NEW ORLEANS PUBLIC SCHOOLS FACILITIES MASTER PLAN DEMOGRAPHIC UPDATE

Population and Public School Enrollment Forecasts

GCR & Associates, Inc. , January 2011

CONTENTS

Introduction……..…..…….1

Summary of Population Trends and Forecasts in the City of New Orleans……2

Summary of Student Enrollment Trends and Forecasts……..4

Methodology for Small-Area Population and Enrollment Forecasts……..……..5

Current Population Estimates…..……..6

Neighborhood Population Forecasts……..7

Translating Neighborhood Population Projections to School Site Catchment Areas……..……...21

Estimating and Forecasting Student Enrollment…..……22

Conclusion……...…….24

Appendix A: Summary of Citywide Population and Enrollment Trends

Appendix B: Map of New Orleans Neighborhoods

Appendix C: New Orleans Neighborhood Population Estimates and Forecasts

Appendix D: New Orleans Neighborhood Student Enrollment Estimates and Forecasts

Appendix E: School Site Catchment Area Population Estimates and Forecasts

Appendix F: School Site Catchment Area Enrollment Estimates and Forecasts

Appendix G: Percentage of Pre-Katrina Population Returned by Neighborhood

Appendix H: Current Distribution of Enrolled Students

Appendix I: Projected Population and Enrollment Change, 2010-2012

Appendix J: Projected Population and Enrollment Change, 2010-2016

Appendix K: Projected Population and Enrollment Change, 2010-2020

Introduction

GCR & Associates, Inc. (GCR) was retained by the Orleans Parish School Board (OPSB) and the Recovery School District (RSD) to prepare forecasts of public school enrollment for a ten-year period. These forecasts are a critical component of administrators' efforts to continuously update the School Facilities Master Plan developed in 2007-2008, which serves as the guiding document for scheduling school construction, renovation, occupation, and large-scale maintenance efforts throughout the city.

As a local demographic, economic, urban planning, and technology consulting firm, GCR has been assisting local and regional public agencies with a wide variety of recovery initiatives since the 2005 hurricanes. The firm's population analysis has been used extensively in all post-Katrina recovery planning efforts (Lambert Neighborhood Plans, the Unified New Orleans Plan, and the New Orleans Master Plan), as well as by the New Orleans Sewerage and Water Board, the New Orleans Criminal District Court, the Regional Transit Authority, the New Orleans City Council, the Orleans Parish School Board and Recovery School Districts, and many other local public agencies in the New Orleans metropolitan area. Likewise, we have partnered with many non-profit and private entities to further their understanding of the post-Katrina demographic landscape in and around New Orleans, and have been widely cited in local and national media outlets relative to post-storm conditions.

To place this report and its contents into context, it is important to note that GCR's agreement with the OPSB and RSD involves semi-annual updates to this data. Perhaps most importantly, these estimates and forecasts will be updated in the spring of 2011, when data from the 2010 Census becomes available at the block level.

The figures prepared by GCR have been calculated for two distinct geographical areas. First, GCR developed current estimates and forecasts for each of the city's seventy-four distinct neighborhoods.[1] Secondly, this data was disaggregated to "catchment areas," defined as city blocks falling completely or partially within a 0.5-mile radius from existing and potential school sites as directed by the RSD and OPSB. For each of these geographies, GCR prepared a range of population forecasts and corresponding projections for the number of students enrolled in grades PK-5, 6-8, and 9-12.[2]

This report outlines the GCR's methodological approach in calculating the current and future population and enrollment throughout the city of New Orleans. It includes summary tables and charts throughout the body of the report as well as appendices containing all small-area data.

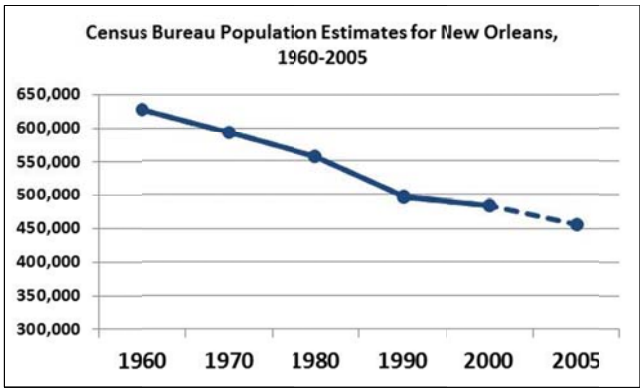
[1] The neighborhood definitions used for this study are the official city definitions. They may differ somewhat from colloquial neighborhood definitions, but are consistent with those used throughout recovery planning processes, including the 2007-2008 School Facilities Master Plan.
[2] For the purposes of this analysis, the PK-5 grade group also includes students classified as enrolled as infants and/or in pre-school grades as listed in reports submitted to the Louisiana Department of Education.

Summary of Population Trends and Forecasts in the City of New Orleans

While a long-term historical analysis of New Orleans' population is somewhat beyond the scope of this study, it is helpful to understand GCR's current and future population estimates within the context of both pre-Katrina and post-Katrina population trends. In 1960, the city had a population of 627,525, a figure that declined steadily throughout the subsequent forty years. The decline was most precipitous following the oil bust of the 1980s, a decade that saw city's population drop by over 60,000 residents, or nearly 11%. The city lost approximately 12,000 residents throughout the 1990s, and by the 2000 Census New Orleans had a reported population of 484,674.

The estimate released by the U.S. Census Bureau's American Community Survey (ACS) suggested that immediately prior to Katrina, New Orleans had a population of 455,576 residents, a reduction of nearly 30,000 residents in a five-year period. While the decennial census estimates are derived from an aggressive count of all households and group quarters throughout the entire city, however, the ACS estimates population primarily based on migration statistics published by the Internal Revenue Service as well as birth and death records maintained by local and state governments.

The 2005 ACS estimate poses two complicated issues. First, it is difficult to imagine that, between 2000 and 2005, the city had lost 2.5 times the number of residents as it had in the previous decade. Secondly, the estimate was published only at an aggregate citywide level, making it difficult to determine the shifts in population at a neighborhood level. Nevertheless, the ACS estimate is the official population of record, and it serves as the baseline against which post-Katrina population figures are measured.



In the five years since Hurricane Katrina, GCR has carefully studied repopulation throughout the city using residential occupancy indicators including active utility accounts, active postal delivery accounts, active Sewerage and Water Board accounts, active sanitation accounts, and voter registration and participation. Using this data, GCR has developed an "activity index" for each block throughout the city to measure population compared to 2005 estimates. As of September 2010, this index suggested that the population of the city was 353,162, or 78% of its pre-Katrina level. An expanded discussion of this methodology is provided in subsequent sections of this report.

Using the activity index, GCR has developed population estimates and has applied these estimates to forecast New Orleans' population on an ongoing basis. For the purposes of this project, GCR developed population forecasts for the Fall 2012, Fall 2016, and Fall 2020 periods. Because future population growth is contingent on a number of

variables—including broader economic conditions, the success of local private real estate investment, continued redevelopment of major public housing complexes, etc.—that are somewhat unpredictable, we have expressed our forecasts as a range consisting of three scenarios: High, Moderate, and Low.

