama with McComb, Mississippi, thereby creating the "Mobile to McComb Highway."	MDOT
12	MDOT should widen U.S. Highway 26 to four lanes from Lucedale west to the Pearl River Bridge near Bogalusa.	MDOT
13	MDOT should widen U.S. Highway 589 to four lanes from Seminary, adjacent to U. S. Highway 49, south to I-59 at the Purvis exit.	MDOT
14	The state should obtain a federal exemption, allowing for forestry and agricultural commodities to be hauled on interstate highways with state weight limits and restrictions.	State government
15	Congress should appropriate \$2 million to the USDA Forest Service's Cooperative Lands Forest Health Management Program.	Congress
16	The Mississippi Institute for Forest Inventory should receive \$2 million and the USDA Forest Service should receive an additional \$1 million to assess wildlife, fisheries, wetlands, scenic and natural areas, hunting and fishing losses, tourism potential, and related topics.	Congress
17	Mississippi State University's College of Forest Resources and Forest and Wildlife Research Center should be utilized for a forest resources assessment.	Mississippi State University
18	The following programs in the designated Presidential Disaster Areas should be funded: Low interest loans and cost share program; expansion of national agricultural insurance programs; tax credits; development of alternative fuel plants; a crop disaster direct payment program; Land, Water and Timber Resources Act; Mississippi Development Authority's Agriculture Business Loan Program.	State legislature and Congress
19	Direct compensation through USDA grant sources should offset the following categories: fuel, income interruption, and house damage and loss.	Federal government. Funding available through USDS grant sources.
20	The state should immediately rebuild the commercial components of the port facilities in Pascagoula and Gulfport.	State government
21	The state legislature should lower the state tax on replacement parts and services to the industry standard.	State legislature
22	FEMA assistance should be secured to reimburse affected dairy producers for up to 100 gallons of diesel fuel per day.	FEMA
23	A dairy disaster assistance program should be funded.	Federal government
24	Federal funding should be provided in the amount of \$17 million for the livestock assistance program.	Federal government
25	USDA should appropriate supplemental funds to reimburse catfish farmers for their losses similar to the previously funded Catfish Feed Assistance Program.	USDA
26	The Nursery and Tropical Fruit Producer Hurricane Relief Act (H.R. 4031) should be used to provide emergency relief to growers suffering losses from the hurricane.	Local growers
27	Provisions set forth in the Florida Vegetable, Fruit and Tropical Fruit Disaster Program authorized with Section 32 funds should be expanded.	Congress
28	Congress should provide funds to assist producers through the Tree Assistance Program, authorized in the Farm Security and Rural Investment Act of 2002.	Congress
29	Seafood infrastructure should be immediately rebuilt with funds from public and private sector sources, and temporary infrastructure should be provided while long-term rebuilding efforts are underway.	Private entities, Mississippi Department of Marine Resources
30	The United States Coast Guard and other federal agencies should lead the effort to remove hurricane-related hazards to waterway navigation.	U.S. Coast Guard
31	The state should set-aside tracts of land to establish public and privately funded seafood industrial parks in Hancock, Harrison, and Jackson Counties.	State government
32	Some form of direct federal compensation should be provided as a retention incentive for fishermen.	Federal Government
33	The Mississippi Department of Marine Resources should use federal funds to restore oyster reefs, shrimp nursery areas, coastal marshes, and other estuarine habitats.	Mississippi Department of Marine Resources
34	Riverine floodplains and near-shore resources should be restored and enhanced.	Mississippi Department of Marine Resources

RECOMMENDATIONS		Responsible Entities and Funding Sources
35	Reefs should be revitalized through a combination of cultch deposition and turning over covered oysters to restore these reefs to their former productivity levels.	Mississippi Department of Marine Resources. Funding available through NOAA's National Marine Fisheries Service, the NOAA Restoration Center, the Department of Transportation, U.S. Fish and Wildlife Service, and state sources.
36	Artificial reefs should be restored.	Mississippi Department of Marine Resources. Funding available through NOAA's National Marine Fisheries Service, the NOAA Restoration Center, The Department of Transportation, U.S. Fish and Wildlife Service, State and local sportfishing organizations.
37	The spotted sea trout hatchery should be rebuilt.	Mississippi Department of Marine Resources. Funding available through NOAA's National Marine Fisheries Service, Department of Transportation, U.S. Fish and Wildlife Service, and state sources.
38	Sustainable marine aquaculture technologies for marine finfish and molluscan aquaculture should be developed to provide job alternatives for the commercial fishing and other marine related industries.	Mississippi-Alabama Sea Grant Consortium and Mississippi Department of Marine Resources. Funded by NOAA.
39	The state should acquire property and designate it for public access and for use by water-dependent industries, including docking and service facilities for Mississippi's commercial and charter fishing fleet.	State government
40	Congressional legislation should increase quotas for migrant workers to support the seafood processing industry.	Congress
41	Smart growth practices and zoning ordinances should be adopted to foster mixed use development.	State and local government
42	Congressional funding for the Department of Interior's Coastal Mississippi National Heritage Program should be increased to expedite the restoration of historical and cultural resources.	Congress
43	Marinas should adopt best management practices, including a Clean Marina Program which can improve water quality.	Marinas

