Mid-Term Report:
New Orleans Opportunity Mapping –
An Analytical Tool to Aid Redevelopment

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Introduction

Opportunity mapping is a research tool used to understand the dynamics of “opportunity” within metropolitan areas. The purpose of opportunity mapping is to illustrate where opportunity rich communities exist (and assess who has access to these communities) and to understand what needs to be remedied in opportunity poor communities. With support from the Ford Foundation and with assistance from the Greater New Orleans Community Data Center, the Kirwan Institute for the Study of Race and Ethnicity is applying its expertise in opportunity mapping in the New Orleans region. The following report provides some early results from this analysis and describes the next steps in the development (and expansion) of this project.

The application of opportunity mapping in the New Orleans region can provide a crucial source of neighborhood level information to aide the monumental redevelopment efforts in post-Katrina New Orleans. Opportunity mapping can assist in connecting marginalized or displaced residents of the region to opportunity rich areas, and assist advocates in assuring new housing opportunities are provided in opportunity rich areas. Opportunity mapping also provides information to aid the reconstruction/rehabilitation of areas most severely impacted by Hurricane Katrina, identifying what opportunities were missing in these neighborhoods prior to Hurricane Katrina (e.g. employment opportunities or high quality educational opportunities). We hope this information can aid community leaders in remedying these deficiencies to assure reconstruction creates opportunity rich neighborhoods that are accessible to all people.
What is Opportunity Mapping?

An extensive body of research has established that neighborhood conditions and proximity to opportunities such as high performing education or sustainable employment have a critical impact on quality of life and self advancement. The central premise of opportunity mapping is that residents of a metropolitan area are situated within an interconnected web of opportunities that shape their quality of life. The location of housing is a powerful impediment to or asset for accessing these opportunities and as such housing policies should be oriented towards providing this access wherever it may exist. Opportunity mapping provide an analytical framework to measure opportunity comprehensively in metropolitan regions and determine who has access to opportunity rich areas. Opportunity mapping also provides a framework to assess what factors are limiting opportunity in a community and can assist in identifying what measures are needed to remedy these impediments to opportunity. Mapping opportunity in the region requires selecting variables that are indicative of high (or low) opportunity. In this context, high opportunity indicators would be the availability of sustainable employment, high performing schools, environmental health, access to high quality health care, adequate transportation, quality child care, safe neighborhoods, and institutions that facilitate civic and political engagement. These multiple indicators of opportunity are assessed in a comprehensive manner at the same geographic scale, thus enabling the production of a comprehensive “opportunity map” for the region.

Why Apply Opportunity Mapping in New Orleans

Hurricane Katrina and its subsequent flooding devastated the New Orleans region, destroying neighborhoods and displacing residents throughout the nation. Due to factors of both geography and negligent policies, lower income communities of color were disproportionately impacted by the storm’s aftermath. Research by many academics, advocates and policy experts have illustrated that neighborhoods most impacted by the storm were highly segregated and isolated from many of the key opportunity structures crucial to quality of life and advancement.

As redevelopment and rehabilitation plans for areas impacted from Katrina and strategies to house those displaced by the storm are developed. Several critical questions need to be addressed:

1. Will strategies to provide immediate housing and shelter to those displaced by the storm, provide these housing options in opportunity rich areas, instead of re-concentrating the displaced in isolated or marginalized communities?

2. Will redevelopment and rehabilitation recreate the concentrated poverty, segregated opportunity poor neighborhoods that preceded Katrina? Or will redevelopment remedy the factors impeding access to opportunity in these neighborhoods, to create livable opportunity rich neighborhoods that are accessible to all?

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1 John A. Powell, Opportunity-Based Housing, 12 WTR J. AFFORDABLE HOUSING AND COMMUNITY DEV. L. 188.
2 For more information regarding the impact of Katrina please see “New Orleans after the Storm: Lessons from the Past, a Plan for the Future.” Produced by the Brookings Institution, Metropolitan Policy Program. October 2005
3. Will redevelopment remedy the public health risks and environmental risks that disproportionately impact low income communities of color, in order to create environmentally sound and healthy/safe neighborhoods?

