

## DEMOGRAPHIA



### NEW ORLEANS: DESTROYED BY GOVERNMENT FLOODS With a Side Trip to the Mississippi Gulf Coast

23 June 2006

#### After the Flood

FAST FACTS: 2006 ESTIMATES		Similar To
Metropolitan Area Population	960,000	Tulsa, Tucson, Edmonton
Central City Population	158,000	Dayton
Urban Area Population <sup>1</sup>	590,000	Acapulco, Allentown
Urban Land Area: Square Miles	198	Stockholm, Colorado Springs, Avignon, Karachi
Urban Land Area: Square Kilometers	512	
Population per Square Mile	3,000	Perth, Fargo (ND), Kingston (ON), Nantes
Population per Square Kilometer	1,150	
Based upon 2006.01.01 Bureau of the Census Estimates ( <a href="http://www.demographia.com/db-katrinano.htm">http://www.demographia.com/db-katrinano.htm</a> ) *Continuously built up area		

#### Before the Flood

FAST FACTS: 2000 CENSUS		Similar To
Metropolitan Area Population	1,360,000	Nashville
Central City Population	485,000	Cleveland
Urban Area Population	1,009,000	Adelaide, Lyon, Buffalo
Urban Land Area: Square Miles	198	Stockholm, Colorado Springs, Avignon, Karachi
Urban Land Area: Square Kilometers	512	
Population per Square Mile	5,100	New York, Leipzig, Auckland
Population per Square Kilometer	1,950	
*Continuously built up area		

*National Weather Service Warning: August 28, 2005: 10:11 AM*

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<sup>1</sup> Demographia estimate, based upon Census parish estimates.

## Unmitigated Disaster

New Orleans is a disaster on the scale of the San Francisco earthquake. There is an important difference, however. The pictures from San Francisco show complete devastation. The pictures and television images in New Orleans, however, convey much less devastation. The houses are still there. However, they are as much destroyed as if they were gone. Up close, it is clear that many of the houses that look intact have suffered serious, if not fatal damage. Up close, the missing doors and windows are obvious. Even closer, where tourists do not go, the interiors have been ruined as well as the household goods. Even more importantly, the lives of virtually hundreds of thousands of people have been severely, even irreparably damaged. Even in areas that are still inhabited, many businesses remain closed.

There are two principal areas of substantial physical damage. The first area is to the east of downtown New Orleans, in the Ninth Ward, New Orleans East and St. Bernard Parish (counties are called parishes in Louisiana). The second area is residential districts adjacent to Lake Pontchartrain and the canals radiating from it. The popular French Quarter sustained little damage and the comparatively affluent Garden District was also largely spared.

Gray Line operates tours of the devastation twice daily, at 9:00 and 1:00 p.m., for a fare of \$35.00 (<http://www.graylineneworleans.com/katrina.shtml>). The buses take tourists to the lakefront districts, but are forbidden by city ordinance from entering New Orleans East or the Ninth Ward. This is a shame, because these areas suffered the greatest devastation. Denying tourists a view of this dilutes their perception of the damage. Showing people the worst damage could not help but generate support for more attention to the needs of New Orleans. The tour is highly recommended and is staffed by people who lived through the disaster.

Throughout the devastated areas, virtually no homes were spared. Some homes show exit holes in their roofs that were the only means of escape for residents who had fled to their attics. Some people are living in trailers for temporary housing, but they are a minority. Most are gone from the devastated neighborhoods.

Schools are ruined. Churches are split open, or their crosses broken down. There is evidence of the fires that broke out in flooded New Orleans and St. Bernard Parish, but could not be fought. Businesses are closed and many appear not likely to open soon. Even in areas that were not substantially damaged, businesses remain closed. This, however, has not kept Garden District neighborhood groups from opposing the construction of a pharmacy where they would prefer a grocery store. The New Orleans of 2006 is so underserved by businesses that it should take whatever it can get.

It is now nearly ten months after Katrina and comparatively little has been done to repair the damage. Our visit was on a weekend, when it might be expected that hoards of property owners would be out working to restore their houses. But, the numbers were small. Perhaps, there is a concern that fixing things can proceed only after more fundamental projects are completed, such as repairing and strengthening levees. Recent history suggests that their hesitation is well founded.

## Massive Population Losses

The New Orleans area has had difficulties for some time. The urban area had been gradually losing population since 2000, apparently falling to below 1,000,000 by 2005. New Orleans had just joined Buffalo to share this dubious honor.

In a matter of a few days in August 2005, the city of New Orleans lost nearly all of its population. Even in January 2006, there were 275,000 fewer residents than before and most have not returned. Even St. Louis, world record holder for population loss, took more than 20 years to lose that much population. The rest of the metropolitan area lost another 100,000 population, according to special estimates made by the US Bureau of the Census. The New Orleans urban area has fallen from over 1,000,000 population in 2000 to an estimated 590,000 today.

However, even as it lost nearly two-thirds of its population, the city of New Orleans (Orleans Parish) was not the biggest loser. St. Bernard Parish is estimated to have lost more than 90 percent of its population, a fact routinely overlooked by a media that, along with urban elites everywhere, is largely blind to anything beyond the urban core.

Before Katrina, New Orleans was one of only five large US urban areas with a population density exceeding 5,000 per square mile (the others were, in order, Los Angeles, San Francisco, San Jose and New York, followed by New Orleans). Katrina reduced the urban population density to approximately 3,000 per square mile, a more than 40 percent. Nonetheless, Katrina ravaged New Orleans is only 10 percent less dense than Portland, Oregon, which is often touted for its densification policies.

