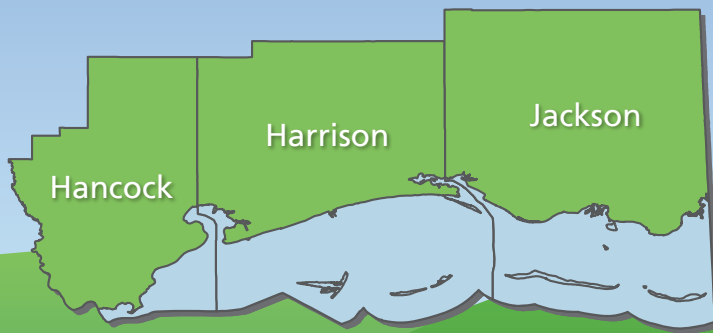




Executive Summary Mississippi Gulf Coast

*By The Compass Group, LLC and
Southern Mississippi Planning and
Development District*

January 2009



**Mississippi Housing Recovery Data Project
Executive Summary for the Mississippi Gulf Coast
(Hancock, Harrison and Jackson Counties)
January 30, 2009**

Note – the information reported here is a work in process that is being continually updated as the Data Project Team collects new data and refines existing data. We expect, however, that any revised numbers will continue to support the overall findings reported here.

The purpose of the Mississippi Housing Recovery Data Project is to gather the best available information on the housing recovery from Hurricane Katrina, to aid the State in planning and guiding the recovery.

The Mississippi Housing Recovery Data Project began in May 2008 and collected data for the three coastal counties (Hancock, Harrison and Jackson) through July 2008. In October 2008 we had organized the data into an integrated database suitable for analysis. From October through December 2008, we used the database to develop the findings reported here. Further updates are planned.

The combination of this Executive Summary and the separate Detailed Report summarizes progress through December 2008 and is the final report for the Mississippi Housing Recovery Data Project, for the three coastal counties.

Table of Contents

Executive Summary (This Report)

- I. **Key Findings.** The most important findings from the Data Project.
- II. **Recovery Data Highlights.** The most important data highlights from our work on the recovery of housing and population in the three coastal counties in total.
- III. **Additional Findings.** Other findings from the Data Project.
- IV. **Additional Information on Key Findings.** Supporting information relevant to the Key Findings.
- V. **Additional Recovery Data.** Supporting information relevant to the Recovery Data Highlights.

VI. **Appendices.**

1. **Apartment Recovery.** The information we used to estimate the apartment recovery.
2. **Homeowner Recovery.** The information we used to estimate the homeownership recovery.
3. **Small Rental Economics.** Why we believe that the actual recovery pattern (reduction of the Small Rental stock and expansion of the Shallow Subsidy Apartment stock) is appropriate.
4. **Major Recovery Programs.** A brief description of the State's housing recovery programs.

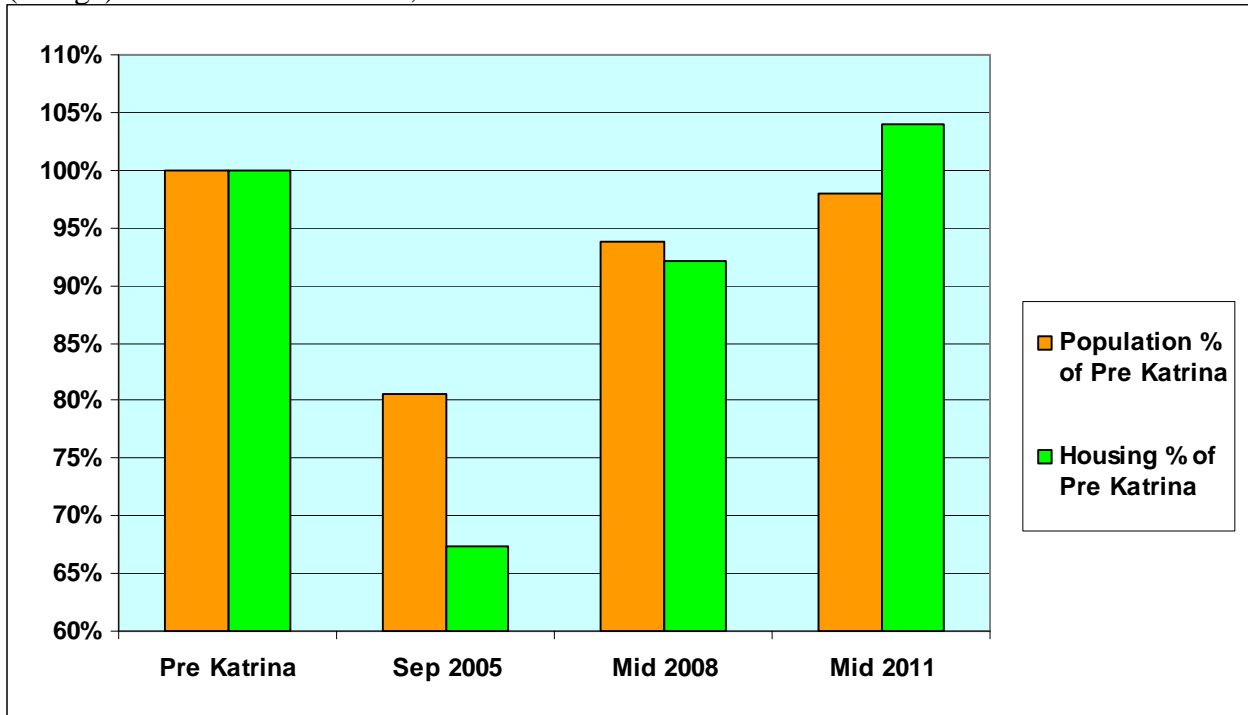
Detailed Report (Available Separately)

- VII. **The Housing Recovery Data Project** – the project itself, the project team, key tasks, and current status.
- VIII. **Supporting Information for Additional Findings.** Supplemental information concerning the Additional Findings discussed in Section III of the Executive Summary.
- IX. **Data Highlights for Hancock County.** Charts and other information summarizing the housing and population recovery in the county.
- X. **Data Highlights for Harrison County.** Charts and other information summarizing the housing and population recovery in the county.
- XI. **Data Highlights for Jackson County.** Charts and other information summarizing the housing and population recovery in the county.
- XII. **Key Maps.** For each county, a map showing the distribution of hurricane damage, and a map showing the distribution of MDA funding and other funding sources.
- XIII. **Housing Stock Estimates.** Our detailed estimates of the pre-Katrina housing stock, and of the housing stock recovery at various points post-Katrina. This section begins with an introductory discussion. It then includes estimates for the three coastal counties in total, for each of the three coastal counties, for each of the eleven incorporated jurisdictions in the three coastal counties, and for the unincorporated areas of each of the three counties.
- XIV. **City and County Summaries.** Recovery information for the eleven incorporated jurisdictions in the three coastal counties and for the three coastal counties individually. We submitted these to MDA in October 2008. We have updated the apartment recovery statistics but have made no other changes.

Section I. Key Findings

Each of the findings below is discussed in more detail in Section III.

We begin this section with a chart showing our estimates of the housing (green) and population (orange) recoveries in Hancock, Harrison and Jackson Counties.



Sep 2005 – 52,512 units with Major or Severe Damage

Mid 2008 – 12,579 fewer units than pre-Katrina

Mid 2011 – 6,319 more units than pre-Katrina

- 1. By Mid-2011, Housing Stock Will Recover to 104% of Pre-Katrina Level.** We estimate that private, state and federal efforts will result in recovery of the housing stock in the three coastal counties to 103.9% of the pre-Katrina level by mid-2011. This represents 6,319 additional housing units, over and above the pre-Katrina level.
- 2. By Mid-2011, Population Will Recover to 97% to 99% of Pre-Katrina Level.** We estimate that the population of the three coastal counties will recover to between 96.5% (if future growth averages 1.0%, the national average population growth rate), 98.0% (if future growth averages 1.5% annually), and 99.4% (if future growth averages 2.0% annually) of the pre-Katrina level by mid-2011. If, in mid-2011, there are 98.0% as many households as lived in the three coastal counties pre-Katrina, there will be 2,863 fewer households in the three coastal counties than pre-Katrina.
- 3. Relationship Between Supply and Demand.** 6,319 additional units and 2,863 fewer households would mean a shift in the supply-demand balance of 9,182 units. By comparison, in an average year (1980-2007), total production of new housing (for-sale and

for-rent) in the three coastal counties was less than 2,500 units. Similarly, our information on historical building permit volume suggests that the three-county housing market has rarely been more than 2,000 to 3,000 units out of balance. If the housing recovery outstrips the population recovery to the extent we estimate, we would expect downward pressure on housing values and a long delay in recovery in the important homebuilding industry, both of which would hurt rather than help the recovery of the Gulf Coast.

4. **The Current State of Housing Recovery.** When we identify a risk of over-production, we are referring to the future level of housing recovery. In mid-2008, we estimate that the housing stock had recovered to 92.2% of the pre-Katrina versus a 93.7% recovery of population.
5. **Need for Production of Additional For-Sale Housing.** We estimate that the current level of recovery in the stock of ownership housing exceeds the population recovery. Moreover, there is a large pipeline of housing under development that appears likely to outstrip any growth in demand between mid-2008 and mid-2011. We found no need for the production of additional for-sale housing in the three coastal counties.
6. **Need for Production of Additional For-Rent Housing.** We found three areas in which additional production of rental housing may be needed: Pascagoula (mid-2011 rental housing stock down 542 units versus pre-Katrina), Long Beach (mid-2011 rental housing stock down 1,090 units versus pre-Katrina), and the unincorporated areas of Hancock County (mid-2011 rental housing stock down 958 units versus pre-Katrina).
7. **We Estimate a Reduction in Affordability Post-Katrina.** Both for-sale and for-rent housing are less affordable now than pre-Katrina. Although the increase in housing quality is a strong benefit of recovery, a decline in affordability is a disadvantage of recovery.
8. **We Estimate an Increased Need for Rental Assistance.** We found a strong demand for rental assistance that will make rental housing affordable to households with incomes below \$20,000 per year. We estimated that currently there are 4,906 households in the three coastal counties who need this type of housing assistance, over and above the need that existed pre-Katrina. We estimate that there are three reasons for this need:
 - 29% of the need is because the public housing recovery is still in process.
 - 38% of the need is attributable to the post-Katrina spike in market rents.
 - 33% of the need is from extremely-low-income households who were owners pre-Katrina and will be renters post-Katrina.Because we estimate that there will be a sufficient number of physical units of rental housing in the three coastal counties, this rental assistance should be provided through *tenant-based* approaches (such as Section 8 Housing Choice Vouchers) rather than through *project-based* approaches (such as the development of new public housing).
9. **Insurance Cost and Availability.** Increased insurance costs for homeowners and homebuyers are having a significant impact on affordability of for-sale housing across the three coastal counties. Similarly, increased insurance costs for landlords suggest that at least some of the post-Katrina spike in market rents is likely to persist. As a result of

increased insurance cost, both for-sale and for-rent housing are less affordable now than pre-Katrina. Moreover, insurance is more difficult to obtain now, compared to pre-Katrina.