Opportunity mapping is unique in that it can provide information to policy makers, community leaders and community members that is comprehensive, visual and easy to understand. Opportunity mapping also provides a comprehensive way to view access to opportunity, looking at multiple indicators of community health simultaneously, painting a more inclusive picture of neighborhood conditions. Opportunity mapping provides an essential base of information to assist in answering these questions to aide redevelopment planning and empower community members with information to assure their communities are rehabilitated into safe, opportunity rich areas. Opportunity mapping can also be dynamic and continuously updated to reflect the changing conditions in the region. Also, the opportunity maps provide a base of information to attempt to project the potential impact of proposed policies in the region.

Results: Opportunity in the New Orleans Region

The attached maps provide some analysis of the distribution of opportunity in the region. The following maps reflect pre and post-Katrina conditions and the access to opportunity in New Orleans and its surrounding areas. Opportunity in the areas of Education, Environmental Health and Flood Risk, Public Health, Economic Health and Mobility, Housing and Neighborhoods is assessed individually and is also averaged to achieve an overall distribution of opportunity in the region, referred to as the “comprehensive opportunity map.” The maps present the distribution of high and low opportunity census tracts in the region. The distribution of the African American community is represented on all maps.

This final cumulative opportunity map is presented as the first map in this report. The comprehensive opportunity map is presented individually and followed by a representation which illustrates the same map with an overlay of the September 10th extent of flooding. All other opportunity maps for the various sub-categories listed above follow the comprehensive opportunity map in this report. Description of the indicators utilized for these maps are described below and in the table at the end of this document.

Comprehensive Opportunity Map for the New Orleans Region:

Clear and distinct spatial patterns of low and high opportunity areas are apparent in the comprehensive opportunity map. Low opportunity neighborhoods have a higher concentration of African Americans than the high opportunity areas. Central city and southeast New Orleans, which includes Lower Ninth Ward and Bywater, illustrate this relationship. Likewise, Lakeview, West End and Audubon reflect an inverse pattern of African American population concentration and opportunity. Flooding impacted most of the low opportunity communities in City of New Orleans.

Educational Opportunity:

Performance scores, school poverty and teacher quality of all public and magnet schools in the study area were assessed to analyze educational opportunities. Additionally, data on the total number of college graduates in the resident population were included in the analysis. The distribution of educational opportunity indicates that neighborhoods such as Lower Ninth Ward, Central City and St. Roch, with high concentration of African Americans, were primarily low opportunity areas. In contrast, Lakeview and Broadmooll are high opportunity areas.
Environmental Health and Flood Risk:
Mold and Endotoxin are great health risks. Their presence in the environment causes respiratory illnesses and other health concerns. Prolonged flooding and the government’s slow response, led to high level of these contaminants in the areas affected by the storm. The toxicity level in the city was assessed using NRDC data on toxicity. Land depth and flood duration was studied to analyze the environmental health impacts of Katrina related flooding. Access to parks and/or open spaces is an equally important environmental issue. Based on post-Katrina toxicity and pre-Katrina access to parks and open spaces, Dillard, portions of New Orleans East and the Lower Ninth Ward appears to be the lowest opportunity areas, in respect to environmental health and flood risk.

Public Health:
Access to health care facilities is an important factor in meeting public health needs. The locational proximity of census tracts to pre-Katrina functional hospitals, data on number of health professionals working in each neighborhood and medically underserved areas information were used to understand the spatial access to public health opportunity. Since most of the hospitals are located in and around the downtown area, high opportunity areas appear to cluster near downtown in this analysis. Some African American neighborhoods near downtown in New Orleans still were identified as low opportunity areas, despite their proximity to downtown health care services.

Economic Opportunity and Mobility:
Availability and access to jobs provides a good indicator of economic opportunity. Data on the following attributes was collected and analyzed to assess economic opportunity in the region: unemployment rates, population on public assistance, proximity to employment (job opportunities within 5 miles), employment competition (ratio of jobs to labor force within 5 miles), economic climate, employment diversity (number of well paying opportunities by skill level) and mean commute time. The distribution of opportunity based on the above attributes indicates that neighborhoods in the City of New Orleans were more likely to be an area of high economic opportunity. Some inner city African American neighborhoods conflict with this trend. Despite their proximity to downtown New Orleans, many African American inner city neighborhoods were areas of low economic opportunity.