The forecasts reflected in the table below were derived from projections calculated for each of the city's seventy-four neighborhoods. A fuller description of this process is contained in the "Methodology for Small-Area Population Forecasts" section of this report. Generally speaking, however, the scenarios can be summarized as follows:

- "High Scenario": Neighborhoods which have experienced population growth over the past two years will continue to attract residents at an aggressive rates, and neighborhoods that have reached or exceeded their pre-Katrina population will continue to experience some modest growth through infill development, the rehabilitation and occupancy of blighted or vacant properties, and some new construction. Most of the proposed new, publicly-announced major residential projects—whether publicly-subsidized or privately-financed—will come to fruition at their intended scale and timetable. Under this scenario, GCR envisions that the population of the city will be approximately 382,000 in 2012, 423,000 in 2016, and 450,000 in 2020.
- "Moderate Scenario": Growth in neighborhood which have experienced significant increases in population over the past two years will continue, but at a somewhat slower rate, while the population in neighborhoods which have reached or exceeded their pre-Katrina capacity will remain at approximately their current levels. Some of the proposed new, publicly-announced major residential projects—whether publicly-subsidized or privately-financed—will come to fruition, but at a somewhat smaller scale and perhaps with a delayed timetable. Under this scenario, GCR envisions that the population of the city will be approximately 370,600 in 2012, 399,400 in 2016, and 423,200 in 2020.
- "Low Scenario": Population increases will slow significantly, even in neighborhoods which have experienced substantial growth over the past two years. In neighborhoods which have reached or exceeded their pre-Katrina capacity, the population will remain approximately at its current level. A relatively few number of proposed new publicly-announced major residential projects—whether publicly-subsidized or privately-financed—will come to fruition at their anticipated scale or timetable. Under this scenario, GCR envisions that the population of the city will be approximately 360,000 in 2012, 377,000 in 2016, and 397,000 in 2020.

GCR has developed the following estimates for the future population of the city of New Orleans:

PAST ESTIMATES		GCR POPULATION FORECASTS			
			High Scenario	*Moderate Scenario*	*Low Scenario*
Spring 2005	455,576	Fall 2012	381,848	370,347	361,190
Fall 2010	353,162	Fall 2016	423,032	399,217	377,295
		Fall 2020	451,344	423,200	397,091

GCR developed forecasts for the 2007-2008 Schools Facility Master Plan with the same arrangement of scenarios. A comparison of updated data to our previous forecasts reveals that population and enrollment growth has tended to reflect—and even slightly exceed—the "High Scenario." While, in theory, each of these scenarios is equally likely, we recommend that users of these forecasts regard the range between the "Moderate" and "High" scenarios as the most probable conditions for the period forecasted.

Summary of Student Enrollment Trends and Forecasts

Since Hurricane Katrina, the composition of the public school system has changed dramatically in New Orleans. Whereas before the storm, nearly all public schools in the city were operated by the Orleans Parish School Board, governance is currently shared by the OPSB and the state-run Recovery School District. Likewise, a majority of students currently attend charter schools rather than those operated directly by the OPSB or RSD. And finally, a central tenet of the restructured system allows parents and students an unprecedented level of choice in the schools they attend.

From a demographic perspective, two important dynamics have emerged in post-Katrina New Orleans relative to school enrollment. The first is that a smaller percentage of the city's overall population is enrolled in public school than before the storm. Whereas in 2003, the city had 69,130 students in public school—about 14.8% of the total estimated population—the 2010 enrollment of 40,263 is 11.4% of the population. This is likely symptomatic of minor but perceptible shifts in the city's overall demographic composition.

A second dynamic, a result of the school system's open enrollment policy, is that the network of students attending various schools is remarkably diffuse. This year, only 13% of students attend school in the neighborhood in which they reside. Even fewer—about 10%--live within half a mile from their school site. Both of these important dynamics were carefully considered while calculating enrollment estimates and forecasts.

In the fall of 2004, public schools in Orleans Parish had a total of 67,365 enrolled students.[3] The most recent report, for the fall of 2010, indicates that the current system-wide enrollment is 40,263, or 60% of the 2004 figure. Enrollment has continued to

[3] This figure, and any such figure cited as "total enrollment," constitutes total enrollment of all public schools in Orleans Parish, including schools governed by state-run agencies such as the Board of Secondary Education (for example, Milestone SABIS Academy and the International School of Louisiana), and the Recovery School District. The figures are taken from site-level enrollment reports published by the Louisiana Department of Education.

grow demonstrably each year since Katrina; the increase from 2008-2010 was nearly 4,000 students. In fact, this growth has outpaced even the most optimistic projections developed for the 2007-2008 Schools Facilities Master Plan. The current enrollment totals for 2010 are 2,000 students higher than the "High Scenario" for the 2010 school year forecast in the Master Plan.

These updated forecasts prepared by GCR indicate that the city's public school enrollment is likely to grow steadily over the course of the next ten years. In the fall of 2012, we anticipate that between roughly 42,500 and 44,000 students will be enrolled in New Orleans public schools. By 2020, this figure is likely to be between 49,000 and 53,000. School officials should plan for a system that is able to accommodate approximately 1,000 new students per year over the course of the next ten years.

The overall forecasts for the number of public school students enrolled throughout the city of New Orleans are as follows:

PAST ESTIMATES		GCR POPULATION FORECASTS			
			High Scenario	*Moderate Scenario*	*Low Scenario*
Fall 2004	67,365	Fall 2012	44,022	42,481	41,193
Fall 2010	40,263	Fall 2016	49,342	46,206	43,252
		Fall 2020	53,001	49,457	45,812

GCR's study provides enrollment forecasts for each neighborhood and site catchment area. These forecasts are provided by grade group, by geographical reporting unit (neighborhood and catchment area), and by scenario, for the fall terms of the 2012-2013, 2016-2017, and 2020-2021 school years, in Appendices C and E.

GCR studied enrollment from an "origin-based" perspective, meaning we have analyzed and forecasted the number of students based on where they are likely to live (as opposed to where they are likely to attend school). OPSB and RSD officials will use these estimates as a basis for developing recommendations for facility planning, a process that involves multiple levels of approval and constant public input. A full description of GCR's methodology is provided throughout this report.

Methodology for Small-Area Population and Enrollment Forecasts

For this study, GCR analyzed population and demographic trends in each of New Orleans' seventy-four neighborhoods. Neighborhoods throughout the city vary widely in their histories, their residential building stocks, their socioeconomic profiles, their proximity to major employment centers, and their impacts from Hurricane Katrina. Accordingly, the development of population forecasts required careful consideration of several important factors for each neighborhood, including:

- The size of its pre-Katrina population
- The extent to which the pre-Katrina population has returned
- The growth or decline in population occurring over the past two years (September 2008-September 2010)

- The average household size, as reported in the 2000 Census
- The estimated number of units that were occupied before Katrina but which are currently vacant
- The presence of large group quarters (college dormitories, the Orleans Parish Prison, major elderly care facilities, etc.)
- The presence of public housing complexes
- The presence of large proposed residential development projects

GCR analyzed each of these data points for every neighborhood to determine the appropriate methodological approach for estimating its current and future population. The remainder of this section describes how GCR develops our population estimates and uses current and historic data to forecast population growth within each neighborhood.