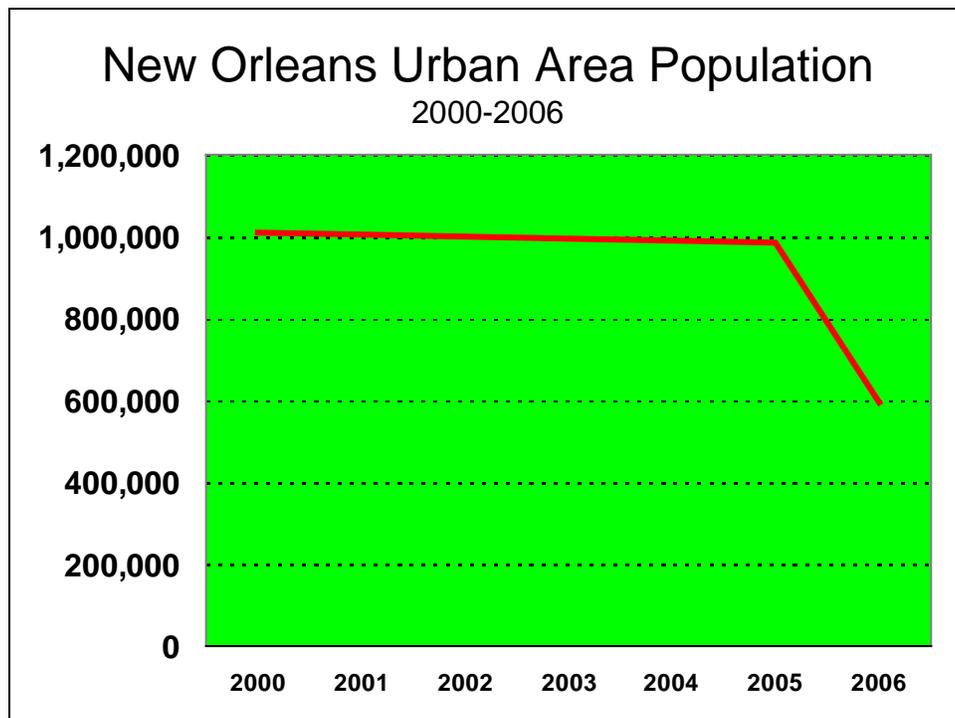


Figure 1

## What Government Hath Wrought

In 1844, Samuel Morse's first telegraph message exclaimed, "What God hath wrought." The message from New Orleans is "what government hath wrought." The Hurricane Katrina did not cause the devastation. If there had just been a strong hurricane, the damage would be well on its way to repair at this point. Neighborhoods would not have been flooded. The hundreds of thousands of evacuees would have returned. St. Bernard Parish and New Orleans would not have been destroyed.

The destruction of New Orleans can be characterized as "what government hath wrought." The cause of the devastation was a government failure by government caused floods. Government Flood Government I occurred when the water poured into neighborhoods from waterways built and insufficiently maintained by government. Then there was Flood Government II, when the surge from Hurricane Rita reflooded parts of New Orleans less than a month later. Competently provided infrastructure would have prevented the second flood as well as the first.

In *The Great Deluge*,<sup>2</sup> Douglas Brinkley tells how the storm surge raced up the man-made Mississippi River-Gulf Coast Outlet, overflowing its banks to inundate New Orleans East, the Lower Ninth Ward and St. Bernard. This 2,000 foot wide shipping channel provided a virtual superhighway for the waters that destroyed so much of the New Orleans area. Not only did the waters surge up the Mississippi River-Gulf Coast Outlet, but they also crashed, head-on, into the levee of the Industrial Canal, sending floodwaters toward the French Quarter. Hindsight is of course "20-20," but it does seem reasonable to have anticipated the potential for such a disaster. Why were there no floodgates or other protection on the Mississippi River-Gulf Coast Outlet?

Moreover, why are they not being constructed now? Without floodgates, the next Katrina sized storm will simply repeat the same pattern of destruction. In addition, with alarmists like Al Gore predicting a Katrina a month, the imperative for closing the Mississippi River-Gulf Coast Outlet at times of risk is clear. Government deserving of respect would not have built the Mississippi River-Gulf Coast Outlet without providing sufficient protection from storm surges for the residents of New Orleans East, the Ninth Ward and St. Bernard Parish. There is now a campaign to close the Mississippi River-Gulf Coast Outlet (<http://www.mrgomustgo.org/index.php>). This is not surprising.

The broken levees of the 17<sup>th</sup> Street Canal and the London Canal have received far more attention. Like the Mississippi River-Gulf Coast Outlet, they were built by a government that simply failed to take sufficient precautions to ensure that what was to be protected was in fact protected. The sad truth is that, if government had been on the job, the people of New Orleans would have been repairing their houses in middle September and much of the community might already be back to normal. The reality is that much of the community may never get back to normal.

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<sup>2</sup> Douglas Brinkley, *The Great Deluge Hurricane Katrina, New Orleans and the Mississippi Gulf Coast*, New York: William Morrow, 2006.