Although a number of factors could cause actual results to differ from our estimates, we believe that our estimate of the mid-2011 housing stock (supply) is conservative.

The nationwide housing finance and credit crisis could also play a factor in housing recovery due to a reduced availability of homebuyer financing, reduced availability of real estate development loans, a rise in foreclosures, and a drop in resale prices. Potential outcomes include a reduction in the homeownership rate, and a decrease in home values.

Additionally, our research shows that the most important factor in the housing recovery, and in the population recovery, will be the recovery of jobs in the three coastal counties. The recovery of jobs was good through 2007, but there are significant risks at this point, such as the need for permanent jobs outside the construction industry to replace temporary construction jobs.

For additional discussion of the recovery in each sector of the housing stock, see Sections II and IV below.

Section II. Recovery Data Highlights

This section includes the most important of our findings from studying the housing recovery and the population recovery.

II.A. Housing Stock Categories

Throughout this Executive Summary and in the Detailed Report, we divide the housing stock into the following categories:

- Ownership Housing
 - Mobile Homes (occupied by an owner rather than a renter)
 - Other Home Owner (primarily single family, but also including townhouses, condominiums, and other multi-unit buildings containing owner-occupied housing)
- Rental Housing
 - Small Rental (which we define as rental housing in projects of one to seven units)
 - Apartments (which we define as rental housing in projects of eight or more units)
 - Market Rate Apartments (with no governmental restrictions on rents)
 - Shallow Subsidy Apartments (with rents up to \$200 below market)
 - Deep Subsidy Apartments (affordable to the poorest households)

II.B Major Assumptions for Housing Stock Estimates

These estimates assume that all Federal and State recovery funding to date (including MDA's Long Term Work Force Housing Program¹ Rounds One and Two, MDA's Small Rental Assistance Program² Round One, MDA's Public Housing recovery program³, and Mississippi Home Corporation's GO Zone Low Income Housing Tax Credit⁴ awards) will lead to the proposed number of completed housing units.

Conversely, these estimates do not include any allowance for additional housing production from remaining State funding for the Long Term Work Force Housing Program, remaining State funding for the Small Rental Assistance Program, or future funding from the Low Income Housing Tax Credit program.

¹ MDA's Long Term Work Force Housing Program provides subsidies to developers and lenders to develop and/or finance affordable ownership and rental housing affordable to working families and individuals. Also see Appendix 4 and www.mississippi.org, Disaster Recovery section.

² MDA's Small Rental Assistance Program provides subsidies to repair or rebuild storm-damaged small rental units, and to develop new small rental units, affordable to working families and individuals. Also see Appendix 4 and www.mississippi.org, Disaster Recovery section.

³ MDA's Public Housing recovery program provides subsidies to public housing authorities, to repair or rebuild storm-damaged public housing units. Also see Appendix 4.

⁴ The federal Low Income Housing Tax Credit program provides income tax benefits to investors in apartment projects for low- and moderate-income households. In Mississippi, the program is managed by Mississippi Home Corporation. Congress provided a special allocation of Gulf Opportunity Zone funding for Mississippi. Also see Appendix 4.

Our estimates do not include potential future State or federal funding (for example, funding that might be made available by MDA in future Long Term Work Force Housing Program or Small Rental Assistance Program funding rounds).

II.C. Summary of Data Highlights For The Three Coastal Counties

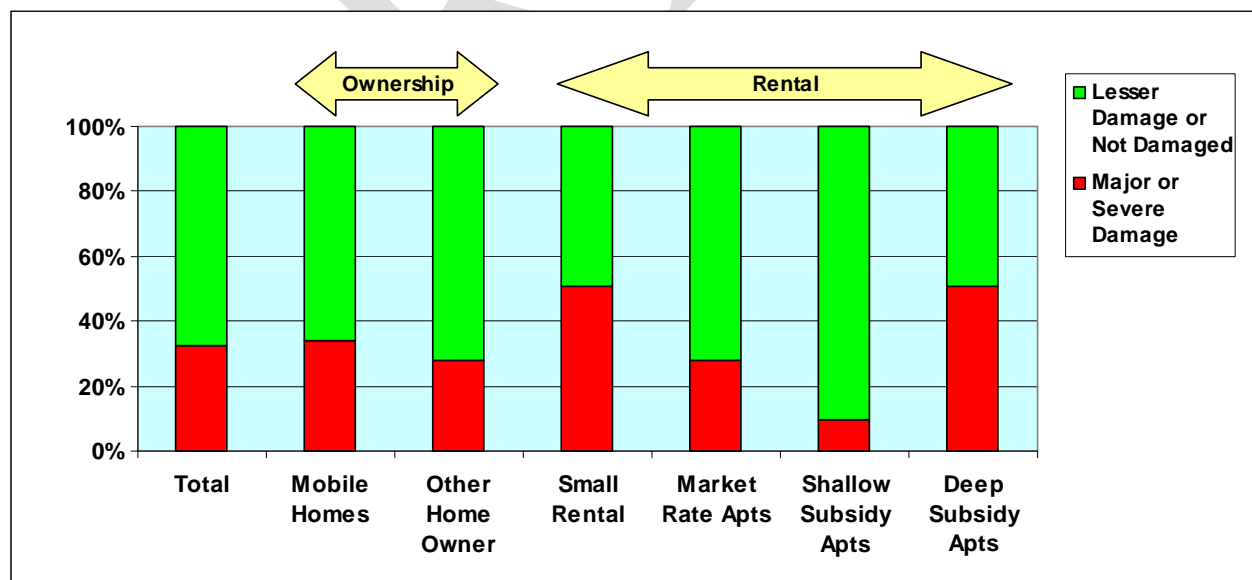
Supporting information for the following highlights may be found in Section V.

II.C.1 Extent of Damage

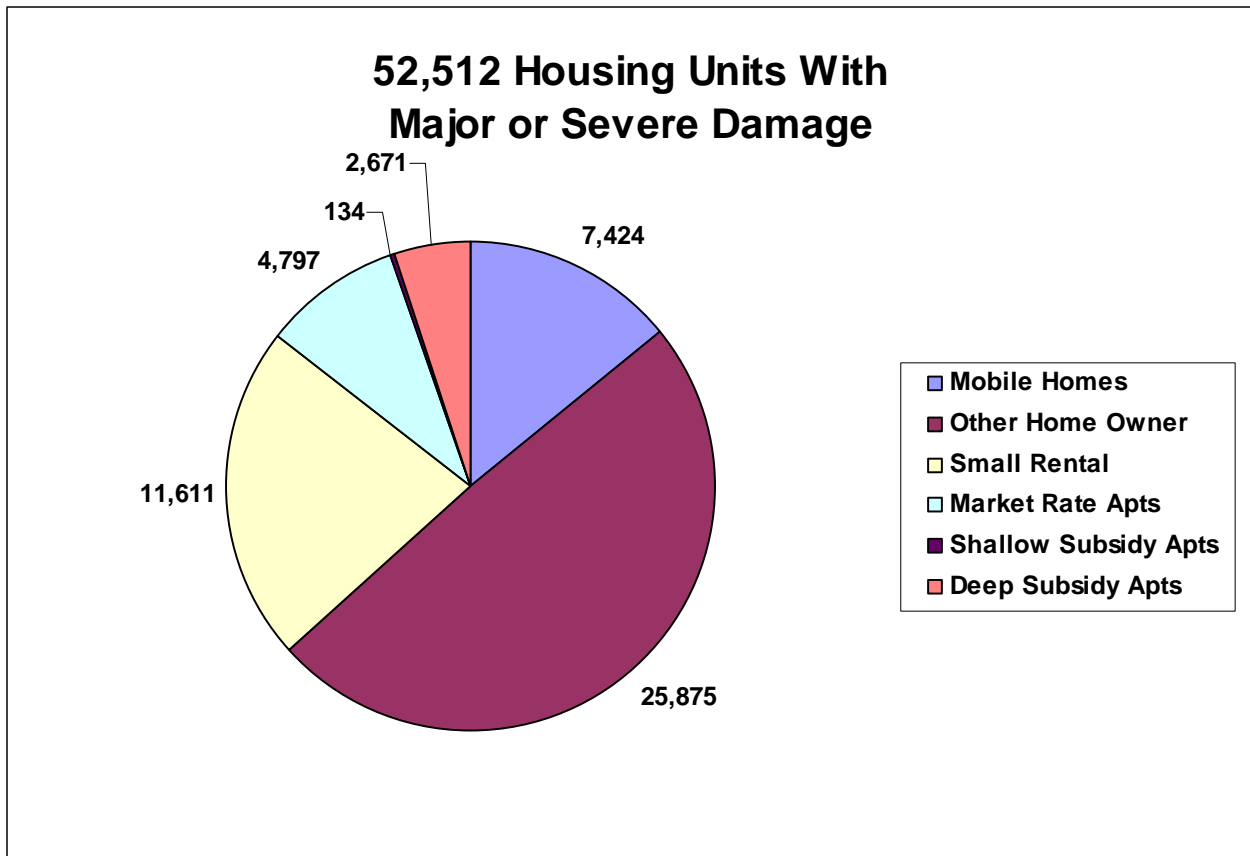
32.7% of housing units in the three coastal counties received major or severe damage. “Severe” damage generally means damage of more than \$30,000 per unit (for example, a home that needed a new roof and a new garage). “Major” damage generally means damage of \$10,000 to \$30,000 per unit. (for example, a home that needed roof repair and sustained limited water damage).

- Deep Subsidy Apartments (apartments affordable to the poorest households) and Small Rental units received the highest percentage of damage relative to their respective number of units (at least 50% major or severe damage). These segments of the rental housing stock included the rental units that were most affordable pre-Katrina.
- We estimate that Shallow Subsidy Apartments received the lowest percentage of damage relative to their respective number of units (less than 10% major or severe damage). This is not surprising, because almost all of these units were developed post-1990.

The State adopted HUD’s damage estimates, based on raw data from housing inspections through February 2006, and using analytical methods developed in April 2006. The chart below illustrates the level of major or severe damage, by type of housing.



The following chart presents the distribution of Major and Severe Damage by type of housing.



II.C.2 Recovery Estimate As Of Mid-2008

As of mid-2008, we estimate that the housing stock in the three coastal counties had recovered to 92.2% of its pre Katrina level.

- Relatively High Recovery: Homeowner units and Shallow Subsidy Apartments had made at least a 100% recovery in the three coastal counties.
- Relatively Low Recovery: Mobile Homes had made a 71.9% recovery, Small Rental units had made a 67.0% recovery, and Deep Subsidy Apartments had made a 66.7% recovery. These segments of the housing stock included the units that were most affordable pre-Katrina.
- Market Rate Apartments had made a recovery close to the 92.2% average for the entire housing stock.