Housing and Neighborhood Health:
Housing and neighborhood quality affects access to opportunity in numerous ways, poverty, vacancy, housing conditions and crime have numerous impacts on quality of life, neighborhood stability and well-being. The neighborhood and housing opportunity map, shows the neighborhoods of the Lower Ninth Ward, Mid-City, Bywater and other inner city neighborhoods as being low opportunity, based on indicators of neighborhood health. These neighborhoods were also primarily African American neighborhoods. Most high opportunity neighborhoods were located outside of the City of New Orleans.

Three early conclusions can be taken from this analysis.

1. Like many regions in the nation, opportunity is spatially distributed throughout the region. High opportunity areas can be found in the City of New Orleans, but much of the
City consists of very low opportunity neighborhoods. Conversely, many of the region’s high opportunity suburbs are found in the surrounding region.

2. Flooding damage impacted both high and low opportunity areas, but low opportunity areas were impacted more. In fact, most of the region’s lowest opportunity (very low opportunity neighborhoods) areas were directly impacted by flooding.

3. African American neighborhoods were more likely to be low opportunity areas, based on the numerous indicators of opportunity assessed in this research. These neighborhoods were also more likely to be impacted by Katrina related flooding.

Next Steps and Project Expansion

The opportunity maps created for this report adequately reflect pre-Katrina conditions in New Orleans. Following the creation of these maps, the project will incorporate the impacts of Hurricane Katrina in regard to the distribution of opportunity in the region, by estimating the extent of flooding and storm damage by neighborhood. This information will provide a base of information to understand where opportunities have been redistributed/or created during the reconstruction process. These revised opportunity maps will also create an analytical framework to estimate the potential impacts of redevelopment proposals and proposals to house displaced residents. Proposed redevelopment concepts can be evaluated in the following ways:

1. Will the proposal help create opportunity and provide neighborhood safety or stability in a previously opportunity poor community?

2. Will the proposal remedy the most pressing issues depressing opportunity in an opportunity poor community?

3. Will the proposal help connect marginalized and or displaced residents with opportunities in the region?

4. Will the proposal provide affordable housing opportunities in opportunity rich communities within the region?

Our goal with this research initiative is to provide valuable information that supports the development of opportunity rich communities that are accessible to all in the New Orleans region. In addition, we hope to provide easy to use information and analysis for community members, activists and policy makers to assist in the tremendous rebuilding and rehabilitation process in the region.
Opportunity mapping, New Orleans City and Surrounding Areas, LA

Opportunity Distribution (by census tracts) based on Education, Environmental Health and Flood Risk, Public Health, Economic Opportunity and Mobility, Housing and Neighborhood Indicators

Source: Census 2000; SchoolMatters.com; NCES; LDOE; NRDC; ESRI; CBP; HRSA; USGS; FEMA; Neighborhood Change Database | Date: 01.17.06
Opportunity mapping, New Orleans City and Surrounding Areas, LA

Opportunity Distribution (by census tracts) based on Education, Environmental Health and Flood Risk, Public Health, Economic Opportunity and Mobility, Housing and Neighborhood Indicators, with flood affected areas

Source: Census 2000; SchoolMatters.com; NCES; LDOE; NRDC; ESRI; CBP; HRSA; USGS; FEMA; Neighborhood Change Database | Date: 01.17.06
Opportunity mapping, New Orleans City and Surrounding Areas, LA

Opportunity Distribution (by census tracts) based on Environmental Health and Flood Risk Indicators

Source: Census 2000; SchoolMatters.com; NCES; LDOE; NRDC; ESRI; CBP; HRSA; USGS; FEMA; Neighborhood Change Database | Date: 01.17.06
Opportunity mapping, New Orleans City and Surrounding Areas, LA