**Figure 2: Mississippi River-Gulf Coast Outlet & Industrial Canal (Left)**

### **More Government Failure**

As if the historic failures of government to do its job were not enough, sitting politicians added to the saga. There was Mayor Nagin of New Orleans, whose city controls the Regional Transit Authority (RTA), with its nearly 400 buses. Despite ordering a long overdue mandatory evacuation, the Mayor did not arrange for the RTA to evacuate the transit dependent (people without cars) from the city. The parish school board had additional hundreds of buses. The private sector had buses that could have been chartered. School buses and transit buses from neighboring parishes might have been used. None of these resources were called upon. Perhaps it should not be surprising that a city with schools that do not educate would have a transit system that does not operate when it is needed the most.

Instead, people were left in the city and crowded into the Superdome and the Convention Center, subjected to inhumane and even criminal environments.

It is less than disingenuous for anyone to claim that this disaster was not anticipated. I, along with millions of people watching television on day before (Sunday) heard the National Hurricane Center advisory repeated repeatedly.

“... most of the area will be uninhabitable for weeks...perhaps longer...”<sup>3</sup>

The advisory went on to suggest that at least one-half of houses would have roof and wall failure. The advisory should have caused government authorities to evacuate the remaining, auto-less residents out of New Orleans while there was still time. At the time the advisory was issued (shortly after 10:00 a.m., New Orleans time), Katrina was rated as a category 5 storm, the most intense category. Only shortly before landfall on Monday morning did the storm turn a bit to the east and it was downgraded to a category 3 --- something the infrastructure of New Orleans should have been able to withstand. If the various responsible government officials and agencies had taken the National Hurricane Center advisory seriously, they would have acted as if a

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<sup>3</sup> Reprinted in full in *The Great Deluge*, pages 79-80.

Category 5 storm was on the way. At least the evacuation disaster could have been largely avoided.

Some have even gone so far as to suggest that Amtrak could have played a substantial role in evacuation. While a few trains might have been operated, the logistics could have been overwhelmingly complicated. Full Amtrak trains disgorging hundreds of people at distant train stations would have been a far greater challenge than using buses. The smaller loads carried by buses could be easily dispersed to directly shelters, without the necessity of setting up yet another shuttle system to get people from the train stations to the shelters. As the New Orleans experience shows, even the simplest plans can be beyond the competence of government.

All the leadership problems in New Orleans, however, may be overshadowed by the extraordinary conduct of Jefferson Parish president Aaron Broussard. President Broussard excused the Parish's pump operators before the storm arrived. It was as if a commander-in-chief had dismissed the army upon threat of invasion.<sup>4</sup>

Everyone admits that there was plenty of blame to go around. The state and federal governments have plenty of which to be ashamed. The Army Corps of Engineers has detailed its failings in a 6,000-page report.

### **Of Pork, Politics and Priorities**

The multitude of mistakes and omissions by the multitude of governments and politicians is not just a matter of coincidence. Take the matter of the poorly constructed, poorly maintained levees. Their failure was not a surprise. Congress and local officials had often been warned about the dangers and the need for upgrades. However, there were apparently more pressing needs.

For example, more than \$150 million was used to restore a trolley line (Canal Street). Local officials lobbied hard for this project. An amount of \$150 million might have made a difference if it had been spent on the levees instead of the trolleys. (Characteristically, overall transit ridership dropped in the first year of its operation). Perhaps, in retrospect, it would have been better to a city than the trolley line or any of the other civic jewels that rated higher as priorities over the years.

The devastation that is New Orleans is the outcome of the nation's "pork barrel" political system, under which the frivolous crowds out the serious. Funding is determined by the agendas of special interests, rather than being rationally prioritized. New Orleans is a victim of the distortion into which American political system has descended.

Moreover, it does little good to muse about the Dutch and their success in building and maintaining levees. Not, at least, until the political processes of Washington, Baton Rouge and New Orleans mirror those of The Hague.

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<sup>4</sup> See *The Great Deluge*, pages 130-131.

## **What Went Right**

Despite all of the difficulties, some things went right. The highway evacuation of New Orleans, for all of its apparent problems, was a stunning success. According to Louisiana Governor Kathleen Blanco, more than 90 percent of the residents of the metropolitan area were evacuated. This was accomplished as people used their own cars to leave the city on highways that operated only in the outward direction for a period of time (contra-flow operation).

The only people left in the metropolitan area were those who refused to leave and those who could not leave. The New Orleans metropolitan area had the second highest share of non-automobile households in the nation (after New York), and most of these households were concentrated in the city of New Orleans.

There is an important lesson here. Virtually all who had the means of evacuation were able to get out of town. However, those who were dependent upon government --- mass transit --- were simply neglected, sentenced as it were, to the Superdome and Convention Center.

What is the difference? It is that people have a personal interest in their own survival, an interest not shared by government. Excuses and even apologies are too often the currency of government. If cars had been available to the transit-dependent citizens of New Orleans, they would have gotten out as well.

## **Smart Growth Nightmare Avoided**

In recent years, various organizations have touted the “value” of higher density living, under the labels of “smart growth” and “new urbanism.” Sierra Club publications, for example, touts the purported superiority of a dense city of San Francisco lifestyle to the suburban lifestyle that has been embraced throughout the world (even in most of the San Francisco area).