II.C.3 Recovery Estimate As Of Mid-2011

Based on State and federal funding already awarded, we estimate that the area's housing stock in mid-2011 will exceed pre-Katrina levels.

- The total number of housing units in the three coastal counties will have increased by 6,319 units over pre-Katrina levels (a 3.9% increase).
 - The stock of ownership housing will have risen by 6,465 units (a 5.7% increase).
 - The stock of rental housing will have declined by 146 units (a 0.3% decrease)

We estimate the following levels of recovery, by mid-2011, for each sector of the housing stock in the three coastal counties:

Mobile Homes	Less Than Full Recovery
Other Home Owner	More Than Full Recovery
Small Rental	Less Than Full Recovery
Market Rate Apartments	Less Than Full Recovery
Shallow Subsidy Apartments	More Than Full Recovery
Deep Subsidy Apartments	More Than Full Recovery

II.C.4 A Partial Recovery in Small Rental Will Be Offset by Strong Recovery in Shallow Subsidy Apartments

We estimate that, as of mid-2011, the rental housing stock will be virtually unchanged versus pre-Katrina levels, with large gains in Shallow Subsidy Apartments offset by losses of Small Rental units.

In Appendix 3, we discuss why a recovery well above 100% is necessary in Shallow Subsidy Apartments, so as to offset the relatively limited recovery we estimate for Small Rental units.

II.C.5 Potential Recovery of Population

The Census Bureau estimated the July population of the three coastal counties at:

- July 2006: 340,219 persons (90.4% of the pre Katrina population of 376,451).
- July 2007: 347,890 persons (92.4% of the pre Katrina population).

If future growth averages 1.5% per year (150% of the national average population growth rate), the population of the three coastal counties over time would be:

- In July 2008: 352,670 persons (93.7% of the pre Katrina population).
- In July 2011 (low forecast): 363,449 persons (96.5% of the pre Katrina population).
- In July 2011 (medium forecast): 368,874 persons (98.0% of the pre Katrina population).
- In July 2011 (high forecast): 374,352 persons (99.4% of the pre Katrina population).

By contrast, we estimate that based on State and federal awards already made, by mid-2011 the housing stock in the three county area will reach 103.9% of its pre-Katrina levels.

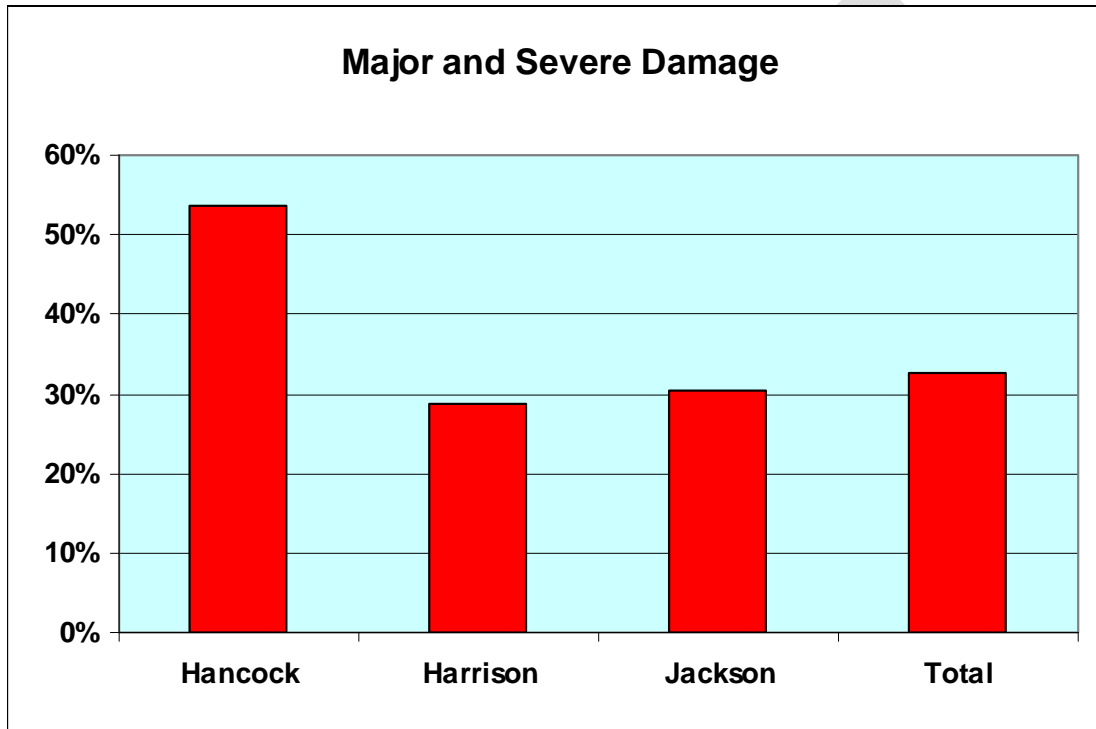
This means that the housing recovery is likely to outstrip the recovery in population by a significant margin, even assuming that the Long Term Work Force and Small Rental Assistance Programs make no additional production awards.

If the actual housing stock recovery exceeds the actual population recovery in this way, we expect downward pressure on home values, financial pressure on rental property owners, and a long-delayed recovery in the important homebuilding industry.

II.C.6 Selected Data Highlights By County

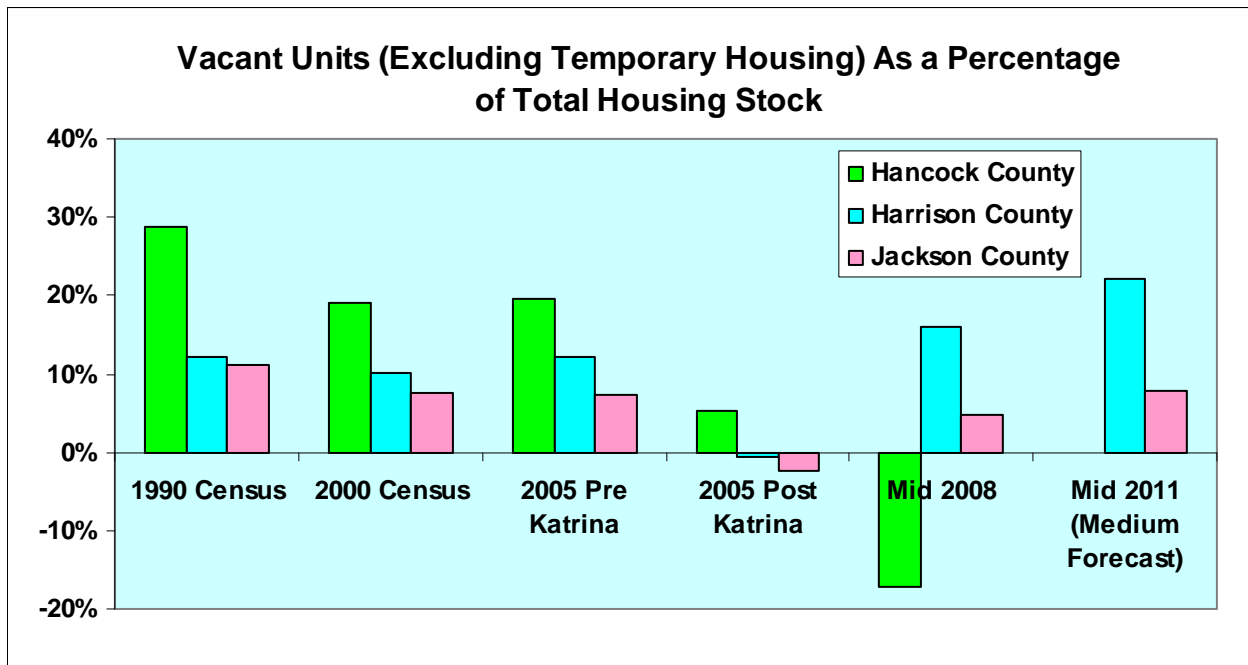
This section presents selected information that highlights differences between the levels of damage, and the progress of recovery, among the three coastal counties. For additional information on recovery by county, see Sections IX (Hancock County), X (Harrison County), and XI (Jackson County) in the Detailed Report.

Damage from Hurricane Katrina was significantly heavier in Hancock County than in the rest of the Gulf Coast. The chart below shows the level of major or severe damage to the housing stock of each coastal county, and for the three coastal counties in total.



The chart above shows the percentage of the housing stock that sustained major or severe damage due to Hurricane Katrina.

The chart below shows that the risk of over-production (by mid-2011) is concentrated in Harrison County. We estimate that Jackson County will have an appropriately sized housing stock, and that Hancock County will face shortages in rental housing and in mobile homes.



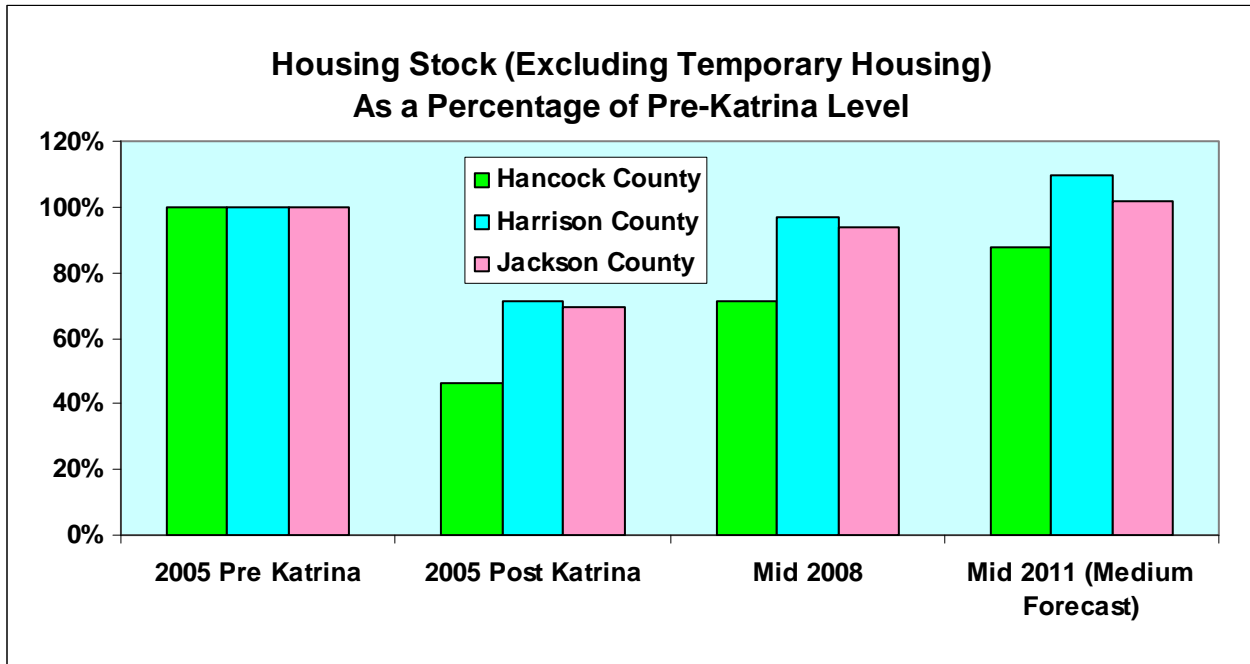
In the preceding chart:

- In mid-2008, the vacancy rate in Hancock County was negative. This means that there were more households who wanted to own or rent in Hancock County than the number of permanent housing units. At this point in the recovery of Hancock County, temporary housing (primarily, Mississippi Cottages and FEMA travel trailers) is an essential component of the housing recovery.
- In mid-2011 Hancock County does not appear, because we estimate that at that time, there will be zero vacant units (that is, we estimate that the number of permanent housing units will be equal to the number of households desiring to own or rent, leaving no vacant units). Because we estimate that a vacancy rate of roughly 10% is necessary for a normally functioning housing market, this reflects a need for additional housing units in Hancock County.