HEALTH AND HUMAN SERVICES

1	Future disaster planning should be coordinated between all health and human services providers, state and federal agencies, including first responders, using a unified communication system.	HHS Disaster Recovery Director
2	The position of health and human services disaster director should be created.	Governor
3	A unified communications system should connect all health care providers, state and local agencies, the law enforcement community and first responders.	HHS Disaster Recovery Director
4	Uniform protocols should identify the types of patients to be transferred, the locations for the transfers, and the assistance available to facilitate the transfer.	HHS Disaster Recovery Director
5	Regulations should be changed to mandate that the HHS Disaster Director, working with the Department of Health, conduct one all-inclusive survey.	HHS Disaster Recovery Director
6	A single source network should coordinate access to mental health providers that is current and permanently maintained.	HHS Disaster Recovery Director
7	When a disaster is imminent, special needs shelters for oxygen dependent, dialysis, and non-hospitalized patients who require on-going care should be identified in every county.	HHS Disaster Recovery Director
8	Arrangements should be predetermined to ensure that transportation, fuel, housing, and child care are available for those expected to perform in unusual circumstances.	HHS Disaster Recovery Director. Funded through Social Services Block Grants.
9	A comprehensive and coordinated disaster plan should be adopted prior to June 1, 2006.	Governor
10	By January 1, 2008, the state should implement a GIS that improves services offered by the Department of Human Services, Department of Health and others.	State government
11	The legislature should amend the statute to include on the Remote Sensing/GIS Coordinating Council the State Health Officer and the Director of the Department of Human Services.	State legislature
12	A committee of health care providers should be appointed by the governor to determine the feasibility of a Regional Health Information Organization accessible to all participating providers.	Governor
13	A "one-stop shop" for human services delivery should be created.	State government

RECOMMENDATIONS	Responsible Entities and Funding Sources
14 Opportunities on the Gulf Coast should be aggressively marketed to healthcare providers nationwide to ensure that physicians fully realize the revitalization efforts underway and the accomplishments achieved.	Hospitals
15 The state should submit a state plan amendment to the Center for Medicare and Medicaid Services (CMS) to establish a supplemental physician retention payment based upon average commercial payor rates.	State government
16 Educational opportunities should be broadened for potential nursing students, including providing additional resources to community colleges and universities to increase capacity and to recruit students to their programs.	State government
17 The Commissioner of Insurance should consider the establishment of a State Insurance Pool for health care providers for business interruption coverage in the event of a disaster.	Commissioner of Insurance
18 The Governor and Legislature should monitor malpractice premiums trends and insurance options to ensure the availability of affordable insurance for health care providers.	Governor and State legislature
19 The federal government should partially compensate some providers for increased costs and reduced revenues by establishing a “floor” for the wage index for providers in the affected areas equal to 1.0.	Federal government
20 The federal government’s share of reimbursement available for Medicaid costs associated with serving hurricane victims should be increased.	Congress
21 Legislation should be passed holding all states harmless for any scheduled reduction in a state’s FMAP for fiscal years 2006-2007.	Congress
22 Legislation should be passed holding all providers harmless for any changes to programs such as Upper Payment Limit, Disproportionate Share, and wage index for fiscal years 2006-2007.	Congress
23 Disaster relief funds should be available for mental health services for residents and first responders	Congress
24 Legislation should recognize that the impact of the disaster on healthcare providers will last for many months and should provide for coverage for affected individuals for a period of at least 24 months.	Congress
25 The “uncompensated care pool” created in the Section 1115 waiver should cover services provided for dates of service through at least the next two years.	Federal government
26 Reimbursement from the federal uncompensated care pool should be defined as uncompensated care provided to any individual from a designated disaster area.	Federal government
27 Services provided by all health care providers which are not covered in a Medicaid beneficiary’s home state should qualify for the uncompensated care pool.	Federal government
28 Measures available to protect and strengthen Mississippi’s Medicaid program, including the support of federal legislation to provide 100% federal funding for all Medicaid expenditures for individuals who are Katrina survivors and for associated administrative costs, should be supported.	Congress
29 The Mississippi State Department of Health (DOH) should adopt a CON exemption or waiver for rebuilding after certain qualifying disasters.	DOH
30 The DOH should adopt a policy that allows for an expedited CON review for expenditures related exclusively to future disaster planning.	DOH
31 A thorough outside assessment of the Trauma System should be conducted.	DOH
32 An independent assessment of mental health needs by an outside consultant should provide recommendations to better align the delivery of services and develop the infrastructure it requires.	Department of Mental Health
33 State legislative action that ensures mental health beneficiaries enjoy parity with all other medical beneficiaries should be supported.	State Legislature
34 A child care plan should be coordinated by the HHS Disaster Director and funded by local businesses, medical providers and/or local and state governments.	HHS Disaster Director. Funded by local businesses, medical providers, and/or local and state governments.
35 The state should evaluate the potential for incentives to encourage the private sector to develop child care facilities, or partner with existing providers, in order to make available the child care our workforce needs.	State government
36 Case management should also focus on children under state custody and ensure that displaced parents with child support obligations meet their responsibilities.	DHS
37 DHS should develop a resource center for the aged which would provide information and services including home-based services, independent living services, volunteerism, physical activity and wellness programs, vocational training, housing options, long-term care planning, and information related to the Medicare and Medicaid programs.	DHS. Funded by United States Department of Human Services’ Administration on Aging.