What if New Orleans had been as dense as the city of San Francisco, with nearly 17,000 persons per square mile, instead of the actual 6,000?<sup>5</sup> At city of San Francisco densities, the entire New Orleans metropolitan area population could have been accommodated within the city of New Orleans. There would have been far fewer cars available. There would have been more people waiting for the RTA buses that were beyond the competence of the mayor to get running. Additional hell-hole evacuation sites would have been needed to augment the misery of the Superdome and the Convention Center. Hundreds of thousands more people would have been stuck in what was to become a virtual cesspool. Many more people would have died. This tragedy was substantially avoided because of the high-quality highway system and the fact that most people had cars.

## **The Lesson of New Orleans**

In the final analysis, New Orleans demonstrates the risk of depending upon government. The residents of New Orleans could not, in retrospect, depend upon government to keep its promises

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<sup>5</sup> Based upon the developed area of the city. The city also contains large areas of wetlands, which are not included in these calculations.

to protect them from floodwaters. Their reward is at least a year and maybe a life away from home. Other New Orleans residents depended upon their public officials for evacuation. The resources were there; the leadership was not. Evacuation came only after an unnecessary purgatory of unspeakable conditions.

So long as the governments of the United States, Louisiana and New Orleans are unable to protect citizens of the New Orleans area from over-spilling and breached levees, it makes little sense to rebuild in the areas below sea level. Residents cannot afford to go through another such nightmare. Moreover, it would be unfair to ask the nation's taxpayers to finance the rebuild of such a "house of cards."

There is also a "chicken and egg" problem. Few households would want to be the first to begin rebuilding unless there is clear indication that others in the neighborhood are going to rebuild. Getting the critical mass of people willing to return to the neighborhoods will not be easy. These will not be urban pioneers, because the government floods destroyed what was urban. Most schools remain closed, most businesses have not reopened and rule of law appears to be short of achievement. The state of Louisiana is now deploying National Guard troops to augment the New Orleans police force, which Brinkley rightly criticizes for its role during the early days of the flood. There are reports that newly installed equipment and features are being stolen from houses as they undergo refurbishment.

The lesson of New Orleans is people must take care of themselves, because they cannot rely with assurance on government. And, 6,000-page apologies do not make things any better.

### **A Side Trip to the Mississippi Gulf Coast**

In contrast to the New Orleans area, the devastation along the Gulf Coast was caused by Katrina, not government. The storm surge simply came ashore and washed away the first few blocks of settlement all along the coast. This could only have been avoided by not building there, which may be a good idea. A bit further inland, there was substantial wind damage and much of it is still evident. But, there is much rebuilding going on.

## **APPENDIX: NATIONAL WEATHER SERVICE WARNING**

Day Before Hurricane Katrina (August 28, 2005, 10:11 AM Central Daylight Time)

[http://www.srh.noaa.gov/data/warn\\_archive/LIX/NPW/0828\\_155101.txt](http://www.srh.noaa.gov/data/warn_archive/LIX/NPW/0828_155101.txt)

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WWUS74 KLIX 281550  
NPWLIX

URGENT - WEATHER MESSAGE  
NATIONAL WEATHER SERVICE NEW ORLEANS LA  
1011 AM CDT SUN AUG 28 2005

...DEVASTATING DAMAGE EXPECTED...

.HURRICANE KATRINA...A MOST POWERFUL HURRICANE WITH UNPRECEDENTED STRENGTH...RIVALING THE INTENSITY OF HURRICANE CAMILLE OF 1969.

MOST OF THE AREA WILL BE UNINHABITABLE FOR WEEKS...PERHAPS LONGER. AT LEAST ONE HALF OF WELL CONSTRUCTED HOMES WILL HAVE ROOF AND WALL FAILURE. ALL GABLED ROOFS WILL FAIL...LEAVING THOSE HOMES SEVERELY DAMAGED OR DESTROYED.

THE MAJORITY OF INDUSTRIAL BUILDINGS WILL BECOME NON FUNCTIONAL. PARTIAL TO COMPLETE WALL AND ROOF FAILURE IS EXPECTED. ALL WOOD FRAMED LOW RISING APARTMENT BUILDINGS WILL BE DESTROYED. CONCRETE BLOCK LOW RISE APARTMENTS WILL SUSTAIN MAJOR DAMAGE...INCLUDING SOME WALL AND ROOF FAILURE.

HIGH RISE OFFICE AND APARTMENT BUILDINGS WILL SWAY DANGEROUSLY...A FEW TO THE POINT OF TOTAL COLLAPSE. ALL WINDOWS WILL BLOW OUT.

AIRBORNE DEBRIS WILL BE WIDESPREAD...AND MAY INCLUDE HEAVY ITEMS SUCH AS HOUSEHOLD APPLIANCES AND EVEN LIGHT VEHICLES. SPORT UTILITY VEHICLES AND LIGHT TRUCKS WILL BE MOVED. THE BLOWN DEBRIS WILL CREATE ADDITIONAL DESTRUCTION. PERSONS...PETS...AND LIVESTOCK EXPOSED TO THE WINDS WILL FACE CERTAIN DEATH IF STRUCK.

POWER OUTAGES WILL LAST FOR WEEKS...AS MOST POWER POLES WILL BE DOWN AND TRANSFORMERS DESTROYED. WATER SHORTAGES WILL MAKE HUMAN SUFFERING INCREDIBLE BY MODERN STANDARDS.

THE VAST MAJORITY OF NATIVE TREES WILL BE SNAPPED OR UPROOTED. ONLY THE HEARTIEST WILL REMAIN STANDING...BUT BE TOTALLY DEFOLIATED. FEW CROPS WILL REMAIN. LIVESTOCK LEFT EXPOSED TO THE WINDS WILL BE KILLED.