The following are not shown on the chart above but are important to keep in mind:

- In Harrison County, we estimate a shortage of rental housing in Long Beach.
- In Jackson County, we estimate a shortage of rental housing in Pascagoula.
- In Hancock County, we estimate a shortage of rental housing and of mobile homes in the unincorporated areas of the county.

As the chart below shows, we estimate that, in the recovery of its housing stock, Hancock County has lagged behind Harrison and Jackson Counties and will continue to do so.



We found that the recovery pattern shown above for the three counties is similar for both ownership and rental housing.

Section III. Additional Findings

Additional information on each of these findings can be found in Section VIII of the Detailed Report. Findings 1-9 can be found in Section I of this Executive Summary.

10. Spike in Market Rents.

- a. The average rent for a market-rate two-bedroom apartment in Harrison County rose from \$564 (August 2004) to \$755 (March 2007, a 34% increase) and then to \$804 (April 2008, a further 6% increase). Similar increases occurred in Hancock and Jackson counties.
- b. This increase in market rents is a significant problem in terms of affordability for low- and moderate-income households.
- c. At the same time, this increase is an important incentive for the development of new rental housing that is needed for the recovery.
- d. There is a large new supply of subsidized rental and ownership units in the pipeline, from MHC's Low Income Housing Tax Credit program, MDA's Small Rental Assistance Program, and MDA's Long Term Work Force Housing Program.
- e. We expect that as this large pipeline is completed, it will exert downward pressure on market rents over the next 2-3 years.

11. For-Sale Housing.

- a. The pace of new home and existing home sales is slow; the pace of sales for the first nine months of 2008 is 56% of the pace during 2004-2006.
- b. Because of insurance costs and the ongoing housing finance crisis, the ability of potential homebuyers to afford for-sale homes has been reduced. We estimate that the typical homebuyer can afford a purchase price today that is \$25,000 below the price the same homebuyer could have afforded pre-Katrina.
- c. Historically, the three coastal counties have demanded, on average, no more than 2,000 single family permits annually. In 2006 and 2007, permits were taken out at three times that rate.
- d. The stages of a typical housing cycle are:
 - i. Stage I (Rising to a Peak)
 - ii. Stage II (Peaking)
 - iii. Stage III (Declining from a Peak)
 - iv. Stage IV (Declining toward a Bottom)
 - v. Stage V (Bottoming)
 - vi. Stage VI (Recovering)

We estimate that the coast market is at Stage III (declining) where Stage II is the peak. Although individual market cycles vary somewhat, a normal expectation is that each stage of a market cycle will last for one year, although a stage could last as long as two years or more. Accordingly, the Gulf Coast market is likely to bottom out two to four years from now.

- e. New home demand is strongest at the low end of the price range (below \$170,000), but few builders can deliver product in that price range, largely because lot prices basically dictate that most new homes will be priced above \$200,000. MDA's Long

Term Work Force Housing Program will help reduce the cost of some of those homes through a variety of financing mechanisms.

12. **Population Recovery through 2007.** Our data on population movement suggest most Katrina displacees who are going to move back, had done so by 2007. Accordingly, we believe that a significant number of displacees are not going to move back. Similarly, we believe that the 2007 population likely represents a new baseline, and that future population growth likely will be similar to state and national population growth rates. Our 2006-2007 population estimates (from the Census Bureau) are supported by data on public school attendance for the 2007-2008 school year, which was at 93% of pre-Katrina levels in the three coastal counties.
13. **Patterns of Population Recovery.** The distribution of population has changed:
 - a. There was a large exodus of working-age individuals immediately after Katrina, and significant numbers of these individuals have not returned.
 - b. The three coastal counties now have a population that is older on average than before Katrina, and older on average than the state or national average.
 - c. We found a modest shift out of the three coastal counties, into Pearl River, Stone and George Counties. We expect that the three upper counties will continue to grow at an above-average rate. This trend is small in terms of the population of the three coastal counties but is significant in terms of the much smaller population of the three upper counties.
 - d. We found a modest shift within the three coastal counties, with population and housing increasing more rapidly north of Interstate 10 than south of Interstate 10. This trend was already evident from the 1990 and 2000 Census reports. We expect that future population and housing growth will be higher in the northern portions of the three coastal counties.
14. **Future Population Recovery.** Housing needs are defined by the number of households. Growth in number of households is primarily a function of growth in population. Accordingly, in developing our estimates of housing demand, we considered the rate of potential future population growth. The following illustrates the population recovery that would occur if population growth for the three coastal counties averages 1.5% per year (the national rate of population growth has averaged 1.0% per year recently):
 - a. 2008 93.7% of pre-Katrina population
 - b. 2009 95.1% of pre-Katrina population
 - c. 2010 96.5% of pre-Katrina population
 - d. 2011 98.0% of pre-Katrina population
15. **Population: Upside Potential and Downside Risk.** We identified the following factors that may cause population to exceed, or fall below, the levels shown above. All else equal, more population growth translates into more demand for housing:
 - a. (Upside) The Jobs Recovery. As discussed below, we believe the ongoing recovery of jobs is vital. Job growth has been good through 2007.
 - b. (Downside) Recession. The national economy is already in recession, but it is not clear whether recession has spread to the Mississippi Gulf Coast. In the last

- recession, job growth in the three coastal counties was near zero. If job growth slows, population growth will suffer, and housing demand will suffer as well.
- c. (Upside) Residential Electric Service. The Gulf Coast Business Council reports that residential electric connections are at 97.6% of pre-Katrina levels, a potential indicator that population recovery may be greater than we estimate.
 - d. (Upside) Although the Census Bureau and Claritas current population estimates are similar, the ESRI Data estimate is some 4% higher.
16. **Blighted Properties.** We collected blighted property lists from local governments but found that there was no consistency regarding how blight was defined, how data were collected, and how localities followed up. We are currently conducting an on-the-ground 100% survey of homes that suffered Katrina damage in the three coastal counties, to assess the extent of blight. We believe this study is necessary because other information on potential blight is insufficient to guide policy at the local level.
 17. **FEMA Temporary Housing Residents.** We conducted a survey by mail of residents of FEMA temporary housing. Also, using data supplied by FEMA, we produced a series of tables showing various attributes of the 4,754 residents (statewide) of FEMA temporary housing as of August 1, 2008. See Section VIII of the Detailed Report for highlights.
 18. **Mississippi Cottage Residents.** We conducted a survey by mail of residents of Mississippi Cottages. See Section VIII of the Detailed Report for highlights.
 19. **Low-Moderate Income Housing Needs.** We estimate that the stock of Deep Subsidy Apartments is poised to make a recovery to 110% of pre-Katrina levels. In addition, the recovery also will include very large numbers of Shallow Subsidy Apartments and Small Rental Assistance Program units that are available to holders of Section 8 Housing Choice Vouchers.
 - a. The increased supply of Section 8 Housing Choice Vouchers, and the increased supply of LIHTC and SRAP and LTWF units that will accept vouchers, should assist in addressing additional needs for deep rental subsidies that arose as a result of Hurricane Katrina.
 - b. That said, the ongoing spike in market rents doubtless is having a severe negative impact on low- and moderate-income households who do not have rental assistance. That is, the spike in market rents is quite large in relation to the incomes of low-income renters.
 20. **Housing Recovery Needs Among the Elderly and/or Disabled.** Our tabulations of results from 373 (non-random) surveys of SMPDD's Medicaid Waiver clients indicated that the great majority is still living in their pre-Katrina homes, but that repairs remain in almost half of the storm-damaged homes. Roughly half reported that their age and/or disability status impacted their ability to pursue and complete their housing recovery.

Section IV. Additional Information on Key Findings

For additional information on our housing stock recovery estimates, see:

- Sections IX through XI in the Detailed Report (Data Highlights for each of the three coastal counties).
- Section XII in the Detailed Report (Housing Stock Estimates).

IV.1 By Mid-2011, Housing Stock Will Recover to 104% of Pre-Katrina Level.

Although today's housing recovery is far from complete, we estimate that private, state and federal efforts will result in recovery of the housing stock in the three coastal counties to 103.9% of the pre-Katrina level by mid-2011. This represents 6,319 additional housing units, over and above the pre-Katrina level.