CURRENT POPULATION ESTIMATES

Throughout the post-Katrina period, GCR has maintained an extensive inventory of property-level data, including active utility accounts, active U.S. postal accounts, active sanitation accounts, voter registration and participation, and others. For most of these data sets, we are able to compare current trends with pre-Katrina trends. This comparison has served as the foundation of GCR's "Activity Index," a copyrighted algorithm which essentially estimates residential occupancy compared to a pre-Katrina baseline. Because we have maintained this database over time, we have been able to quantify repopulation activity throughout the city since the storm. Furthermore, since this data is recorded at the individual property level, we are able to aggregate data into customized reporting units; therefore, we can report repopulation among block groups, neighborhoods, City Council districts, ZIP codes, etc.

While the Activity Index allows GCR to develop population estimates for nearly every block in the city, some blocks require special consideration. These "exception blocks" consist primarily of blocks housing large institutions whose population is not accurately captured through the indicators comprising the Activity Index.

For example, on a typical New Orleans block consisting of single-family homes, duplexes, triplexes, etc., the Activity Index measures how many units are currently occupied as a percentage of the number of occupied units prior to Katrina. We then multiply that percentage by the number of estimated pre-storm residents to calculate the current population of that particular block. This calculation assumes, of course, that the residential profile of the block has not changed dramatically, and that a household that is occupied in 2010 is relatively similar in size to the one occupied in 2005.

The relationship between residential occupancy indicators and population, however, does not hold true for every block in the city. Consider, for example, the Orleans Parish Prison, whose inmates are counted as residents. The prison has the same number of residential occupancy indicators (one master utility account, for instance) as it did prior to Hurricane Katrina. But the number of inmates is drastically different—approximately

80% of its pre-Katrina level—and indicating that the population of that block is comparable today to what it was prior to Katrina is inaccurate.

This relationship is also complicated in public housing complexes, college dormitories, major elderly care facilities, Federal City, and the like. Therefore, GCR developed an inventory of properties whose population needed to be estimated individually. In these instances, we obtained estimates about the population of various facilities from as reliable a source as possible:

- For the population of Orleans Parish Prison, GCR consulted the *Orleans Parish Prison Ten-Year Population Projection* report authored by the JFA institute in November 2010
- For the current population and development schedule within public housing complexes, GCR consulted HANO and representatives from individual development teams. We also consulted articles published in the *Times-Picayune* in some instances.
- For the population of university dormitories, we consulted university officials and enrollment figures cited in local and national media outlets and university websites
- For other major residential projects—most notably Federal City—we consulted individual development teams and *Times-Picayune* articles.

Using data from the Activity Index and the resources listed above, GCR estimates that the population of the city as of September 2010 was 353,162, or 78% of its pre-Katrina level.[4] According to our estimates, the city has grown by approximately 20,000 residents since September 2008. As the section below indicates, GCR anticipates that this robust growth will continue over the course of the next several years.

As stated in the introduction to this report, GCR will be updating its forecasts for both population and student enrollment upon the release of data from the 2010 Census. This data will become available in February 2010.

NEIGHBORHOOD POPULATION FORECASTS

Predicting the future population of neighborhoods in New Orleans is not a "one-size-fits-all" exercise. The exercise rests on the development of information and assumptions which combine historical data, logic, intuition, and familiarity with the local area. Population change is dependent upon a number of factors which vary among neighborhoods, and GCR's judgment about the appropriate methodology for neighborhoods rested on determining which key characteristics are similar and different among them.

In developing our forecasts, GCR divided neighborhoods into two distinct categories: "regular" and "exception." The designation and treatment as a "regular" neighborhood

[4] Notably, this estimate is very similar to recent estimates published by the U.S. Census Bureau's American Community Survey as well as by ESRI, a leading supplier of demographic and market research data.

indicates that, by and large, the Activity Index was able to measure the past and current population of the city in a reasonably comprehensive manner. Generally, these neighborhoods have a traditional mix of single-family and small multi-family homes as their primary building stock.

Most of New Orleans' neighborhoods are classified as "regular." This classification, of course, does not imply that their cultural, socio-economic, or historic profiles are homogenous. It simply suggests that their inventory of housing is successfully measured by the Activity Index. Below is a list of these fifty-one neighborhoods:

"Regular" Neighborhoods

Algiers Point	Freret	Pines Village
Algiers Whitney	Garden District	Plum Orchard
Aurora/Walnut Bend/Huntlee Village	Gentilly Terrace	Pontchartrain Park
Bayou St. John	Hollygrove	Read Boulevard East
Behrman	Holy Cross	Read Boulevard West A
Black Pearl	Irish Channel	River Park/Cut Off/Lower Coast
Broadmoor	Lake Vista	Seventh Ward
Bywater	Lakeshore	St. Anthony
City Park	Lakeview	St. Claude
Country Club Gardens	Lakewood	St. Roch
Country Club/Dixon A	Leonidas/West Carrollton	St. Thomas Area/Lower Garden District
Desire Area	Marigny	Tall Timbers/Brechtel
East Carrollton	Marylville/Fountainebleau	Touro
East Riverside	McDonogh	Uptown
Fairgrounds/Broad	Milan	Viavant/Venitian Isles
Fillmore	Milneburg	Vieux Carre
Florida Area	Parkview	West Riverside

As stated above, the defining characteristic of these "regular" neighborhoods was the ability to credibly estimate their population using GCR's Activity Index. But clearly there are many differences among them, including the impact of Hurricane Katrina, the rate of population growth since the storm, the size of the average household, and others. To account for these differences, GCR organized these neighborhoods into categories based on two criteria. First, we analyzed the percentage of pre-Katrina residents who have returned, and secondly, we analyzed the population change over the past year (between September 2009 and September 2010. After establishing these categories, we developed the growth scenarios, which are described below.

The first category of "regular" neighborhoods were those which have recovered between 80% and 100% of their pre-Katrina population (as of September 2010) and which have experienced population growth over the past year. This was by far the most typical profile for the "regular" neighborhoods, with twenty-five neighborhoods fitting into this category. These neighborhoods are as follows: Algiers Whitney, Bayou St. John, Black Pearl, Bywater, City Park, Country Club Gardens, Country Club/Dixon A, East Carrollton, East Riverside, Fairgrounds/Broad, Gentilly Terrace, Irish Channel, Lake Vista, Lakeshore, Leonidas/West Carrollton, Marigny, Marylville/Fountainebleau,

Milan, Parkview, Read Boulevard East, River Park/Cut Off/Lower Coast, Tall Timbers/Brechtel, Uptown, Vieux Carre, and West Riverside.

For these neighborhoods, we developed the following assumptions for the high and low scenarios.

- Under the High Scenario, these neighborhoods would absorb the capacity of units that have been vacant since Katrina by 2015. After that point, they would grow at a rate comparable to half of the average rate of growth among this classification of neighborhoods until 2020. This 2015-2020 rate was taken by examining the rate of growth between 2009 and 2010 in each of these twenty-five neighborhoods; the average rate was approximately 2%. Since there will be less housing supply available after 2015, GCR assumed that growth could well continue, but would occur at half of its current rate, or about 1% per year. The selection of this rate is, naturally, somewhat arbitrary, but we believe it constitutes a reasonable and fundamentally conservative assumption.
- Under the Low Scenario, we have assumed that neighborhoods fitting this profile will not exceed their pre-Katrina population before 2020. They will continue to grow at a slow rate in the interim, but the population will level off at its pre-Katrina level.
- The Moderate Scenario reflects the average of the High and Low Scenarios. Since the High Scenario represents the "ceiling" of anticipated growth, and the Low Scenario the "floor," is it reasonable to suggest that the most likely rate of growth will be somewhere between the two.[5]

The second category of "regular" neighborhood are those which have likewise recovered between 80% and 100% of their pre-Katrina population but which have experienced population decline in the past year. The neighborhoods falling into this profile are relatively few and are generally those which experienced little to no Katrina-related flooding and have attracted high percentages of their pre-Katrina residents. They include Aurora/Walnut Bend/Huntlee Village, Behrman, the Garden District, McDonogh, St. Thomas Area/Lower Garden District, and Touro.