AN INLAND HURRICANE WIND WARNING IS ISSUED WHEN SUSTAINED WINDS NEAR HURRICANE FORCE...OR FREQUENT GUSTS AT OR ABOVE HURRICANE FORCE...ARE CERTAIN WITHIN THE NEXT 12 TO 24 HOURS.

ONCE TROPICAL STORM AND HURRICANE FORCE WINDS ONSET...DO NOT VENTURE OUTSIDE!

## URBAN TOURS BY RENTAL CAR: ABOUT THE SERIES

*Urban Tours by Rental Car* offers perspectives on urban development obtained by automobile tours through urban areas. Rental cars are not the favored method for visiting cities, especially those outside one's own country. Instead, tourists and urban planners favor packaged tours or local public transport systems. Both are splendid ways for seeing the city as it used to be --- the very reason for most tourist visits. The historical core areas contain monuments, prime government and religious edifices and quaint neighborhoods that are often centuries old. This is particularly important to tourists from the newer urban areas of the American, Canadian or Australian West, where history extends not far before World War II. It is further understandable that few tourists travel thousands of miles to see the newer suburban areas that look very much like home. But most tourists do not profess to be students of the urban area.

For the urban planner interested in understanding the whole urban area, it is not enough to study the core alone, regardless of its architectural attractiveness, romanticism, history or affirmation of an individually preferred life style. No one, regardless of the depth of their education can develop reliable conceptions from an unrepresentative sample, and urban cores are the very essence of unrepresentative samples. Both public transport and packaged tours miss the larger part --- the expanse of sprawling residential and business development that rings virtually all major urban areas. They may be of little interest to many urban planners, but they should be.

Stripping away regional architectural facades, one might as well be in the suburbs of Phoenix, Portland, Perth or Paris. Here, the automobile is king, because no public transport system has been developed that can effectively serve destinations outside the core (at least at a price any society can afford). While public transport market shares are higher in European suburban areas than in the New World, much of the difference is attributable to lower incomes and less automobile access. Indeed, public transport's principal weakness, lack of automobile competitiveness, is itself a contributing factor to the rising motorization occurring from the suburbs of Copenhagen and Nagoya to the suburbs of Lagos and Mumbai. To oversimplify this phenomenon as being a "love affair with the automobile" is the equivalent of saying that Singaporeans or Brazilians have a love affair with air conditioning. Human beings prefer comfort to discomfort and they prefer free time to time over which they have no control.

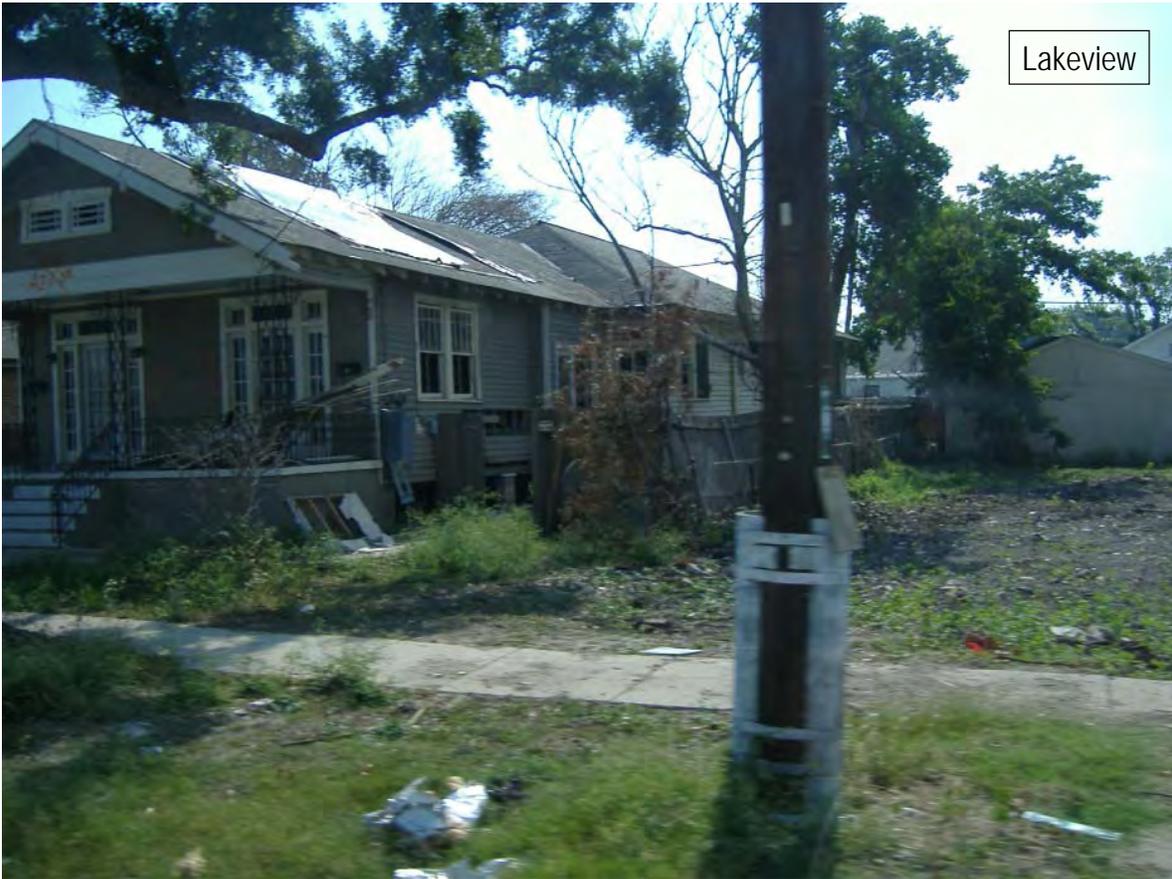
It is no wonder that tourists return to the United States thinking that all Paris looks like the second arrondissement (less than one percent does) and that urban planners think all of Milan looks like the architectural treasures that surround the Cathedral. In fact, the sprawling suburbs of Europe, Japan, Canada and Connecticut resemble one another in many ways. For any seeking to study the urban area in its entirety --- not just the favored haunts of core-dwelling elites --- there is no alternative to "getting behind the wheel." Thus, "urban tours by rental car."

