CITI COMMUNITY DEVELOPMENT EQUITY INDICATORS

South Florida Regional Planning Council

HOLLYWOOD

Income, Employment and Education,
ACS 2006-10 BG

Housing Affordability,
ACS 2006-10 BG

Income, Employment and Education,
ACS 2007-11 CT

Housing Affordability,
ACS 2007-11 CT

OPA-LOCKA

Income, Employment and Education,
ACS 2006-10 BG

Housing Affordability,
ACS 2006-10 BG

Income, Employment and Education,
ACS 2007-11 CT

Housing Affordability,
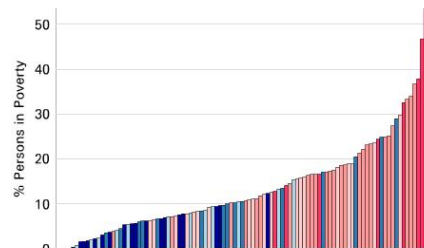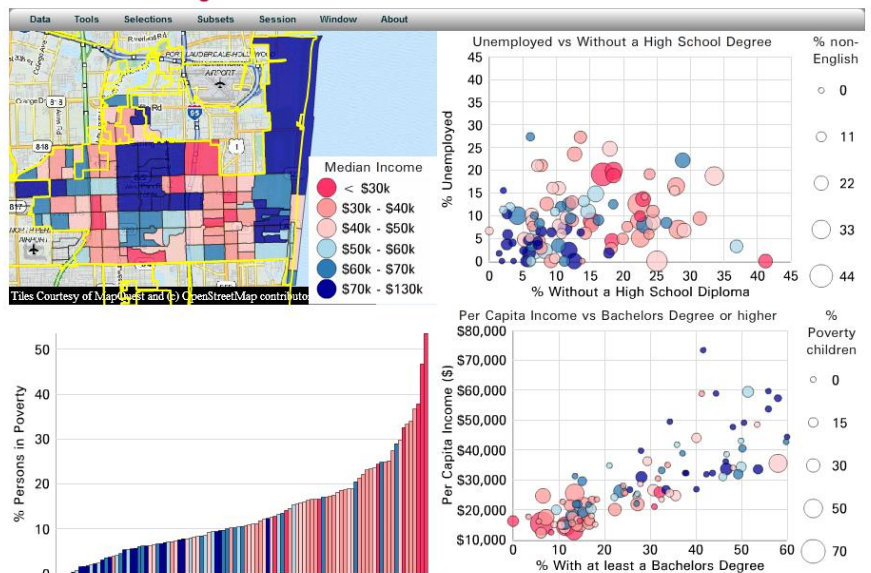ACS 2007-11 CT

Community Indicators (beta)

Southeast Florida Regional Partnership

| Data | Tools | Selections | Subsets | Session | Window | About |

Median Income
- < $30k
- $30k - $40k
- $40k - $50k
- $50k - $60k
- $60k - $70k
- $70k - $130k

Tiles Courtesy of MapQuest and © OpenStreetMap contributors

Unemployed vs Without a High School Degree

% non-English
- 0
- 11
- 22
- 33
- 44

% Unemployed
% Without a High School Diploma

Per Capita Income vs Bachelors Degree or higher

%
Poverty children
- 0
- 15
- 30
- 50
- 70

Per Capita Income ($)
% With at least a Bachelors Degree

% Persons in Poverty

OIC

MAPC 50 YEARS
METROPOLITAN AREA PLANNING COUNCIL
SMART GROWTH AND REGIONAL COLLABORATION

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Citi Community Development Equity Indicators

INTRODUCTION

To understand the challenges and opportunities of using data to drive change in Southeast Florida,

the Citi Community Development Equity Indicators Project uses Social Equity Indicators to Better

Understand our Communities and Improve Policy.

The first three sections of this report describe a series of meetings that were held to explore how data can be visualized in a way that enhances the creation of opportunities and resilience in communities through improved understanding of community issues and policy making. The last section gives further detail in terms of project background and technical analysis of the source, retrieval, processing, and reliability of the data.

TIMELINE

From April 23-25, 2013, three meetings were held at the South Florida Regional Planning Council (SFRPC) office to present initial ideas, engage related parties, and collect feedback. These meetings were:

- Community Indicator Focus Group for the City of Hollywood
- Community Indicator Focus Group for the City of Opa-locka
- Data Common Conversation for the Southeast Florida Region

Participants for each meeting were sent a follow-up email inviting them to continue their participation towards reaching desired outcomes.