For these neighborhoods, GCR developed the following assumptions for the high and low scenarios:

- Under the High Scenario, these neighborhoods would absorb half of the units which have remained vacant since Katrina by 2020. In the interim years, they will experience linear growth.
- Under the Low Scenario, these neighborhoods would continue to lose population at the same rate as in the 2009-2010 period, but would begin to grow

[5] As a general rule, the size of the range between the High and Low Scenarios is proportional to the percentage of pre-Katrina residents who have returned to a neighborhood. For example, the difference between the High and Low Scenarios is greater in a neighborhood in which 80% of residents have returned than in one in which 95% of residents have returned. This is a result of the fact that the number of vacant units in the more populated neighborhood is much smaller, and therefore the rate of repopulation is somewhat more predictable.

thereafter, such that they would absorb half of the units which have remained vacant since Katrina by 2020.

- The Moderate Scenario reflects the average of the High and Low Scenarios.

While these neighborhoods have many characteristics that are different among them, they all have a strong recovery profile, a record of demonstrable growth in the past year, and the ability to absorb additional residents.[6]

The third category of "regular" neighborhood were neighborhoods which currently have over 100% of their pre-Katrina population and which have experienced population growth in the last year. Only Algiers Point met these criteria, and scenarios for this neighborhood were developed as follows:

- Under the High Scenario, Algiers Point would continue to experience the same absolute growth of 28 estimated residents per year through 2020, bringing its population from 2,267 in 2010 to 2,545 in 2020.
- Under the Low Scenario, Algiers Point would continue to experience growth, but at a more modest pace compared to the 2009-2010 period. GCR has assumed that the growth would be cut in half through 2012, reduced to 25% of the 2009-2010 period through 2017, and then stabilize thereafter. The population in 2020 would be 2,330—about seventy residents more than are in the neighborhood today. Here again, the reduction of the rate is somewhat arbitrary, but represents continued but slower growth throughout this period.
- The Moderate Scenario reflects the average of the High and Low Scenarios.

The final category of "regular" neighborhoods consist of those which have fewer than 80% of their pre-Katrina residents. Predictably, these are the neighborhoods which experienced the most widespread and devastating flooding after Hurricane Katrina. These nineteen neighborhoods are:

- Broadmoor, Desire Area, Fillmore, Florida Area, Freret, Hollygrove, Holy Cross, Lakeview, Lakewood, Milneburg, Pines Village, Plum Orchard, Pontchartrain Park, Read Boulevard West A, Seventh Ward, St. Anthony, St. Claude, St. Roch, and Viavant/Venetian Isles.

Clearly, the future population levels of these neighborhoods are the least predictable, and depend a great deal on major public and private reinvestment, successful public policy, flood insurance rates, broader economic conditions, construction costs, and the like. Although for the purposes of this report, GCR has treated them similarly from an algorithmic standpoint, the recovery of these neighborhoods will likely be complicated and uneven.

[6] The ability to absorb new residents is a function of the fact that even in the most densely-populated neighborhoods in the city prior to Katrina, there were a fair number of vacant housing units reported by the 2000 Census. Although it is unrealistic to ever anticipate that the vacancy rate in an area will become 0%, it is reasonable to assume that the presence of vacant units represents some degree of slack within the housing market in a particular neighborhood. So even a neighborhood with 99% of its pre-Katrina population can grow; the pre-Katrina population is hardly a "ceiling" for population levels.

- Under the High Scenario, GCR anticipates that these neighborhoods will absorb half of the units which have remained vacant since Katrina by 2020. In the interim years, their growth will be linear.
- Under the Low Scenario, these neighborhoods will absorb only 25% of the units which have remained vacant since Katrina by 2020. As in the High Scenario, their growth will be linear in the interim years.
- The Moderate Scenario reflects the average of the High and Low Scenarios.

Altogether, these "regular" neighborhoods currently house an estimated 220,504 residents. Under the High Scenario, they will grow to approximately 260,893 residents by 2020, and under the Moderate and Low Scenarios, they will have 249,140 and 237,386 residents, respectively.

"Exception" neighborhoods are neighborhoods which have unique large properties or characteristics whose populations could not be adequately measured by the Activity Index alone. These include neighborhoods containing universities, public housing complexes, significant numbers of large apartment complexes, a substantial inventory of large proposed projects, the Orleans Parish Prison, etc. Throughout the course of this study, GCR conducted supplementary research to determine population levels within these areas, including media reports, Census data analysis, and contacts with personnel on development teams or facility staffs.

The twenty-three "exception" neighborhoods are listed below:

"Exception" Neighborhoods

Neighborhood	Unique Considerations
Algiers Naval Station	Federal City development
Audubon/University	Tulane and Loyola Universities
Calliope Project	B.W. Cooper Housing Project
Central Business District	Large number of proposed new units
Central City/Magnolia	C.J. Peete/Harmony Oaks redevelopment; Guste Housing Project
Desire Project	Desire/Abundance Square Housing Project
Dillard	Dillard University
Edgelake/Little Woods	Significant number of large multi-family complexes
Fischer Project	Fischer Housing Project
Florida Housing Development	Florida Housing Project
Gentilly Woods	New Orleans Baptist Theogolical Seminary
Gerttown/Zion City	Xavier University
Iberville Project	Iberville Housing Project
Lake Terrace/Lake Oaks	University of New Orleans; Southern University of New Orleans
Lower Ninth Ward	Make it Right development
Mid-City	Orleans Parish Prison
Read Boulevard West B	Significant number of large multi-family complexes; Fisherman's Wharf
Sixth Ward/Treme/Lafitte	Lafitte Project redevelopment
St. Bernard Area/Project	St. Bernard Project/Columbia Parc redevelopment
St. Thomas Project	River Garden development
Tulane/Gravier	LSU/VA Hospital development
Village de L'Est	Significant number of large multi-family complexes
Warehouse District	Large number of proposed new units

Since each of these neighborhoods was considered individually, this section provides a summary of the data and assumptions used in the development of projections for each.

NEIGHBORHOODS WITH PUBLIC HOUSING PROJECT AND REDEVELOPMENT SITES

This study occurred during a time of transformation for most of the city's largest public housing complexes. Among these are, of course, the Lafitte, B.W. Cooper, C.J. Peete, and St. Bernard projects approved by the New Orleans City Council in 2007. Other areas experienced similar redevelopments prior to Katrina, and the Iberville redevelopment is scheduled in upcoming years. In the development of these projects, GCR was diligent in using a variety of data sources, including 2000 Census data, information received from local redevelopment teams, and data published in local media outlets such as the *Times-Picayune*. The treatment of neighborhoods with public housing units is complicated by the fact that some complexes are neighborhoods unto themselves, while others are housed within other municipal neighborhoods.