<http://www.rentalcartours.net>

<http://www.demographia.com>

<http://www.publicpurpose.com>





Lakeview



Lakeview



Lakeview



Lakeview

Lakeview



Lakeview



Lakeview



Lakeview





Lakeview



Lakeview

Lakeview: Escape Hatch Cut in Roof



Lakeview: Escape Hatch Cut in Roof





Lakeview: Greek Orthodox Cathedral Fully Restored



Shopping Center: Lakeview



Industrial Canal



Lake Pontchartrain



Lake Pontchartrain



Boat Housing at Lake Pontchartrain

Lower 9<sup>th</sup> Ward



Lower 9<sup>th</sup> Ward



Lower 9<sup>th</sup> Ward



Lower 9<sup>th</sup> Ward



Lower 9<sup>th</sup> Ward



Lower 9<sup>th</sup> Ward



St. Bernard Parish



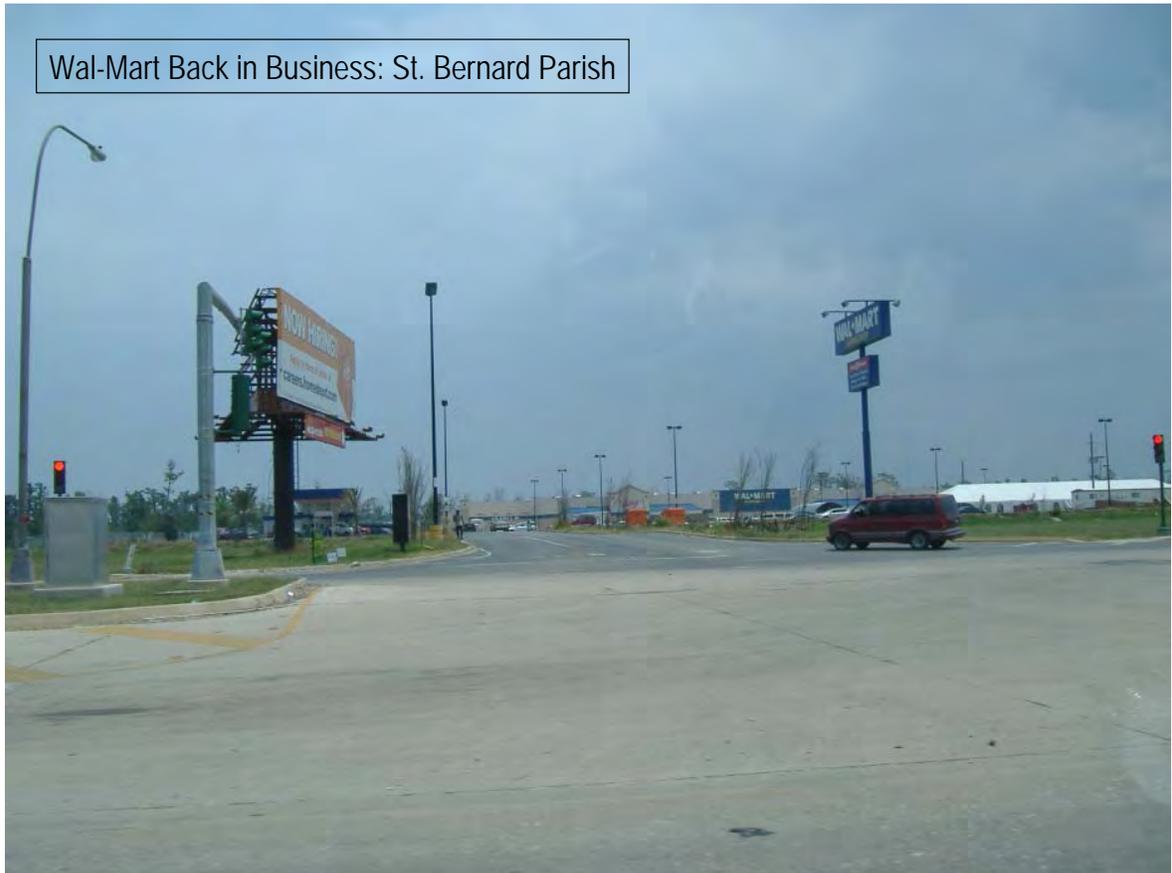
St. Bernard Parish



Home Depot Back in Business: St. Bernard Parish



Wal-Mart Back in Business: St. Bernard Parish





St. Bernard Parish



St. Bernard Parish

St. Bernard Parish



Shopping Center: St. Bernard Parish



Temporary Living Quarters: St. Bernard Parish

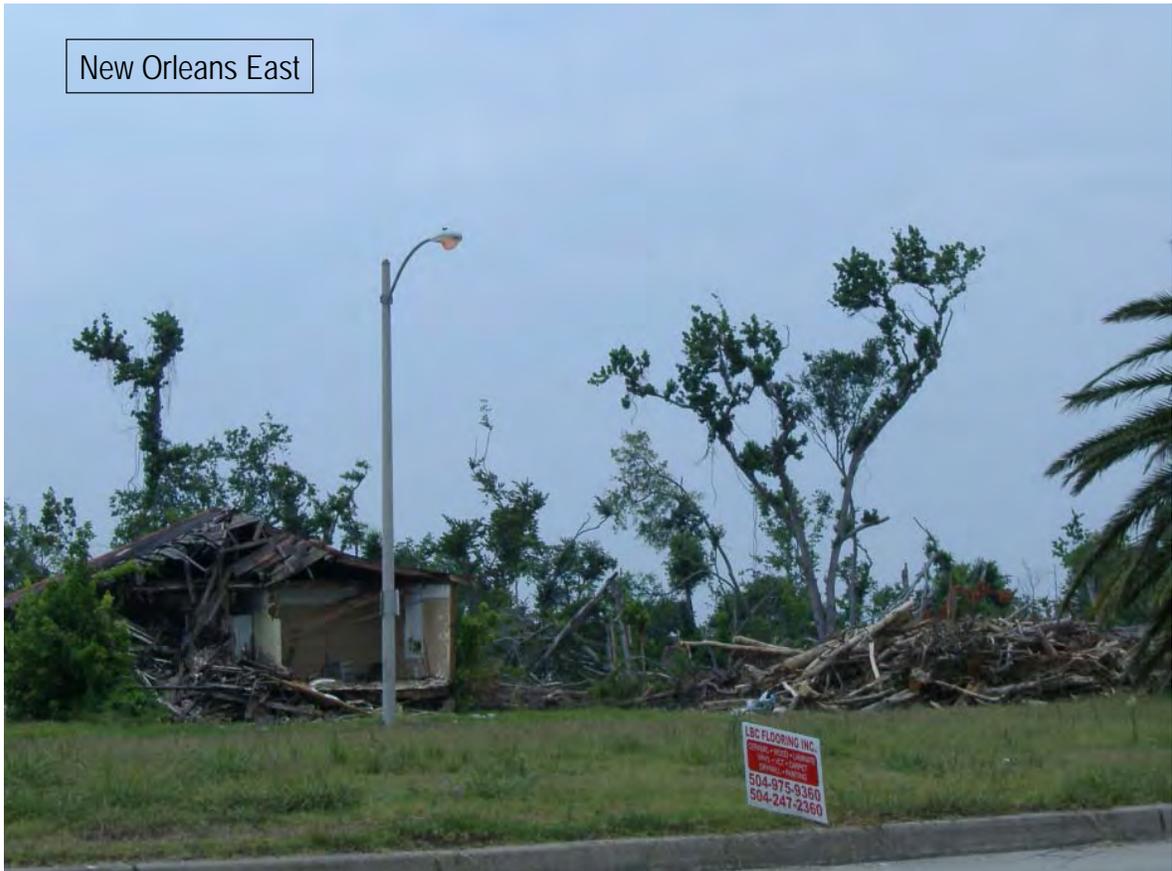


St. Mary's Episcopal Church  