RECOMMENDATIONS	Responsible Entities and Funding Sources
38 Senior wellness centers should be designed to be hubs of activity for the senior community.	The DHS Division of Aging in partnership with local governments. Funding may be available through Community Development Block Grant or Social Services Block Grants.
39 State legislative committees should regularly review regulations involving the reporting of diseases, isolation, and quarantine laws.	State legislature
40 The Department of Mental Health should consider establishing a permanent facility north of I-10.	Department of Mental Health. Congressional funding should be sought.
41 Public health education in the classroom should be expanded and school children's access to public health education should be increased through the development of a statewide curriculum	DOH and Department of Education
42 All hospitals should regularly review their bylaws to ensure that appropriate physician coverage will be available in-house during future hurricanes.	Hospitals

ENDNOTES

Land Use

- ¹ Governor's Commission on Recovery, Rebuilding and Renewal. Infrastructure Committee. Land Use Subcommittee. Notes from meetings. Oct. 2005.
- ² Mississippi Renewal Forum. Mississippi Renewal Forum *Summary Report*. Nov. 2005: 7.
- ³ Mississippi Renewal Forum. Mississippi Renewal Forum *Summary Report*. Nov. 2005: 13.
- ⁴ United States. Department of Homeland Security. Federal Emergency Management Agency. Emergency Management Institute. Managing Floodplain Development Through the National Flood Insurance Program - Independent Study 9 - Unit 1. Aug. 1999.
- ⁵ United States. Department of Homeland Security. Federal Emergency Management Agency. Emergency Management Institute. Managing Floodplain Development Through the National Flood Insurance Program - Independent Study 9 - Unit 1. Aug. 1999.
- ⁶ United States. Department of Homeland Security. Federal Emergency Management Agency. National Flood Insurance Program - Answers to Questions About the NFIP. May 2004.
- ⁷ United States. Department of Homeland Security. Federal Emergency Management Agency. National Flood Insurance Program - Answers to Questions About the NFIP. May 2004.
- ⁸ United States. Federal Emergency Management Agency. "Hurricane Katrina Flood Recovery." 18 Nov. 2005. http://www.fema.gov/hazards/floods/recoverydata/katrina_ms_index.shtm.
- ⁹ Holmes, Charles. (Central Mississippi Planning and Development District). Personal interview. 22 Nov. 2005.
- ¹⁰ Mississippi Renewal Forum. Mississippi Renewal Forum *Summary Report*. Nov. 2005: 11.

Transportation

- ¹ Dash, Tracy. "Working On The Railroad." Sun Herald [Gulfport] 27 Oct. 2005.
- ² Brown, Larry L. "Butch". "Re: FHWA ER (Emergency Relief) Funds Request." Letter to Governor Haley Barbour. 19 Oct. 2005.
- ³ Coast Transit Authority. Emergency

Public Transportation Plan/Hancock, Harrison and Jackson Counties, Mississippi. 30 Sept. 2005.