We have also found it useful to compare the overall level of vacant housing units at various points in time. A supply of vacant units is needed for several reasons:

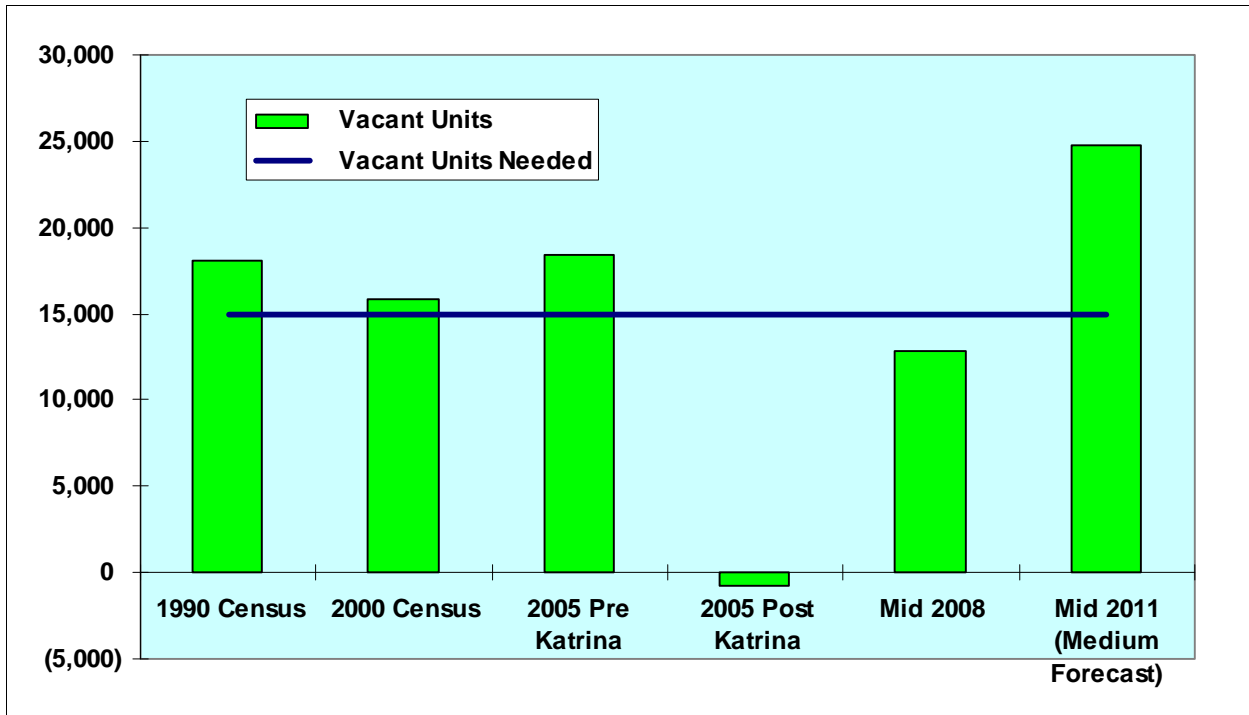
- To provide potential owners and renters with an adequate range of choices.
- For rental units undergoing repairs in preparation to be shown for rent.
- For ownership units undergoing repairs in preparation to be shown for sale.
- For second homes (for example, timeshares and beach houses) and recreational homes (for example, hunting cabins and fishing cabins).

We estimate that, in the three coastal counties, roughly 15,000 vacant units (roughly a 10% vacancy level) are needed for these purposes. Of the 15,000 total vacant units, we estimate that:

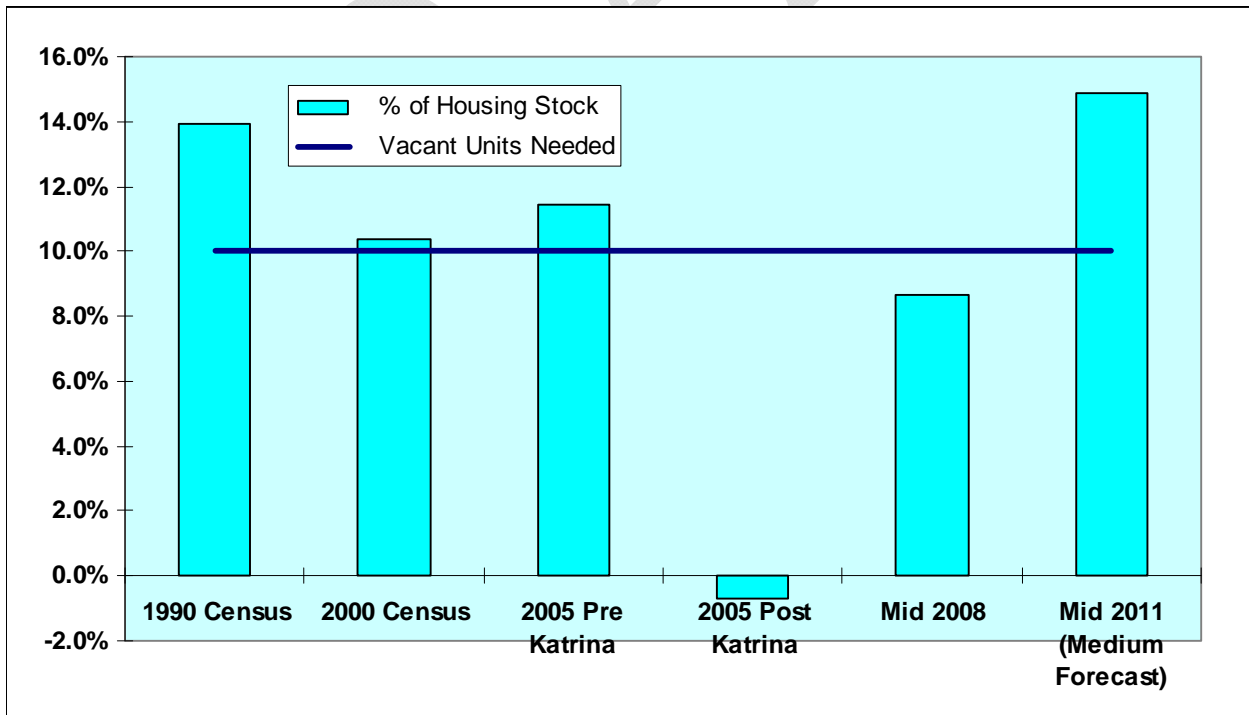
- Roughly 10,000 are needed for second homes and recreational homes.
- Roughly 5,000 are needed to provide an adequate supply of housing for sale and for rent.

The supply of vacant units exceeded this level in 1990, matched this level in 2000, and exceeded this level pre-Katrina. We estimate that the supply of vacant units will significantly exceed this level by mid-2011.

The first chart below shows the number of vacant units (for owners and renters); the second chart shows vacant units (for owners and renters) as a percentage of the total housing stock. We did not include temporary housing in mid-2008; if temporary housing (for example, FEMA trailers) had been included, the number of vacant units would have been some 6,500 units higher.



The extreme shortage of housing post-Katrina caused households to “double-up”, to occupy homes that had significant damage, and to make other compromises. The chart below provides the same data, with vacancy expressed as a percentage of total housing units.



The average number of permits issued annually (single family plus multifamily) for 1980-2007 was 2,465 units per unit (1,816 single family units plus 649 multi-family units).

Just over 3,000 permits per year were issued (on average) in the three peak years in pre-Katrina permits (1983, 1994 and 2004). Just over 1,400 permits per year were issued (on average) in the three trough years in pre-Katrina permits (1981, 1991 and 1997). From this, we estimate that supply and demand have rarely been more than 2,000 to 3,000 units out of balance over the 15 years prior to Hurricane Katrina.

By contrast, we estimate that housing supply may exceed demand by more than 9,000 units by mid-2011.

For more information on historical levels of building permit activity, see Section VIII in the Detailed Report.

IV.2 By Mid-2011, Population Will Recover to 97% to 99% of Pre-Katrina Level.

No additional discussion.

IV.3 Relationship Between Supply and Demand.

When housing supply exceeds housing demand, housing prices will fall. This is favorable for homebuyers and renters and unfavorable for home sellers and landlords; on balance, neither negative nor positive for the Gulf Coast as a whole.

However, an excess of supply means that housing production is not needed, with very painful consequences to those whose jobs depend on housing production: building material producers and retailers, construction workers, real estate development companies, realtors, and lenders, to name those who are most directly affected. Normally, the housing production sector is one of the sectors that fuel a recovery; it will be difficult for the Gulf Coast to continue to grow post-Katrina if the housing production sector suffers a prolonged slowdown.

In preparing our estimates of the housing recovery, we assumed that no additional units will be produced by the state and federal recovery programs beyond those units already awarded. If additional units are produced by these programs, the risk of over-building would be increased.

We also assumed that all existing programs funded by the state and federal recovery programs would result in production of the intended number of units. Because of the national housing finance crisis, it is possible that some planned projects may not be developed; if that occurred the risk of over-production would be reduced.

In selecting key assumptions for our housing stock estimates, we made choices that would result in lower rather than higher estimates of housing stock. Accordingly, we believe that our estimates are conservative. Similarly, we believe that it is likely that the actual housing stock will be greater than we estimate.

IV.4 The Current State of Housing Recovery.

See the Housing Stock Estimates in Section XII in the Detailed Report.

IV.5 Need for Production of Additional For-Sale Housing.

See the Housing Stock Estimates in Section XII in the Detailed Report.

IV.6 Need for Production of Additional For-Rent Housing.

See the Housing Stock Estimates in Section XII in the Detailed Report.

IV.7 We Estimate a Reduction in Affordability Post-Katrina.

Although we have identified a potential over-supply of housing generally, we have also identified issues concerning the affordability of the post-Katrina housing stock.

- Rents have risen significantly post-Katrina.
- Rising insurance costs have made home purchases less affordable.
- The need to elevate homes in many areas of the Gulf Coast has added cost without necessarily adding value.
- Recovery necessarily involves a significant change in the average home on the Gulf Coast. As a general rule (subject to case-by-case exceptions), older housing, housing that is less well maintained, and housing with relatively low rents and relatively low values is largely replaced by housing that is newer, meets current new construction standards, and has relatively higher rents and values. Although the increase in housing quality is a strong benefit of recovery, a decline in affordability is a disadvantage of recovery, unless affordability is enhanced through governmental efforts.

IV.8 We Estimate an Increased Need for Rental Assistance.

In this report, we use the term Deep Subsidy Apartments to refer to *project-based* rental housing that includes subsidies that allow affordability to households with an income level of \$20,000 and below. Examples include public housing, privately-owned Section 8 apartments, and privately-owned apartments with Rental Assistance subsidies from the U.S. Department of Agriculture.

It should also be noted that Small Rental units, Market-Rate Apartments, and Shallow-Subsidy Apartments can be affordable to extremely-low-income households through *tenant-based* rental assistance such as Section 8 Housing Choice Vouchers. We recommend additional tenant-based assistance to meet the additional need discussed below.

In our Estimate of Voucher Need deliverable, we estimated that the current level of need for deep rental subsidies is 4,906 households above the pre-Katrina level of need. In making this estimate, we started with HUD's special tabulations of 2000 Census data, indicating levels of "worst case needs" (renter households paying more than 50% of household income for rent and utilities).

We then made adjustments for the post-Katrina environment:

- For the current number of renter households.
- For Deep Subsidy Apartment stock that is currently off line.

- For a higher incidence of housing cost burdens due to the post-Katrina spike in market rents.
- For low-income households who were owners pre-Katrina and may be renters (with high housing cost burdens) post-Katrina.
- For the change in the number of vouchers authorized now versus 2000.

We reviewed three Apartment Studies (by W. S. Loper & Associates, for the Gulf Regional Planning Commission). Each of these studies indicated very high occupancy levels in apartments affordable to households with incomes below \$20,000 per year.

The information we reviewed concerning occupants of FEMA temporary housing suggests that a significant number of low-income households who were owners pre-Katrina will be renters post-Katrina and may need deep subsidies in order to afford rental housing now.

IV.9 Insurance Cost and Availability.