St. Bernard Parish

St. Mary's Episcopal Church  
St. Bernard Parish



New Orleans East



New Orleans East



New Orleans East

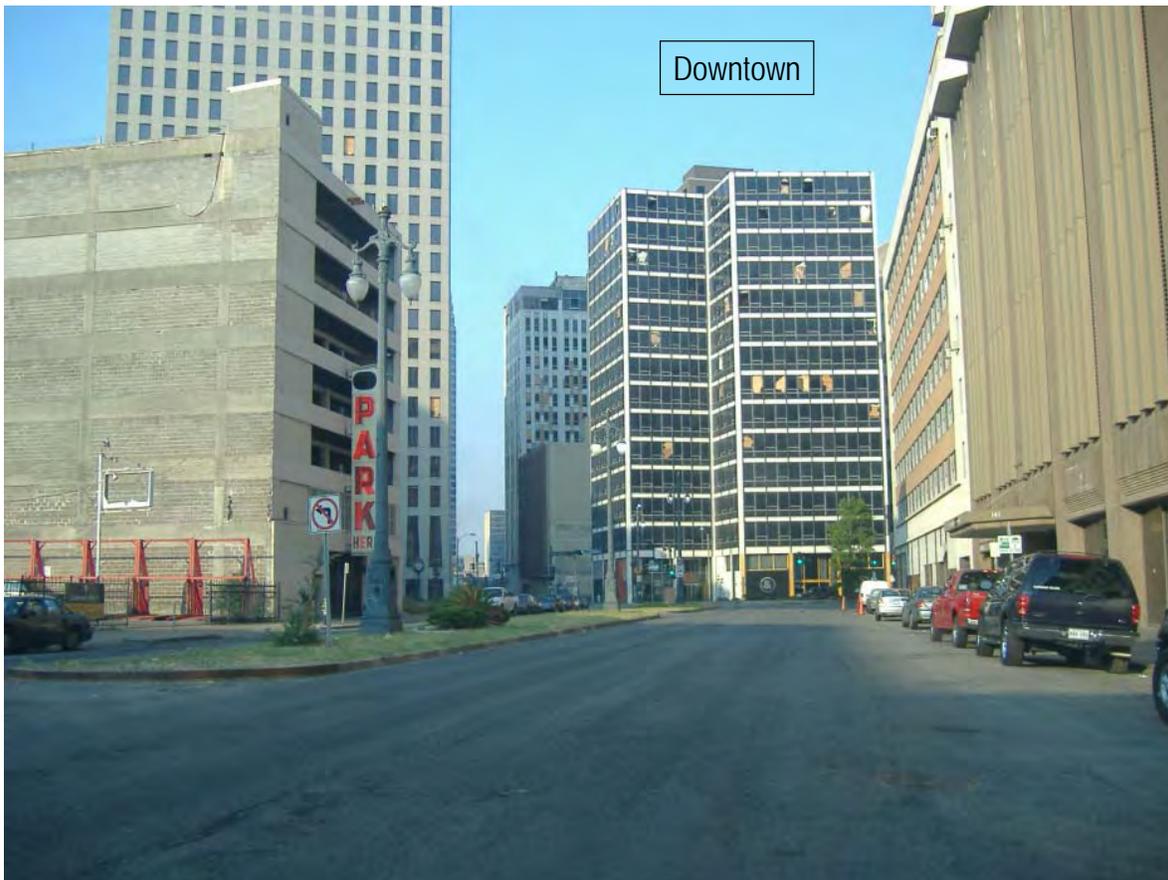


New Orleans East



New Orleans East







Downtown



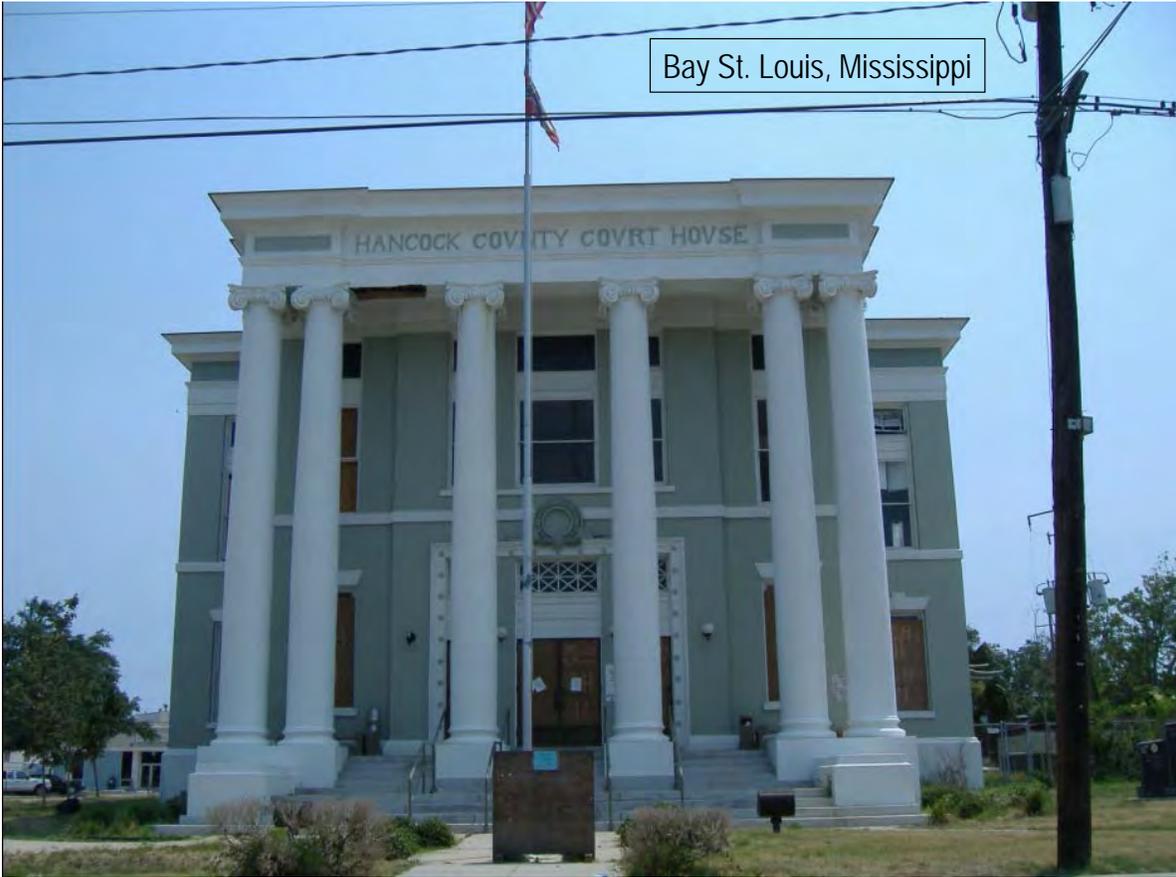
St. Louis Cathedral: French Quarter

Tour Bus



Riverfront Tourist Trolley





Bay St. Louis, Mississippi



Rebuilt CSX Bridge  
Bay St. Louis, Mississippi

Waveland, Mississippi



Waveland, Mississippi



Waveland, Mississippi



Waveland, Mississippi