⁴ Coast Transit Authority. Emergency Public Transportation Plan/Hancock, Harrison and Jackson Counties, Mississippi. 30 Sept. 2005.

⁵ Allee, Donald R. "Mississippi State Port Authority Hurricane Katrina Condition Survey Summary." Memo to Charles Ozier. 29 Nov. 2005.

⁶ McAndrews, Mark. Memo to Charles Ozier addressing damages sustained to Jackson County Port Authority/Port of Pascagoula from Hurricane Katrina. Nov. 2005.

⁷ McAndrews, Mark. Memo to Charles Ozier addressing damages sustained to Jackson County Port Authority/Port of Pascagoula from Hurricane Katrina. Nov. 2005.

⁸ Hemphill, Jerry. "Hurricane Katrina Damage Assessment Report/ Port Bienville Industrial Park/Hancock County, Mississippi." Memo to Charles Ozier. 11 Nov. 2005.

⁹ United States. Federal Railroad Administration. Highway-Rail Incidents Reported On Form FRA F6180-57. Railroad - CSX Transportation. State - Mississippi. 2005. <<http://www.safetydata.fra.dot.gov>>

¹⁰ Coast Transit Authority. Emergency Public Transportation Plan/Hancock, Harrison and Jackson Counties, Mississippi. 30 Sept. 2005.

¹¹ Kevin Coggin, personal interview, 11 Nov. 2005.

¹² Hemphill, Jerry. "Comments of the Hancock County Port & Harbor Commission on the Final Report Draft (11/29/05) Intermodal Transportation Committee." Memo to Charles Ozier. 6 Dec. 2005.

Public Services

¹ Mississippi State. Mississippi Public Service Commission. 9 Dec. 2005. <<http://www.psc.state.ms.us>>

² Mississippi State. Mississippi Public

Service Commission. 9 Dec. 2005. <<http://www.psc.state.ms.us>>

³ Tusa Consulting Services, Inc. "Coastal Mississippi and Louisiana Radio System Overview," 2005.

⁴ Mississippi State. Senate Bill 2514. 2005.

⁵ RCC Consultants, Inc. "Executive Summary of the May 2003 Wireless Communication Assessment," 2005.

⁶ RCC Consultants, Inc. "Executive Summary of the May 2003 Wireless Communication Assessment," 2005.

⁷ Geospatial One Stop. "GIS for the Gulf." <<http://gos2.geodata.gov/wps/portal/gos>>

Housing

¹ Waldron, Tom, Brandon Roberts and Andrew Reamer. "Working Hard, Falling Short: America's Working Families and the Pursuit of Economic Security." Annie E. Casey Foundation: Baltimore, MD. October 2004.

² Wial, Howard and Jeff Ricket. "The State of U.S. Industries - U.S. Hotels and their Workers: Room for Improvement." AFL-CIO Working for America Institute: Washington, DC. September 2002.

³ Belsky, Eric S., Nicholas Retsinas and Mark Duda. "The Financial Returns to Low-Income Homeownership." Joint Center for Housing Studies. Harvard University. Copyright President and Fellows of Harvard College. September 2005.

⁴ John, David C. "Providing Flood Insurance After a Disaster is a Mistake." The Heritage Foundation: Washington DC. 19 Oct. 2005. <www.heritage.org/Research/Regulation/wm888.cfm>

⁵ Fischer, Will and Barbara Sard. "Bringing Katrina's Poorest Victims Home." Center on Budget and Policy Priorities: Washington, DC. 3 Nov. 2005.

Tourism

¹ Reports received by the Sun Herald.

² TNS. Mississippi Gulf Coast Convention & Visitors Bureau. Mississippi

Coast Visitors Profile, 2004.

³ Mississippi Development Authority; Mississippi Department of Employment Security.

⁴ Mississippi Department of Employment Security.

⁵ Mississippi Development Authority; Mississippi Department of Employment Security.

⁶ TNS. Mississippi Coast Visitors Profile.

⁷ Tourism Committee. Field Research, 2005.

⁸ Sun Herald, 25 Oct. 2005.

⁹ Becker, Tom (President, Gulf Coast Charter Boat Association) interview. 10 Nov. 2005.

¹⁰ Tourism Committee. Field Research, 2005.

¹¹ By Moody's | Economy.com, Inc. Précis© Metro Reports for Gulfport-Biloxi and Pascagoula MSAs. 25 Sept. 2005.

¹² Mississippi Department of Employment Security. Labor Market Data reports, 2005; Mississippi State Tax Commission. Retail sales tax collections reports, 2005.