From the viewpoint of a homebuyer, a \$2,000 per year increase in insurance costs means a \$25,000 decrease in the mortgage loan the homebuyer can afford to borrow. Our field research suggests that typical purchasers of starter homes are facing annual insurance costs in the \$3,000 range, triple the roughly \$1,000 per year insurance costs prevailing pre-Katrina. This has the following impact on affordability:

- The extra \$2,000 in insurance costs is \$167 per month.
- At 6.5% / 30 years, \$167 per month would pay principal and interest on a loan of \$26,400.
- Accordingly, increased insurance costs have reduced the purchase price that a typical homebuyer can afford, by roughly \$25,000, compared to pre-Katrina.

A future task for the Mississippi Housing Recovery Data Project Team is to work with insurance experts to estimate the prevailing levels of insurance prices, for a standard quality starter home, in varying locations across the Gulf coast.

If the post-Katrina spike in insurance costs persists:

- There is likely to be a negative impact on home values in the southern portions of the three coastal counties.
- The existing trend for new development to be concentrated in the northern portions of the three coastal counties is likely to accelerate.
- The existing trend for increased new development in Pearl River, Stone and George Counties) is likely to accelerate.

Importance of Economic Recovery

Regarding employment growth, see the chart on the next page. The difference between recession (losing 1,000 to 1,500 jobs annually) and strong growth (gaining 7,000 to 8,000 jobs annually) is very large. We believe that the future strength of the Gulf Coast housing markets will be strongly influenced by the level of job growth for 2008-2011. Of the roughly 11,300 jobs lost post-Katrina in 2005 and 2006, approximately 10,500 were recovered in 2007.

Employment (Biloxi-Gulfport-Pascagoula MSA)

Year	Employment	Growth	Growth %	Discussion
1990	119,600			
1991	122,883	3,283	2.7%	
1992	128,592	5,709	4.6%	Average annual job growth = 7,410 jobs
1993	140,217	11,625	9.0%	
1994	149,242	9,025	6.4%	
1995	147,050	(2,192)	-1.5%	
1996	146,683	(367)	-0.2%	Negative job growth during previous recession
1997	151,700	5,017	3.4%	Average annual job growth = 7,922 jobs
1998	162,008	10,308	6.8%	
1999	170,450	8,442	5.2%	
2000	170,133	(317)	-0.2%	Negative job growth during the most recent recession
2001	166,958	(3,175)	-1.9%	
2002	165,867	(1,091)	-0.7%	
2003	166,783	916	0.6%	Minimal job growth compared to recent recoveries
2004	167,758	975	0.6%	
2005	164,300	(3,458)	-2.1%	Over 11,300 jobs lost post-Katrina
2006	156,408	(7,892)	-4.8%	
2007	166,867	10,459	6.7%	10,500 jobs recovered in 2007

Source: U.S. Department of Labor

Note: the MSA covers the three coastal counties plus Stone and George Counties

The following chart shows trends in employment in the construction sector, in the five-county area.

Employment (Natural Resources, Mining and Construction)										
Gulfport-Biloxi-Pascoukala, MS MSA, 2000-2008 (in thousands)										
Month	2000	2001	2002	2003	2004	2005	2006	2007	2008	
Jan	10.4	10.0	9.9	9.5	7.1	7.5	11.2	11.2	12.1	
Feb	10.3	10.4	10.1	10.0	7.2	7.6	10.8	11.3	12.1	
Mar	10.2	9.9	9.8	9.4	7.5	7.9	10.9	11.6	12.1	
Apr	9.9	9.6	9.3	8.9	7.4	7.9	10.5	11.3	12.2	
May	10.3	9.8	9.2	8.2	7.4	8.2	11.4	11.3	12.1	
Jun	10.4	9.4	9.1	7.9	7.4	8.1	11.9	11.0	12.3	
Jul	10.5	9.0	8.7	7.6	7.4	8.1	11.4	11.4	12.4	
Aug	10.5	9.3	8.7	7.7	7.3	8.2	11.6	12.0	12.3	
Sep	10.1	9.2	8.7	7.6	7.3	9.3	11.6	12.2		
Oct	9.8	9.6	8.9	7.6	7.4	10.3	11.3	12.3		
Nov	9.6	9.9	9.0	7.5	7.5	10.9	11.2	12.2		
Dec	9.6	9.6	9.1	7.4	7.4	11.5	11.2	12.2		
Average	10.1	9.6	9.2	8.3	7.4	8.8	11.3	11.7	12.2	
							Comparison to August 2005	3.1	3.5	4.0

Source: Bureau of Labor Statistics
 Note: we expect that variations are attributable to construction employment

We point out that the current spike in construction employment is temporary and will need to be replaced with permanent jobs. In the five-county area, there are 4,000 more construction workers now than there were pre-Katrina.

There is a risk of a recession along the Gulf Coast, driven by national trends. Our information is not sufficient to establish whether there is a recession along the Gulf Coast today, but clearly there is a risk that a recession could occur.

Nationwide Housing Finance and Credit Crisis.

Homebuyer loans are much more difficult to obtain now. Mortgage lenders report a denial rate in 2006 that was more than double the denial rate in 2004-2005. The following table is from Riverside Advisors' report to MDA (submitted July 17, 2008) Determining Need for Homeownership Assistance in the Mississippi Gulf Coast. This table shows that the denial rate for home mortgages more than doubled in 2006 compared to the 2004-2005 baseline. Riverside found that "problematic credit histories continue to be the leading reason for denial of applications."

Gulfport-Biloxi MSA Home Mortgage Disclosure Act "HMDA" data

	Applications Received	Applications Denied	Percent of applications denied
2004	5,910	584	9.9%
2005	7,036	678	9.6%
2006	7,417	1,557	21.0%

Regarding foreclosures, Riverside reports "Sub-prime and predatory lending became prevalent in Mississippi and the state is now identified as having the highest rate of sub-prime lending in the country.⁵ Sub-prime lending can result in delinquency and foreclosure rates of up to 10 times the rates associated with prime lending. During the third quarter of 2007, the foreclosure rate of sub-prime loans in Mississippi was 6.5 times higher than that of standard loans.⁶ 38,991 homes in Mississippi are projected to go into foreclosure in 2008-2009.⁷

Similarly, credit has tightened for commercial loans that developers use to produce new housing.

The table below shows numbers of homes sold, and average sales prices, for 2004-2008, for the three coastal counties. This table indicates that 2008 sales volume is down by 44% from the level that prevailed in 2004-2006, and that the average sales price dropped 8.5% between 2007 and 2008.

⁵ "National Crisis Hits Home" Mississippi Economic Policy Center 2008

⁶ "National Crisis Hits Home" Mississippi Economic Policy Center 2008

⁷ "Defaulting On The Dream", Pew Center for the States April, 2008

**Hancock, Harrison and Jackson Counties
Home Sales and Average Sales Prices 2004-2008**

	Hancock	Harrison	Jackson	Total
2004 Homes Sold	826	1,606	2,323	4,755
2005 Homes Sold	782	1,667	2,540	4,989
2006 Homes Sold	706	1,764	2,710	5,180
2007 Homes Sold	421	1,340	1,916	3,677
2008 Homes Sold (annualized)	343	1,026	1,430	2,799
2004-2006 Average	771	1,679	2,524	4,975
2007 as % of '04-'06 Average	54.6%	79.8%	75.9%	73.9%
2008 as % of '04-'06 Average	44.5%	61.1%	56.6%	56.3%
2004 Average Price	\$137,200	\$130,312	\$130,910	\$131,801
2005 Average Price	\$165,184	\$154,689	\$152,316	\$155,126
2006 Average Price	\$163,609	\$161,234	\$162,368	\$162,151
2007 Average Price	\$159,524	\$167,621	\$171,407	\$168,667
2008 Average Price	\$154,131	\$147,490	\$159,210	\$154,290
2007 versus 2006	-2.5%	4.0%	5.6%	4.0%
2008 versus 2007	-3.4%	-12.0%	-7.1%	-8.5%
2008 versus 2006	-5.8%	-8.5%	-1.9%	-4.8%

Source: National Association of Realtors

Section V: Data Highlights for the Three Coastal Counties

This section contains selected information from our Housing Stock Estimates for the three coastal counties combined. Some of this information repeats information from Section III above.

Similar information, in the same format, for each of the three counties individually may be found in Sections X (Hancock County), XI (Harrison County) and XII (Jackson County) in the Detailed Report.

V.A Housing Stock Categories and Key Assumptions

For a description of the housing stock categories used in this Executive Summary, and for our key assumptions concerning State and federal housing recovery programs, see Section II.A.

V.B Summary of Data Highlights

We have developed this summary of Data Highlights based on the data presented in Sections V.C through V.F below.

- 32.7% of housing units in the three coastal counties received major or severe damage. “Severe” damage generally means damage of more than \$30,000 per unit. “Major” damage generally means damage of \$10,000 to \$30,000 per unit. See Section V.C.
- As of mid-2008, we estimate that the housing stock in the three coastal counties had recovered to 92.2% of its pre Katrina level. See Section V.D.
- Based on State and federal funding already awarded, we estimate that the area’s housing stock in mid-2011 will exceed pre-Katrina levels by nearly 6,319 units (3.9% of the pre-Katrina housing stock). See Section V.F.

We estimate the following levels of recovery, by mid-2011, for each sector of the housing stock in the three coastal counties:

- | | |
|------------------------------|-------------------------|
| ○ Mobile Homes | Less Than Full Recovery |
| ○ Other Home Owner | More Than Full Recovery |
| ○ Small Rental | Less Than Full Recovery |
| ○ Market Rate Apartments | Less Than Full Recovery |
| ○ Shallow Subsidy Apartments | More Than Full Recovery |
| ○ Deep Subsidy Apartments | More Than Full Recovery |

V.B1. Damage to Housing Units (see Section V.C)

32.7% of the three-county area's housing stock received major or severe damage from Hurricane Katrina.

Deep Subsidy Apartments (apartments affordable to the poorest households) and Small Rental units received the highest percentage of damage relative to their respective number of units (at least 50% major or severe damage). These segments of the rental housing stock included the rental units that were most affordable pre-Katrina.

We estimate that Shallow Subsidy Apartments received the lowest percentage of damage relative to their respective number of units (less than 10% major or severe damage). This is not surprising, because almost all of these units were developed post-1990.

V.B.2. Housing Stock Recovery Through Mid-2008 (see Section V.D)

By mid-2008, we estimate that:

- Homeowner units and Shallow Subsidy Apartments had made at least a 100% recovery in the three coastal counties.
- Mobile Homes had made a 71.9% recovery, Small Rental units had made a 67.0% recovery, and Deep Subsidy Apartments had made a 66.7% recovery. These segments of the housing stock included the units that were most affordable pre-Katrina.