Opportunity Distribution (by census tracts) based on Public Health Indicators

**Legend**
- Black population
- 1 Dot = 500
- Census Tracts
- Neighborhoods
- Counties
- Water Feature

**Public Health**
- Quantile based categories
- Very Low Opportunity
- Low Opportunity
- Moderate Opportunity
- High Opportunity
- Very High Opportunity

**Source:** Census 2000; SchoolMatters.com; NCES; LDOE; NRDC; ESRI; CBP; HRSA; USGS; FEMA; Neighborhood Change Database | Date: 01.17.06
Opportunity mapping, New Orleans City and Surrounding Areas, LA

Opportunity Distribution (by census tracts) based on Economic and Mobility Indicators

Source: Census 2000; SchoolMatters.com; NCES; LDOE; NRDC; ESRI; CBP; HRSA; USGS; FEMA; Neighborhood Change Database | Date: 01.17.06
Opportunity mapping, New Orleans City and Surrounding Areas, LA

Opportunity Distribution (by census tracts) based on Housing and Neighborhood Indicators

Source: Census 2000; SchoolMatters.com; NCES; LDOE; NRDC; ESRI; CBP; HRSA; USGS; FEMA; Neighborhood Change Database | Date: 01.17.06

LEGEND
- Black population
  - 1 Dot = 500
- Census Tracts
- Neighborhoods
- Counties
- Water Feature

Housing & Neighborhood
Quantile based categories
- Very Low Opportunity
- Low Opportunity
- Moderate Opportunity
- High Opportunity
- Very High Opportunity
## NEW ORLEANS PRE-KATRINA OPPORTUNITY MAPPING

### EDUCATION

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<th>Indicator</th>
<th>Source</th>
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<td>Educational attainment for population 25 years and over</td>
<td>Census 2000, SF 3</td>
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<td>School poverty for neighborhood schools</td>
<td>National Center for Education Statistics, 2003-2004</td>
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<td>Performance scores for neighborhood schools</td>
<td>Louisiana Department of Education, 2003-2004</td>
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<td>Teachers with Masters Degree or Higher</td>
<td>Louisiana Department of Education, 2003-2004</td>
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<td>Education quality - Core classes taught by qualified teachers</td>
<td>Louisiana Department of Education, 2003-2004</td>
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### ENVIRONMENTAL HEALTH & FLOOD RISK

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<td>Measures for post storm toxicity/Mold</td>
<td>Natural Resources Defense Council Toxicity survey data</td>
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<td>Proximity to parks/Open spaces</td>
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<td>Flood Risk (Elevation depth, extent and duration of flooding)</td>
<td>USGS; FEMA</td>
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### PUBLIC HEALTH

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<tr>
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<td>Proximity to Hospitals</td>
<td>ESRI data</td>
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<td>Per capita number of health professionals working in neighborhood</td>
<td>Community Business Pattern 2003</td>
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<td>Medically Underserved Areas</td>
<td>Bureau of Primary Health Care</td>
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### ECONOMIC OPPORTUNITY AND MOBILITY

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<td>Population on Public Assistance</td>
<td>Census 2000, SF 3</td>
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<td>Proximity to employment (job opportunities within 5 miles)</td>
<td>Community Business Pattern 2003</td>
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<tr>
<td>Employment competition (ratio of jobs to labor force within 5 miles)</td>
<td>Census 2000 SF3; Community Business Pattern 2003</td>
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<tr>
<td>Economic Climate (change in number of jobs from 1999 to 2004 within 5 miles)</td>
<td>Community Business Pattern</td>
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<tr>
<td>Economic Climate (business creation from 1999 to 2004 within 5 miles)</td>
<td>Community Business Pattern</td>
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<td>Mean Commute Time</td>
<td>Census 2000, SF3</td>
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<td>Employment Diversity (# of well paying opportunities by skill level)</td>
<td>Louisiana Department of Labor; Census 2000 SF3</td>
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### HOUSING AND NEIGHBORHOODS

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<td>Property Values</td>
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<td>Population Change 1990-2000</td>
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<td>Home Ownership</td>
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