¹³ Tourism Committee. Field Research, 2005.

¹⁴ National Trust for Historic Preservation, 2005.

¹⁵ Tourism Committee. Field Research, 2005.

¹⁶ Mississippi Gulf Coast Golf Association. Inventory analysis, 2005.

Small Business

¹ Mississippi Department of Employment Security, *Mississippi Business Population*.

² SBA Business Profile, MDES Occupational Reports.

³ SBA, MDES.

⁴ American Red Cross, Hurricane Katrina Damage Assessment, Sept. 2005.

⁵ Committee and area Chambers of Commerce surveys.

⁶ Committee and area Chambers of Commerce surveys.

⁷ Mississippi Development Authority.

Agriculture, Forestry and Marine Resources

¹ Mississippi State. Mississippi Forestry Commission; Mississippi Forestry Association. A Response, Recovery, and Renewal Plan for Mississippi's Forest Resource. 19 Oct. 2005: 2.

² Governor's Commission. Subcommittee on Forest Resources. Committee research. Nov. 2005.

³ Subcommittee on Forest Resources. Committee Research. Nov. 2005.

⁴ 23 U.S.C.A. § 127(a) (2004).

⁵ Subcommittee on Forest Resources. Committee Research. Nov. 2005.

⁶ Subcommittee on Forest Resources. Committee Research. Nov. 2005.

⁷ Subcommittee on Forest Resources. Committee Research. Nov. 2005.

⁸ Lester Spell, Jr., D.V.M., "Recommended Assistance for Agriculture Damages in Mississippi Due to Hurricanes and Other Weather Related Conditions in 2005." 17 Oct. 2005: 2.

⁹ United States. Congress. House. Nursery and Tropical Fruit Producer Hurricane Relief Act (Introduced in House). H.R. 4031. 7 Oct. 2005.

Defense and Government Contracting

¹ Committee Research.

² Northrop-Grumman reports.

³ NASA, Center Operations Directorate, NASW 02010 Task Order 12.

⁴ NASA, Center Operations Directorate, NASW 02010 Task Order 12.

⁵ NASA.

Education

¹ Bounds, Hank (State Superintendent, Mississippi Department of Education). Personal interview. 22 Nov. 2005.

² Joachim, Pat (University of Southern Mississippi). Personal interview. 17 Nov. 2005.

³ Favre, Tommy D. (Mississippi Department of Employment Security). Personal interview. 12 Nov. 2005.

⁴ Favre, Tommy D. (Mississippi Department of Employment Security). Personal interview. 12 Nov. 2005.

Health and Human Services

¹ Governor's Commission on Recovery, Rebuilding & Renewal. Committee on Health & Human Services. Questionnaire: Summary of Responses. 6 Dec. 2005.

² Rockville City Government. "Mapping and Geographic Information System: A Bird's Eye View to Our City." Rockville, Maryland. 28 Nov. 2005. <<http://www.rockvillemd.gov/gis>>; ESRI. Geography Matters: An ESRI White Paper. Redlands, California. Sept. 2002.

³ Mississippi State. House Bill 861. 2003.

⁴ HHS 115 waiver; HHS 1135 waiver.

⁵ Coalition for Fairness in Mental Illness Coverage. "Pass Mental Health Parity Now! End Discriminatory Mental Health Coverage." April 2003; "Employers Should Support Mental Health Parity." March 2003.

Non-Governmental Organizations

¹ Government Accounting Office, Senate Finance Committee.

² Chronicle of Philanthropy.

Finance

¹ Mississippi Business Finance Corporation. Rural Economic Development Guidelines. 1 July 1997.

² Mississippi Business Finance Corporation. Rural Economic Development Guidelines. 1 July 1997.

Policy Recommendations

¹ The Guiding Principles for Rebuilding the Mississippi Gulf Coast represent basic premises found in Holistic

Disaster Recovery: Ideas for Building Local Sustainability After a Natural Disaster. 2001; Guiding Principles for the Quality Reconstruction of Eastern North Carolina. 2000.

² See Appendix A: Disaster Recovery Assistance. www.governorscommission.com.

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The same site also contains downloadable copies of MRF team reports on each of the 11 towns examined during the Renewal Forum and on general topics such as the environment, transportation, social issues, and architecture.

For more information about this report, previous publications, and next steps in implementing plans for the renewal of South Mississippi, go to www.governorscommission.com.

GOVERNOR'S COMMISSION
RECOVERY, REBUILDING, RENEWAL

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