V.B.3. Housing Stock Projections to Mid-2011 (see Section V.G)

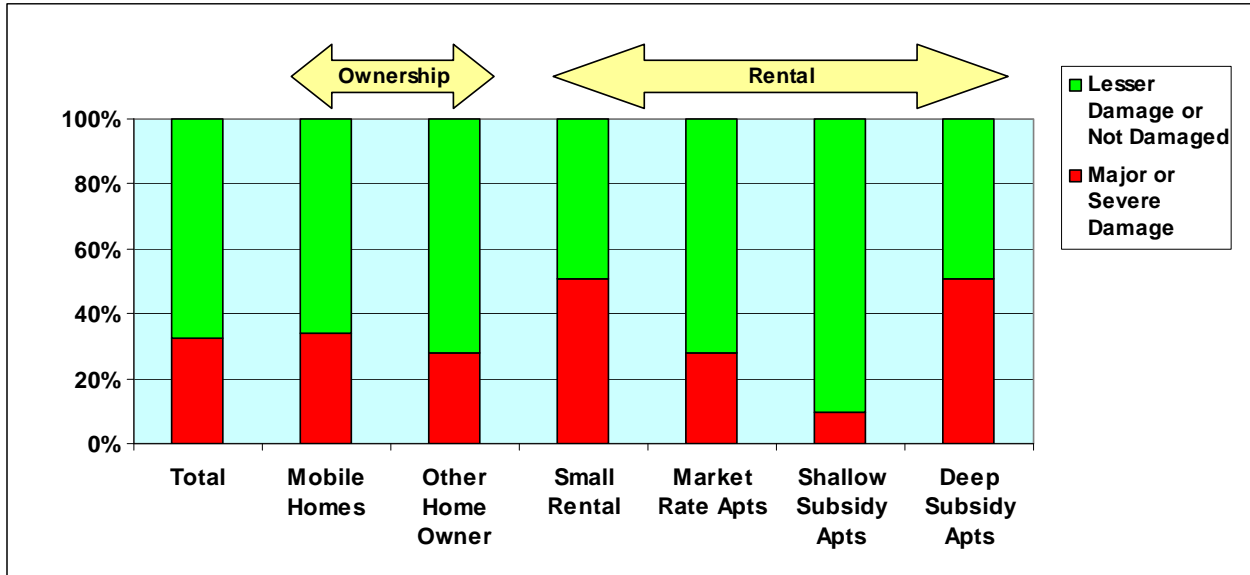
We estimate that by mid-2011:

- The total number of housing units in the three coastal counties will have increased by 6,319 units over pre-Katrina levels (a 3.9% increase).
 - The stock of ownership housing will have risen by 6,465 units (a 5.7% increase).
 - The stock of rental housing will have declined by 146 units (a 0.3% decrease)
- Declines of more than 1,000 units will have occurred for Mobile Homes (4,705 units, a 21.7% decrease) and Small Rental units (5,627 units, a 24.5% decrease).
- Increases of more than 1,000 units will have occurred for Homeowner units (11,170 units, a 12.1% increase) and Shallow Subsidy Apartments (5,781 units, a 423% increase).

In Appendix 3, we discuss why a recovery well above 100% is necessary in Shallow Subsidy Apartments, so as to offset the relatively limited recovery we estimate for Small Rental units.

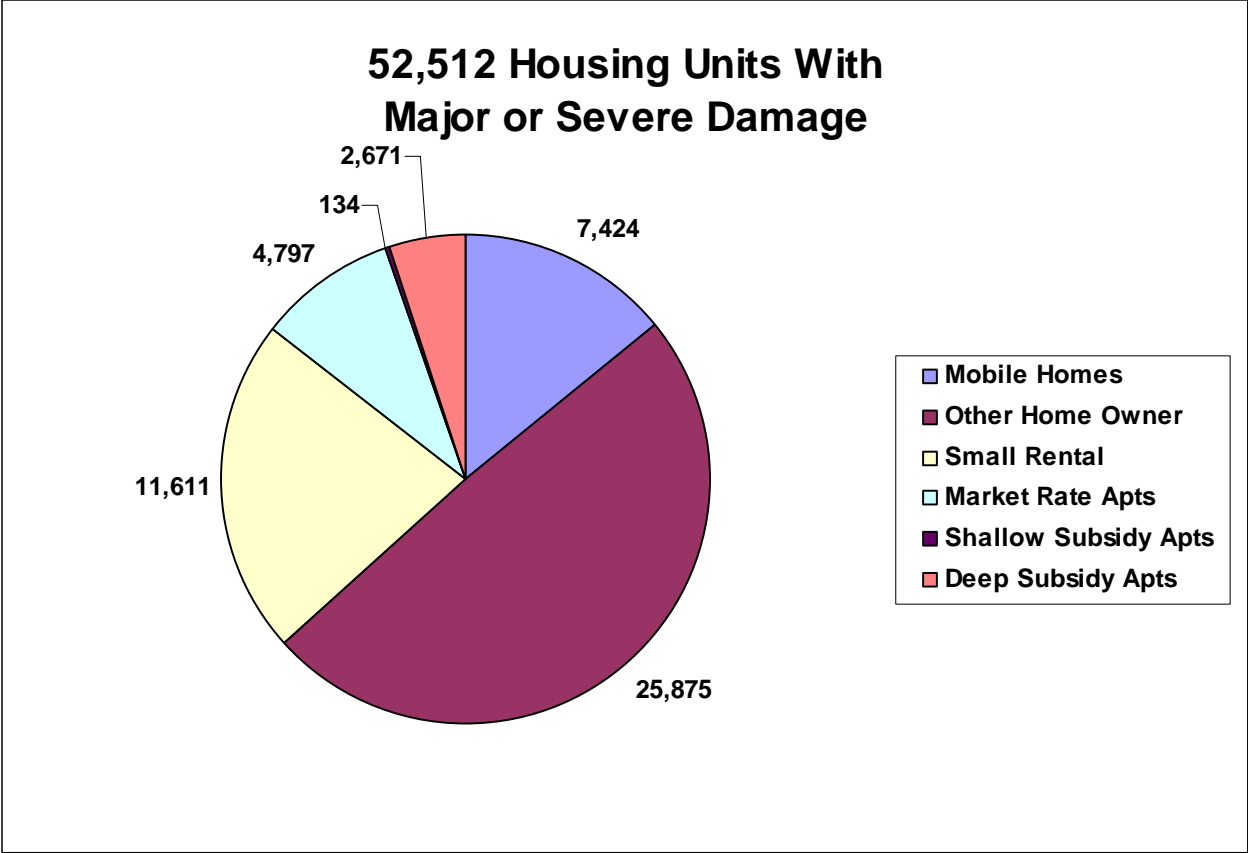
V.C. Katrina Damage

The State adopted HUD's damage estimates, based on raw data from housing inspections through February 2006, and using analytical methods developed in April 2006. The chart below illustrates the level of major or severe damage, by type of housing.



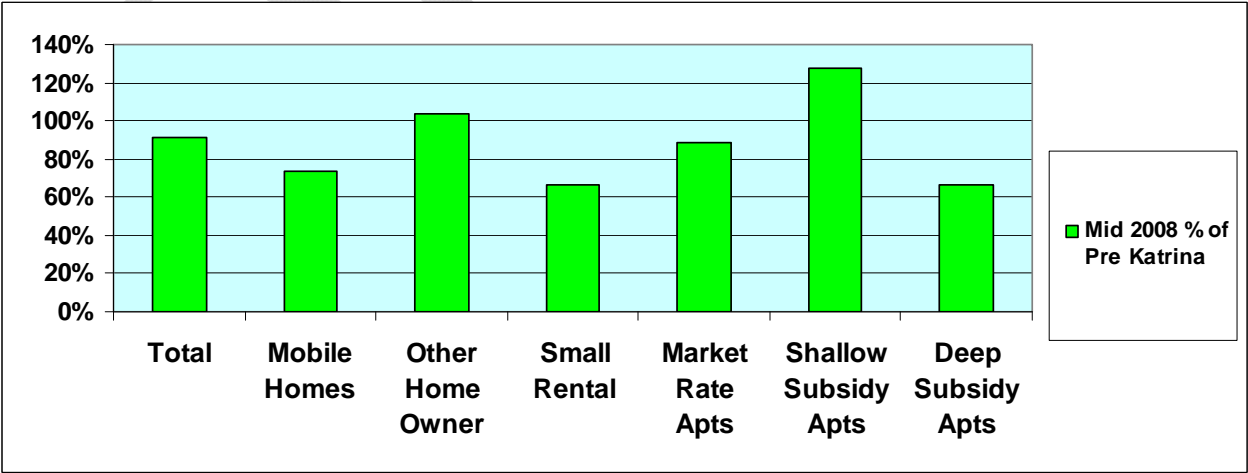
Severe damage generally means repair cost of \$30,000 or more (for example, a home that needed a new roof and a new garage). Major damage generally means repair cost of \$10,000 or more (for example, a home that needed roof repair and sustained limited water damage).

The chart on the following page shows the number of units sustaining Major Damage or Severe Damage, by type of housing, in the three coastal counties



V.D. Housing Stock Recovery through Mid-2008

The following chart shows our estimate of the housing stock in mid-2008 as a percentage of the pre-Katrina housing stock. This chart excludes temporary housing (e.g. Mississippi Cottages and FEMA travel trailers)



Although the total housing stock has recovered to 92.2% of the pre-Katrina level, the Other Home Owner (primarily single family homes) and Shallow Subsidy Apartment segments have recovered to more than 100% of their pre-Katrina levels.

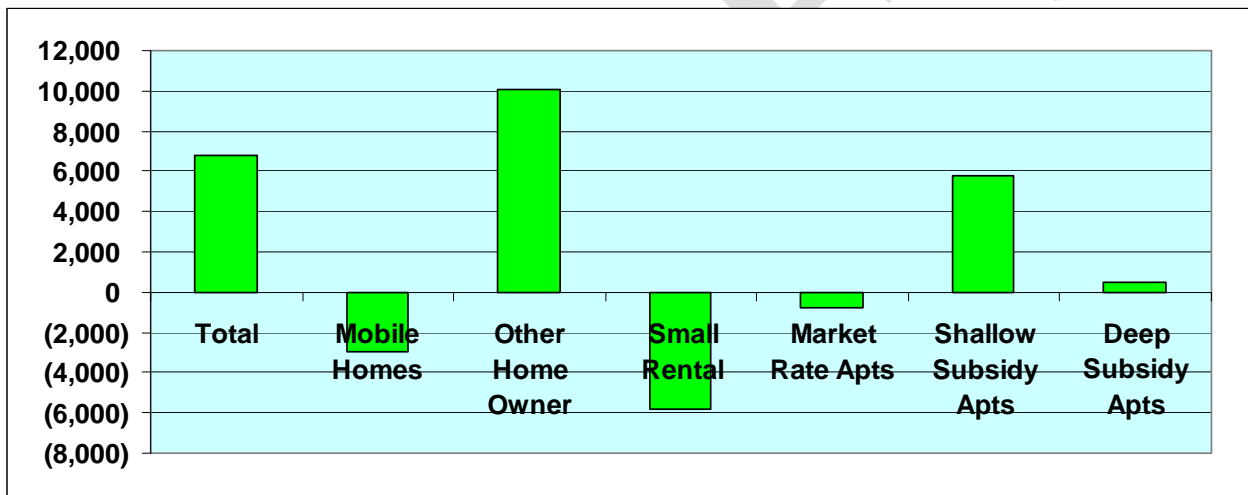
The preceding chart reflects not only repair / rebuilding of housing damaged by Katrina, but also new construction activity on formerly vacant land.