For public housing developments, GCR developed High, Moderate, and Low scenarios relative to the rate at which units would be constructed and placed in service. The High Scenario, for example, assumed that all phases will be completed as scheduled, while the Moderate and Low Scenarios assumed that parts of scheduled phases will take longer than anticipated to complete or be scaled back somewhat. The development schedules were taken from information provided by development teams and/or those published

by the Housing Authority of New Orleans (HANO). Generally, we also assumed that once constructed and placed in service, the units would be 95% occupied.

The **Central City/Magnolia** neighborhood, one of the city's largest from a geographical perspective, houses the Guste and C.J. Peete housing projects, as well as a large area typical of the New Orleans urban landscape. Both public housing complexes are undergoing redevelopment initiatives, with the C.J. Peete complex being re-branded as Harmony Oaks. Based on data received from the local development teams and HANO, GCR estimates that the current population of Harmony Oaks is approximately 784 residents, while the population of the Guste development is approximately 504 residents.

Using the development schedule provided by HANO and the development teams, GCR established Low, Moderate, and High Scenarios for the number of new units within these complexes as of 2012, 2016, and 2020. We assumed that units within the Guste development would be occupied at the same average household size reported by the 2000 Census (2.8 people per household), and that one third of the new units within Harmony Oaks would be occupied at this household size as well. New units provided at subsidized and market rates within Harmony Oaks, we assumed, will be occupied by household sizes more comparable to those within areas of Central City outside of the historic public housing footprint (2.24 people per household).

The population of the remainder of Central City/Magnolia is currently an estimated 12,926 residents, or 82% of its pre-Katrina population. Based on an analysis of the number of vacant units in the area, GCR anticipates that by over the next two years, the neighborhood will experience a significantly higher rate of population growth as during the previous two year period (about 370 residents) under the High Scenario, a slightly higher rate under the Moderate Scenario, and the same rate under the Low Scenario. By 2020, GCR estimates that the neighborhood will return to its pre-Katrina level under the High Scenario, to approximately 95% of its population under the Moderate Scenario, and approximately 92% of its pre-Katrina population under the Low Scenario.

All told, the anticipated population of Central City/Magnolia is as follows:

Central City/ Magnolia

PAST ESTIMATES		GCR POPULATION FORECASTS			
			High Scenario	*Moderate Scenario*	*Low Scenario*
2000 Census	19,043	**Fall 2012**	14,706	13,945	13,703
Spring 2005	17,900	**Fall 2016**	15,473	14,576	14,210
Fall 2010	12,924	**Fall 2020**	16,290	15,027	14,492

The **Calliope Project** neighborhood likewise consists partially of public housing and partially of blocks more typical of the New Orleans urban fabric. According to estimates published by HANO, there are approximately 379 residents living in the public housing areas within the neighborhood. Based on the schedule of additional units, GCR established Low, Moderate, and High Scenarios for the number of new units within these complexes as of 2012, 2016, and 2020.

Based on an analysis of the number of vacant units in the area, GCR anticipates that over the next two years, the surrounding neighborhood will experience a significantly higher rate of population growth as during the previous two year period (about five residents) under the High Scenario, a slightly higher rate under the Moderate Scenario, and the same rate under the Low Scenario. By 2020, GCR estimates that the neighborhood will return to its pre-Katrina level under the High Scenario, to approximately 95% of its population under the Moderate Scenario, and approximately 92% of its pre-Katrina population under the Low Scenario.

Calliope Project

PAST ESTIMATES		GCR POPULATION FORECASTS			
			High Scenario	*Moderate Scenario*	*Low Scenario*
2000 Census	4,368	**Fall 2012**	1,774	1,202	632
Spring 2005	4,106	**Fall 2016**	2,675	1,968	1,392
Fall 2010	624	**Fall 2020**	2,699	2,218	1,747

The **Desire Project** neighborhood consists entirely of the Desire Projects/Abundance Square developments. Currently, there are approximately 265 units on line in the neighborhood, according to HANO. Assuming that these are occupied at the average citywide occupancy rate, and assuming that they are occupied by households of approximately the same average size as the 2000 Census (3.49 people per household), there are 809 residents in the area. Based on GCR's assumptions regarding the published development schedule, the anticipated population of the neighborhood is as follows:

Desire Project

PAST ESTIMATES		GCR POPULATION FORECASTS			
			High Scenario	*Moderate Scenario*	*Low Scenario*
2000 Census	660	**Fall 2012**	1,028	919	864
Spring 2005	620	**Fall 2016**	1,028	973	919
Fall 2010	809	**Fall 2020**	1,028	973	919

The **Fischer Project** neighborhood is coterminous with the Fischer public housing development. According to HANO data, this development currently consists of 223 units. Assuming that these are occupied at the average citywide occupancy rate, and assuming that they are occupied by households of approximately the same average size as the 2000 Census (2.98 people per household), there are 809 residents in the area. Based on GCR's assumptions regarding HANO's published development schedule, the anticipated population of the neighborhood is as follows:

Fischer Project

PAST ESTIMATES		GCR POPULATION FORECASTS			
			High Scenario	*Moderate Scenario*	*Low Scenario*
2000 Census	2,034	**Fall 2012**	1,343	1,295	1,221
Spring 2005	1,912	**Fall 2016**	1,343	1,295	1,221
Fall 2010	855	**Fall 2020**	1,343	1,295	1,221

The **Sixth Ward/Treme/Lafitte** neighborhood, like the Central City/Magnolia and Calliope Project neighborhoods, consists both of a public housing footprint and a

traditional New Orleans urban landscape. The Lafitte housing complex is, of course, undergoing a total redevelopment and is currently unoccupied, with construction underway. Based on the development schedule provided to GCR from the development team, we developed High, Moderate, and Low scenarios for the build-out of the project over the course of the next several years. Since the new units will consist of public housing, subsidized, and market rate units, GCR assumed a range of household sizes occupying these units. For public housing units, we assumed that active units would be 95% occupied at the same average household size as pre-Katrina household sizes (2.82 residents per household according to the 2000 Census), and that subsidized and market rate units would be 95% occupied at the average household size for non-public housing units in the Sixth Ward/Treme/Lafitte neighborhood (2.37 residents per household).

For the remaining portions of the neighborhood, GCR applied anticipated population growth rates similar to those of the Central City/Magnolia neighborhood. These rates assume that the neighborhood would grow by a substantially higher number of residents than occurred over the past two years (249 residents) between 2010 and 2012 under the High Scenario, a slightly higher number of residents under the Moderate Scenario, and a comparable number of residents under the Low Scenario. By 2020, GCR estimates that the neighborhood will have returned to its pre-Katrina level under the High Scenario, to 95% of its pre-Katrina level under the Moderate Scenario, and to 92% of its pre-Katrina residents under the Low Scenario. It is anticipated that the scattered site development around the Lafitte development would be subsumed into the surrounding population growth.