V.E. MDA Small Rental Assistance Program (SRAP)

The three coastal counties included 1,952 small rental units that received awards in Round One of SRAP.

V.F Projected Housing Stock in Mid-2011 vs. Pre Katrina Levels

The following chart shows our estimate of the increase or decrease in the area's housing stock, comparing mid-2011 to pre Katrina levels. We use a mid-2011 comparison, because we expect that all recovery awards to date will have led to completed housing by then.



Highlights of the chart above include:

- Total housing stock will have risen by over 6,000 units, driven by very large gains in Other Home Owner units (other than mobile homes) and Shallow Subsidy Apartments (from MHC's Low Income Housing Tax Credit awards and MDA's Long Term Work Force Housing awards).
- The ownership housing stock will have risen by over 6,000 units, with a nearly 5,000 unit loss in Mobile Homes more than offset by a 11,000+ unit gain in Other Home Owner (primarily single family for-sale) units.
- The rental housing stock will be virtually unchanged versus pre-Katrina levels, with large gains in Shallow Subsidy Apartments offset by losses of Small Rental units.

Our estimates do not include potential future State or federal funding (for example, funding that might be made available by MDA in future Long Term Work Force Housing Program or Small Rental Assistance Program funding rounds).

DRAFT

Section VI: Appendices

Appendix 1: The Apartment Recovery

Our data on the apartment stock is project-by-project, building on studies commissioned by the Gulf Regional Planning Commission. We supplemented these study results with information from MHC, MDA, HUD, USDA, other funders, owners and managers.

Our estimated apartment stock in mid-2011 includes, in addition to apartments that were on line in April 2008:

- 1,194 market rate units that were under construction in April 2008.
- Zero additional market-rate units (we assume that soft market conditions across the Gulf Coast will discourage further market-rate production).
- 5,661 units in 53 projects that have received GO Zone Low Income Housing Tax Credit allocations. Of these 53 projects, MHC reports that 33 had started construction as of late November 2008.
- 1,998 units in 21 projects that have received MDA Public Housing Program funding. 12 of these projects also received GO Zone LIHTCs from MHC.
- Zero additional LIHTC units (we assume that soft market conditions across the Gulf Coast will discourage further LIHTC production).
- 616 rental units that have received MDA Long Term Work Force Round One funding.
- 996 rental units that have received MDA Long Term Work Force Round Two funding.
- Zero additional LTWF rental units (for purposes of our analysis, we did not make estimates for future MDA awards).
- Project by project estimates for repair or rebuilding of damaged apartment projects that received HUD or USDA subsidies pre-Katrina.

Appendix 2: The Homeownership Recovery

Our information on the mobile home recovery is from the State Fire Marshal's office (retailers and transporters are required to register mobile homes with the State Fire Marshal's office at the time the mobile homes are placed on the purchaser's site).

For Other Home Owner units (primarily single family homes), we have several indicators of recovery:

- Aerial photography evidence that a home was destroyed by Hurricane Katrina and then subsequently rebuilt.
- Real estate tax assessment data, showing that a home lost value after Hurricane Katrina and then regained the original value or more.
- Building permit data.
- MDA award data (Homeowner Assistance Program I, Homeowner Assistance Program II, and Elevation Grants).

We also obtained data on home sales activity.

Appendix 3: The Economics of Rental Housing Development

We estimate that the Small Rental sector will make only a limited recovery, and that the Shallow Subsidy Apartment sector will make a very strong recovery. We also estimate that the surplus in Shallow Subsidy Apartments will more or less offset the shortfall in Small Rental units.

This pattern is appropriate. The primary reason is that new rental housing can be developed more cost effectively in the form of apartments than in the form of single family, duplex, triplex and four-plex properties. Below we provide additional information on this subject.

We also find that new rental housing on the Gulf Coast is targeting the work force end of the rental housing market. In our view, this is to be expected, as a matter of real estate economics. However, as we point out in our findings concerning affordability, although the housing recovery appears likely to generate more rental units than are needed, the housing recovery appears unlikely to generate as many affordable rental units as are needed. Accordingly, we recommend additional tenant-based rental assistance, to provide the needed additional affordability.

An investor-builder who is considering developing new rental housing must be satisfied that the likely rents from the property (once completed) will be sufficient to cover rent losses (primarily vacancy loss, but also including bad debt loss and concessions), cover operating expenses and reserves, and with enough left over to pay a market rate of return on the cost to develop the property. A simplified version of the feasibility calculation would look like this:

\$100,000 development cost, borrowed at 7% / 30 years	\$665 per month
Operating expenses and reserves	+ \$350 per month
Necessary level of collected rent	\$1,015 per month
Plus allowance for rent loss	+ \$85 per month
Rent level needed for feasibility	\$1,100 per month

Each potential project will have its own set of costs, and each investor-builder will have his or her own set of economic assumptions. That said, the preceding example uses costs and assumptions that are broadly consistent with what would be required to develop and operate market-rate apartments on the Gulf Coast today. A \$1,100 rent is significantly above today's average market-rate apartment rents (the April 2008 Gulf Regional Planning Commission study draft showed an average rent of \$780 for two-bedroom market-rate apartments).

It is clear that a similar calculation, for a single family home (or duplex), would shown an even higher rent needed for feasibility, given the materially greater development costs for these types of housing. At the end of this Appendix, we include our estimate that a builder-investor would require rents in excess of \$1,600 per month to develop a single-family home for rental purposes.

The preceding suggests at least the following conclusions:

- Market rate rental construction necessarily will target the high end of the rental market. The development of rental units that are affordable to low- and moderate-income households will require some level of government subsidy (the more affordable the rents, the greater the subsidy that will be required). The subsidy could be provided directly to renters (for example, through the Section 8 Housing Choice Voucher program) or could be built into the financing of the property itself (for example, through deeper subsidies under the Small Rental Assistance Program and/or Long Term Work Force Housing Program).
- Significant recovery in the small rental stock (much of which had relatively low rents pre-Katrina) is unlikely except through MDA's Small Rental Property Program. Because the Small Rental stock cannot be expected to make a 100% recovery, the apartment stock will need to make a greater than 100% recovery in order to provide an adequate stock of rental housing by mid-2011.
- Because the Market Rate Apartment stock necessarily will target the high end of the rental market as discussed above, and because the Deep Rental Subsidy Apartment stock is constrained by the fact that no new federal project-level subsidies are available, we believe that the Shallow Subsidy Apartment stock will need to make up for under-recovery in the Small Rental stock. Our data suggest that this is exactly what is likely to occur on the Gulf Coast.

On the following page is an illustration of why the Housing Recovery Data Project Team believes that economically rational investors will not build single-family homes for rent. If a builder-investor used the estimates below, he or she would conclude that development of a single-family house for rent would be economically feasible only at a monthly rent of \$1,639 or higher, which is far above the prevailing market rent.

Mississippi Housing Recovery Data Project
Illustration of Small Rental Development Economics (Single Family Rental Unit)

Using this set of assumptions, the owner would require \$1,639 monthly rent, or higher in order to justify investing in the development of this small rental property (note -- tenant pays utilities also)

Total Development Cost	\$172,200	
Finished lot	\$40,000	Most lots cost \$45K and up
Cost to Elevate	\$0	Assume does not need to be elevated
Other Hard Costs	\$100,000	
Builder / Developer Profit	\$17,200	10% of total development cost
Other Soft Costs	\$15,000	Architect, construction interest, ...

Minimum initial return needed (to cover debt service and equity yield)	8.0%	Calculated on total development cost
Minimum Net Operating Income needed	\$13,776	\$1,148 per unit per month

Break-even rent level needed	\$19,666	\$1,639 per unit per month
Rent loss	\$1,380	7.0% Vacancy, bad debt, concession
Collected Rent	\$18,286	
Management fee	\$0	10.0% of collections
Real estate taxes	\$860	0.5% of total development cost
Property insurance	\$1,750 /year	
Grounds maintenance	\$0 /year	Assume paid by tenant
Maintenance during occupancy	\$250 /year	Assume most is paid by tenant
Repairs / painting at turnover	\$750 /year	Assume one turnover per year
Utilities during occupancy	\$0 /year	Assume paid by tenant
Utilities during vacancy	\$150 /year	Roughly one month vacant each year
Legal and accounting	\$0 /year	Assume none
Capital reserve	\$750 /year	Appliances, flooring, roof, HVAC, ...
Net Operating Income	\$13,776	i.e., cash flow before debt service

Source: The Compass Group, LLC

Appendix 4: Major Housing Recovery Programs with State or Federal Funding

Homeowner Assistance Program Phase I (Mississippi Development Authority). MDA's HAP I program provided grants of up to \$150,000 for homeowners who sustained flood damage from Hurricane Katrina and who maintained appropriate insurance coverage.

Homeowner Assistance Program Phase II (Mississippi Development Authority). MDA's HAP II program provided grants of up to \$100,000 for low- and moderate-income homeowners who sustained flood damage from Hurricane Katrina, whether or not they maintained adequate insurance coverage.

Homeowner Elevation Grants (Mississippi Development Authority). MDA's Elevation Grant program provided grants of up to \$30,000 to homeowners who are required to elevate finished floor levels above pre-Katrina levels.

Small Rental Assistance Program (Mississippi Development Authority). The SRAP program provides grants to developers of one-unit to four-unit rental properties that serve work force participants. In general, half of SRAP units must be affordable at 80% of area median income (roughly \$40,000 for a family of four on the Gulf Coast), and half must be affordable at 120% of area median income (roughly \$60,000 for a family of four).

Long Term Work force Housing Program (Mississippi Development Authority). The LTWF program provides grants to developers of for-sale and for-rent housing for work force participants. All LTWF units are affordable at 80% of area median income (roughly \$40,000 for a family of four on the Gulf Coast), and some units are affordable at lower income levels.

Public Housing Recovery Program (Mississippi Development Authority). MDA's Public Housing program provides grants to housing authorities for the reconstruction or repair of public housing that was damaged by Hurricane Katrina. Public housing is affordable to households with extremely low incomes.

Low Income Housing Tax Credit Program (Mississippi Home Corporation). The LIHTC program provides tax benefits to developers of apartment projects that serve moderate-income households. The LIHTC program provides affordability at 60% of area median income, roughly \$30,000 for a family of four on the Gulf Coast.