The resulting population forecasts for the Sixth Ward/Treme/Lafitte neighborhoods are as follows:

Sixth Ward/ Treme/ Lafitte

PAST ESTIMATES		GCR POPULATION FORECASTS			
			High Scenario	*Moderate Scenario*	*Low Scenario*
2000 Census	9,216	**Fall 2012**	9,711	8,401	7,750
Spring 2005	8,663	**Fall 2016**	9,194	8,473	7,552
Fall 2010	5,795	**Fall 2020**	9,511	8,929	8,076

A similar approach was applied to the **St. Bernard Area/Project** neighborhood. Currently, the portions of the neighborhood outside of the public housing footprint house approximately 1,070 residents, or 61% of the pre-Katrina population. As with the Central City/Magnolia and Sixth Ward/Treme/Lafitte neighborhoods, GCR assumed that the neighborhood will add a significantly higher number of residents between 2010 and 2012 than during the 2008-2010 period (74 residents) under the High Scenario, a slightly higher number of residents under the Moderate Scenario, and a comparable number of residents under the Low Scenario. By 2020, GCR estimates that the neighborhood will have returned to its pre-Katrina level under the High Scenario, to 95% of its pre-Katrina level under the Moderate Scenario, and to 92% of its pre-Katrina residents under the Low Scenario. It is anticipated that the scattered site development

around the Lafitte development would be subsumed into the surrounding population growth.

Within the footprint of the St. Bernard public housing complex, of course, has emerged the Columbia Parc development. Based on unit counts provided by the development team, GCR estimates that the current population of Columbia Parc is approximately 1,126, a number which figures to increase as additional phases are completed in the near term. As with other public housing complexes, GCR devised High, Moderate, and Low scenarios based on scheduled completion of units provided by the development team and applied a 95% occupancy rate to completed units. We assumed that units reserved for public housing tenants would be occupied at a comparable household size as pre-Katrina public housing units (3.41 residents per household according to the 2000 Census) and that subsidized and market rate units would be occupied at an average household size comparable to the surrounding neighborhood (2.56 people per household). Accordingly, the total population estimates for the St. Bernard Project/Area neighborhood is as follows:

St. Bernard Area/ Project

PAST ESTIMATES		GCR POPULATION FORECASTS			
			High Scenario	*Moderate Scenario*	*Low Scenario*
2000 Census	6,411	**Fall 2012**	3,171	2,950	2,619
Spring 2005	6,026	**Fall 2016**	3,532	3,480	3,295
Fall 2010	2,196	**Fall 2020**	3,619	3,532	3,329

The **Florida Housing Development** neighborhood, which housed over 1,500 residents prior to Katrina, remains shuttered, with an effective population of zero. With no firm redevelopment plans in place, it is difficult to assess the future conditions, and HANO officials have remained reluctant to move forward with redevelopment of the area. Without any credible indicators of future population levels in the neighborhood, GCR has projected that the population will remain at zero throughout the study period.

The **St. Thomas Project** neighborhood was the first major public housing complex to be redeveloped, and has been re-branded as River Garden. Much of this work occurred prior to Katrina, and additional units are under construction currently. The developers will add up to thirty-five new units according to demand.

Since River Garden has recreated an urban setting quite similar to traditional New Orleans neighborhoods, it became in some ways more realistic to treat this neighborhood more like a "regular" neighborhood, in which individual occupancy indicators could be used to measure population and compare it to pre-Katrina levels. However, GCR was careful to consider the mix of market rate and subsidized housing both recently-constructed and in the development pipeline. We anticipated a high occupancy rate (>90%) of newly-constructed units at a mix being occupied at a household size that was an average of public housing and non-public housing households as reported by the 2000 Census. The anticipated population of the St. Thomas Project neighborhood is as follows:

St. Thomas Project

PAST ESTIMATES		GCR POPULATION FORECASTS			
			High Scenario	*Moderate Scenario*	*Low Scenario*
2000 Census	3,753	**Fall 2012**	4,346	4,097	4,014
Spring 2005	3,528	**Fall 2016**	4,462	4,346	4,014
Fall 2010	4,561	**Fall 2020**	4,462	4,346	4,097

Finally, the **Iberville Project** neighborhood, which consists entirely of the Iberville housing development, is currently slated for redevelopment. While the formal plans for this project are still emerging, we were able to incorporate the preliminary development schedule provided by the development team. According to the data GCR received, 1,534 residents currently live in the Iberville development. GCR assumed that the redevelopment would begin in some form over the course of the next two years, and the development schedule could displace a significant number of residents in the interim. Based on the development of our scenarios, the forecasted population of Iberville is as follows:

Iberville Project

PAST ESTIMATES		GCR POPULATION FORECASTS			
			High Scenario	*Moderate Scenario*	*Low Scenario*
2000 Census	2,540	**Fall 2012**	1,534	767	0
Spring 2005	2,388	**Fall 2016**	2,248	712	486
Fall 2010	1,534	**Fall 2020**	2,331	2,098	1,749

NEIGHBORHOODS WITH UNIVERSITY CAMPUSES AND DORMITORIES

Five neighborhoods house university campuses. These include Audubon/University (Tulane, Loyola), Gerttown/Zion City (Xavier), Dillard (Dillard), Lake Terrace/Lake Oaks (University of New Orleans, Southern University of New Orleans), and Gentilly Woods (Baptist Theological Seminary). Residents of dormitories in these institutions are reported among the group quarters population in the Census, a category distinct from the neighborhood's household population.

GCR's approach to these neighborhoods was to consider the non-university blocks in these neighborhoods using the "regular" neighborhood methodology—that is, to measure their recovery and forecast their future population using the Activity Index and the forecasting assumptions employed with the fifty-one "regular" neighborhoods. We then estimated the group quarters population of the dormitories by either contacting university officials or relying on media and university website accounts of overall student enrollment.

Accordingly, the projected population of these neighborhoods is as follows:

University Neighborhoods

	PAST ESTIMATES		GCR FORECASTS								
	2000	2010	2012			2016			2020		
			High	*Moderate*	*Low*	*High*	*Moderate*	*Low*	*High*	*Moderate*	*Low*
Audubon/University	14,898	13,832	14,055	13,919	13,890	14,499	14,141	13,996	15,165	14,585	14,084
Gerttown/Zion City	4,719	3,822	4,335	3,997	3,910	4,535	4,349	4,085	4,877	4,692	4,261
Dillard	6,471	4,805	5,714	5,411	5,108	6,083	5,727	5,481	6,130	6,034	5,727
Lake Terrace/Lake Oaks	2,191	2,350	2,402	2,367	2,359	2,454	2,402	2,367	2,506	2,419	2,385
Gentilly Woods	4,268	2,741	3,050	2,972	2,895	3,790	3,441	3,021	4,140	3,790	3,441

OTHER "EXCEPTION" NEIGHBORHOODS

The **Algiers Naval Station** neighborhood is the site of the Federal City development. This mixed-use facility will consist of a large number of new residential units that is likely to attract thousands of new residents. The development scale and schedule has been widely publicized, and GCR confirmed the estimated number of units with HRI, the primary development agency. As with the public housing forecasts, we developed High, Moderate, and Low scenarios based on the project's build-out, and assumed that the average household size would be approximately similar to that of the surrounding neighborhood (2.99 residents per household as of the 2000 Census).

The surrounding neighborhood has maintained a fairly stable population, and GCR assumed that under the High Scenario, it would absorb all of the units which have remained vacant since Hurricane Katrina and some additional units that were vacant in 2000 by 2020. The Moderate and Low Scenarios assume a slightly less ambitious absorption of these vacant units. The resulting population of the Algiers Naval Station neighborhood is as follows:

Algiers Naval Station

PAST ESTIMATES		GCR POPULATION FORECASTS			
			High Scenario	*Moderate Scenario*	*Low Scenario*
2000 Census	2,902	**Fall 2012**	3,261	2,950	2,760
Spring 2005	2,728	**Fall 2016**	4,142	3,513	3,282
Fall 2010	2,511	**Fall 2020**	5,579	5,021	4,097

The three "exception" neighborhoods in New Orleans East—**Edgelake/Little Woods, Village de L'Est, and Read Boulevard West B**—all involved a similar consideration; namely, that they have an unusually high number of large apartment complexes. We isolated these neighborhoods for this reason, but came to the conclusion that the Activity Index would ultimately approximate their estimated population credibly, as apartment units tend to have individual occupancy indicators (utility accounts, postal accounts, etc.) that are similar to those of single-family households. Therefore, they were treated very similarly to "regular" neighborhoods in the forecasting process, and the resulting population projections are as follows:

New Orleans East "Exception" Neighborhoods

	PAST ESTIMATES		GCR FORECASTS								
	2000	2010	2012			2016			2020		
			High	*Moderate*	*Low*	*High*	*Moderate*	*Low*	*High*	*Moderate*	*Low*
Edgelake/Little Woods	44,318	33,214	36,202	35,455	34,708	39,973	37,720	35,016	42,225	39,973	37,720
Village de L'Est	14,665	8,944	9,991	9,314	9,129	11,038	10,100	9,870	13,785	10,796	9,870
Read Blvd. West B	9,596	3,938	4,909	4,585	4,261	7,926	6,596	5,267	9,255	7,926	6,596

The **Lower Ninth Ward** merited individual consideration for two reasons. First, it clearly experienced a particularly devastating impact from Hurricane Katrina, and currently has only 3,147, or 24% of its pre-Katrina residents, today. Secondly, it has been the recipient of one of the city's most highly-publicized redevelopment projects, the Make it Right initiative. Using data published on Make it Right's website, and assuming an increasingly catalytic effect of this project, GCR assumed that population growth would continue in this area throughout the coming years.

GCR's scenarios for the Lower Ninth Ward are based on the population growth in the neighborhood over the course of the past year. According to our estimates, the neighborhood grew by approximately 508 residents between September 2009 and September 2010. The High Scenario assumes that this annual absolute growth will continue over the course of the next ten years. The Moderate Scenario assumes that the neighborhood will grow at approximately 75% of the 2009-2010 rate, and the Low Scenario assumes growth of 50% of the past year's levels. Accordingly, the population forecasts for the Lower Ninth Ward are as follows:

Lower Ninth Ward

PAST ESTIMATES		GCR POPULATION FORECASTS			
			High Scenario	*Moderate Scenario*	*Low Scenario*
2000 Census	14,008	**Fall 2012**	4,163	3,909	3,655
Spring 2005	13,168	**Fall 2016**	6,195	5,433	4,671
Fall 2010	3,147	**Fall 2020**	8,227	6,957	5,687

The **Mid-City** neighborhood, one of the city's largest, is in most respects a "regular" New Orleans neighborhood in its urban form. However, a careful analysis of the neighborhood's population must account for the Orleans Parish Prison, which reported approximately 6,000 residents in the 2000 Census. According to the November 2010 study released by the JFA Institute, the prison currently houses approximately 3,189 inmates. The ten-year projection calculated by JFA has this population holding relatively steady through 2020, when the population is estimated to be 2,903. GCR has assumed, for the purposes of our study, that the JFA estimates will hold true and that the population of Orleans Parish Prison will remain approximately 3,000 over the course of the next ten years.

The remainder of the Mid-City neighborhood currently houses an estimated 13,077 residents, or 94% of its pre-Katrina population. The neighborhood has grown by approximately 1,000 residents in the past year and 3,000 in the past two years. As such, the neighborhood was treated similarly to comparable "regular" neighborhoods as

described in the previous section of this report. The total projected population for Mid-City is as follows:

Mid-City

PAST ESTIMATES		GCR POPULATION FORECASTS			
			High Scenario	*Moderate Scenario*	*Low Scenario*
2000 Census	19,897	**Fall 2012**	16,086	15,790	15,561
Spring 2005	18,703	**Fall 2016**	16,695	15,907	15,645
Fall 2010	15,314	**Fall 2020**	16,891	16,103	15,841

The **Tulane/Gravier neighborhood** will be the neighborhood most affected by the major new LSU/Veterans' Affairs hospital development. Over the course of the past year, the LSU/VA footprint has been systematically depopulated, with housing units being demolished or relocated. The current development schedule indicates that the VA facility will be completed in 2013, and the LSU facility a year later.

Tulane/Gravier has, of course, already changed significantly in the past two years through the construction of several large apartment complexes. While the LSU/VA project has no direct housing component, it is conceivable that the investment will catalyze population growth in the area. The area contains a number of developable tracts of land, and a study performed by AECOM as part of the BioScience District initiative projected that a significant number of new units may come only, catering primarily to young professional renters. GCR's High Scenario anticipates that all of these new units will be occupied in the years after the hospitals' completions. The Low Scenario, meanwhile, assumes that the hospitals will have a minimal impact on the neighborhood's population. Below are the estimates prepared by GCR for the Tulane/Gravier neighborhood:

Tulane-Gravier

PAST ESTIMATES		GCR POPULATION FORECASTS			
			High Scenario	*Moderate Scenario*	*Low Scenario*
2000 Census	4,234	**Fall 2012**	4,149	4,032	3,931
Spring 2005	3,980	**Fall 2016**	5,103	4,895	4,200
Fall 2010	3,860	**Fall 2020**	5,216	4,980	4,363

For this study, GCR considered the **Central Business District and the Warehouse District** as one combined neighborhood. The primary reason for this treatment was the fact that our firm recently completed a comprehensive study of the area for the Downtown Development District, through which we developed a comprehensive inventory of the number of units. Additionally, GCR maintains a database of proposed and announced large-scale development projects, of which many are situated in these two neighborhoods.

As of the end of 2009, GCR estimated that these two neighborhoods contained 3,913 housing units. Assuming a relatively small average household size (1.4 residents per household), the population of this area at that time was 5,478. Referencing our inventory of proposed projects, we anticipate that the number of new units in the CBD/Warehouse District area could be as high as 3,903 by 2020, and is likely to be no

lower than 1,935 at that time. Similar to the public housing developments, GCR developed interim High, Moderate, and Low scenarios based on the scheduling and scale of these announced projects, some of which are publicly subsidized and some of which are privately financed. We assumed that the average household size of approximately 1.4 residents would remain consistent throughout this study period, and calculated the following projections for the combined neighborhoods:

CBD/Warehouse District

PAST ESTIMATES		GCR POPULATION FORECASTS			
			High Scenario	*Moderate Scenario*	*Low Scenario*
2000 Census	2,626	**Fall 2012**	6,400	6,074	5,749
Spring 2005	2,468	**Fall 2016**	10,246	8,736	7,331
Fall 2010	5,478	**Fall 2020**	10,943	9,345	8,188

Translating Neighborhood Population Projections to School Site Catchment Areas

Throughout the development of this study, it became increasingly necessary for OPSB and RSD officials to have population and enrollment data reported at an additional geographical unit, that of the "catchment area." For the purposes of this exercise, a catchment area was defined as the blocks falling within a 0.5-mile radius of each school site. This unit of analysis provided school officials with a more granular picture of demographic conditions within neighborhoods.

Establishing population estimates and projections for these areas was essentially a three-step process. First, GCR established current population estimates for each block in the city. For the overwhelming majority of blocks, this involved the application of GCR's Activity Index, in which we compared current residential occupancy to pre-Katrina occupancy. As a simplified example, suppose a block had ten occupied housing units and an estimated population of thirty in 2005, establishing an average household size of three. If the same block had seven occupied housing units as of September 2010, the estimated population of that block would be twenty-one.

Some blocks, of course, did not fit neatly into this methodology. As one example, we did not have an accurate method of comparing blocks within the current Harmony Oaks development with pre-Katrina conditions, since the structure of reporting utility accounts and the like is dramatically different today than in 2005, when most accounts were registered to the HANO offices. In these instances, we distributed the current estimated population of Harmony Oaks evenly across the blocks within the Harmony Oaks footprint. Similar methods were used for university dormitories, other public housing complexes, Federal City, etc. While this provided admittedly imperfect estimates, it was simply the most logical method given the constrictions of available data.

Secondly, we assumed that each block in a given neighborhood would grow at the same rate as the overall neighborhood. If, for instance, Block A was located in Neighborhood X, and neighborhood X was projected to grow at 2% between 2010 and 2012, the population of Block A would likewise grow 2% during this period. (For blocks within

exception areas such as public housing developments, GCR applied the growth rate of those particular areas rather than the surrounding neighborhood). This methodology essentially created an approximate population forecast for each block in the city.

Finally, we aggregated the blocks within each catchment area to develop current population estimates and forecasts for these catchment areas.

Estimating and Forecasting Student Enrollment

The most critical piece of this study for the purposes of facilities planning, of course, is the question of how many students are likely to attend public schools in New Orleans and from which neighborhoods they are likely to come. Additionally, it is important to consider the proportion of these students enrolled in elementary, middle, and secondary grades.

ESTIMATING THE CURRENT ENROLLMENT OF STUDENTS WITHIN NEIGHBORHOODS AND CATCHMENT AREAS

GCR received data from each OPSB and RSD-operated school for the period of the 2003-2004 to 2010-2011 school years, including the home address and grade of each enrolled student.[7] We also carefully analyzed the site-level reports published by the Louisiana Department of Education for these years. To understand the relationship between these two data sets, a brief discussion of the data processing methods is necessary.

Using GIS and database technology, GCR "geo-coded" and "geo-referenced" each student address, meaning we located each address on a map using X,Y coordinates and then associated each student with a municipal block, or STFID.[8] Once a student is associated with a block, we were able to determine the neighborhood and site catchment area(s) in which each student lives. In theory, this process provides a count of the number of students in each neighborhood and catchment area.

However, the process of geo-referencing (also known as "geo-coding") is imperfect, and did not capture the exact location of each student address. The reason for this is two-fold. First, we did not receive an address for every single student. Some student data was reported without an address, and there were a very few schools for which we received no data at all.

Secondly, not every address geocoded properly. Typically, a successful geocoding rate is about 90%, and GCR was able to surpass that mark with the addresses we were given. However, because of errors in data entry and limitations of the geocoding database, not every student was fully accounted for.

[7] Only student addresses and grade levels were imported into our database. No names, dates of birth, student identification numbers, etc. were retained. Additionally, no data on student performance or any other types of confidential information was provided to GCR.
[8] STFID, or "Summary Tape File ID" is the unique Census code for each block in the United States.

Therefore, GCR was required to make assumptions about the students whose origins we did not know. The most logical method for doing so was acting upon the hypothesis that the distribution of students of whose addresses we were certain was similar to those of whose addresses we were certain. For example, if 5% of all students whose addresses were geocoded were from Neighborhood X, we assumed that 5% of students whose addresses we did not know were also from Neighborhood X[9]. Since geocoding errors are unlikely to occur more frequently in one neighborhood versus another, this was the most judicious approach to ensure that we were analyzing the fullest data set possible.

Through this method, GCR determined the current number of enrolled students in each neighborhood and catchment area and grouped them according to grade levels. For the purposes of this study, as stated in the introduction to this report, the grade groupings are Pre-K-5th grades, 6th-8th grades, and 9th-12th grades.

FORECASTING STUDENT POPULATIONS

Once GCR had accounted for all currently-enrolled students, we began the process of forecasting student enrollment in each neighborhood and site catchment area. The most important assumption we made in developing these forecasts is that enrollment growth is most likely to be directly correlated to population growth in each area. Two primary observations justified this approach:

- The percentage of the city's population enrolled in public school has not changed dramatically since Hurricane Katrina. Each year, the number of enrolled students has been between 10.7% and 11.4% of the overall population, and there is no clear trend among these percentages.
- No large area of the city is likely to experience a dramatic demographic shift in the coming years. While demographic conditions in the city—and to a certain extent in particular neighborhoods—may be slightly different ten years from now than they are today, it is highly doubtful that these changes would constitute a significant shift in the distribution of public school students.

To test the likelihood of the second point, we analyzed the distribution of students among neighborhoods from 2006-2010. Although there were, naturally, small fluctuations in the percentages of students coming from certain neighborhoods, the distribution was generally quite stable. One particular exception was that the number and percentage of students coming from the Central City/Magnolia neighborhood dropped somewhat between 2007 and 2010 despite overall population increase in the neighborhood. After ensuring that this was not the result of a data processing error, we determined that it is most likely the effect of the closure of the C.J. Peete housing project.

Under this assumption, the current 2010-2011 school year served as the baseline for all enrollment projections. GCR then calculated the growth rate of each neighborhood and catchment area under the High, Moderate, and Low Scenarios for the fall semesters of

[9] We used the same process to allocate students to various catchment areas.

the 2012-2013, 2016-2017, and 2020-2021 school years. The growth rate of students, therefore, is equal to the growth rate of the overall population in each neighborhood and catchment area. The resulting enrollment estimates are available in Appendices D and F of this report.

Conclusion

This study represents GCR's best estimate of current and future population and student enrollment conditions as of January 2011. In our effort to continuously support officials in the Orleans Parish School Board and the Recovery School District, we will provide an update of these figures upon the release of the 2010 Census, scheduled for February 2010.

The process of looking into the future at such a fine temporal and geographical scale is, by nature, speculative. Our study involves analysis of the best available data and a robust understanding of past and current conditions within the city of New Orleans. However, conditions often change because of circumstances which are simply unpredictable. One large investment or public project may catalyze population growth in a particular area, or a particular event may depress growth in another. The introduction or dramatic expansion of a new industry may redefine a neighborhood or group of neighborhoods in ways that we cannot envision today.

Nevertheless, we are confident that these figures, and the assumptions on which they rest, represent a viable effort to predict a range of activity within the city's neighborhoods. As a firm which has worked extensively in and on behalf of the city, we are committed to refining them when necessary and making them available to anyone for whom they will be useful. Finally, we remain willing to discuss them in any context or forum to help users better understand and apply them.