DESIRED OUTCOMES

Community Indicator Focus Groups

By the end of the meeting the participants will have:

- Familiarity with the Community Indicators Project and the 15 Fair Housing Equity Assessment indicators;
- A list of the policy, planning and service delivery points where an equity lens would be useful;
- An understanding of the challenges of American Community Survey Data reliability at the neighborhood level; and
- A discussion of data, equity themes and data visualizations that resonate with the leaders of the cities of Hollywood and Opa-locka, with a focus on how data can support their work.

SECTION 1: HOLLYWOOD COMMUNITY INDICATOR FOCUS GROUP

MEETING PURPOSE:

To understand how community level data can be used to enhance decision making by increasing understanding of areas of opportunity and inequity.

Participants

Participants included Hollywood elected officials and employees of the Hollywood Department of Community & Economic Development, as well as representatives from CITI Community Development, the Police Department, Memorial Healthcare Systems, the Hollywood Community Redevelopment Agency, Hispanic Unity of Florida, Barry University, and Florida Atlantic University.

Welcome and Introductions

Isabel Cosio Carballo, the Southeast Florida Regional Partnership Coordinator, offered a warm welcome and brief summary of the Community Indicators Project. The Project is a community-based extension of the regional Fair Housing and Equity Assessment (FHEA) under development as part of the Southeast Florida Regional Partnership's seven50 plan development process. Funded by Citi Community Development, the City of Hollywood is one of two pilot communities where we seek to test whether this data and data visualization is meaningful to city officials and community partners and enhances understanding and policy making. Holly St. Clair, the Director of Data Services from the Boston Metropolitan Area Planning Council, requested that each participant introduce themselves and share the types of data that they work with. The kinds of data that were brought up related to finance, crime, insurance (uncompensated care), building permits, real estate, education, and census statistics.

Opportunity and Equity

Next Holly led a group discussion on how opportunity, equity, or inequity is discussed in municipal policy, planning and service delivery. Equity is not just about need or disparity, but recognizing that there are differences. Some of these differences might not have a negative impact on communities. A participant offered his perception, "We are fluid. The region and communities are impacted by populations that come from overseas trying to escape even harsher inequities. Immigration has more of an influence here than in other regions. It's not always documented in the data, yet these people need services."

Stated meeting goals in reference to equity focused on increasing quality of life through fair distribution of access to affordable housing, health services, safety resources, and education opportunities. Participants expressed the need to understand patterns and the interrelationships of issues and conditions in order to reach these goals more effectively.

Participant input included:

- Rather than the city buying foreclosures, it would have been better to prevent the people from going into foreclosure in the first place
- Spread social services so they are not clustered in one area of a city
- Map spatial distribution of everyone who is not able to pay for hospital services
- Provide resources to help individuals with chronic mental health, particularly those who are homeless

> **"Implementation is limited when too many resources are spent on data collection"**
> - Representative from Hispanic Unity

Affordable Housing

Participants also communicated their desires to find balance in their respective interests. For the issue of affordable housing, it must be supplemented with a range of housing choices, to attract a diverse workforce. It was observed that new housing requirements increase costs because building codes require increased hurricane and storms surge resistance. While offering the benefit of increased resilience, these requirements make housing less affordable.

Health Services

The Memorial Healthcare Systems representative shared survey results showing the top three priorities among residents to be crime prevention, environmental facilities (infrastructure/drainage/waste), and meaningful activities for youth and elderly.

Public Safety Resources

Hollywood rates second highest in Broward County in terms of calls for services related to violent crimes and 911 calls. The Hollywood Police Officer shared how the majority of their resources were allocated to areas around the Federal Highway/U.S. 1 and State Road 7/U.S. 441. Residents from other areas of the city complain that they don't see police officers in their neighborhoods because of the concentration of officers along these corridors.

Overview of FHEA Indicators Methodology and Analysis

Richard Ogburn, the Director of Research at the South Florida Regional Planning Council, described how the Fair Housing Equity Assessment (FHEA) indicators were chosen and how the data was collected and integrated into the project for each of the pilot communities. He stated the caveats related to American Community Survey (ACS) data and margins of error. The pilot methodology focused on a large city as well as a small city in order to distinguish issues related to scale and reliability of the data for understanding the socio-economic characteristics of the population. ACS data is a valuable tool for performing analysis of cities and neighborhoods and developing policy alternatives to address equity issues.

Generally speaking, census tract level is more reliable than block group level data because there is a larger sample size. Using census block groups is useful for honing in on the neighborhood level to detect trends at a smaller scale. However, one needs to be aware that the margins of error for block group level data will often be very high. For larger cities and neighborhoods, as well as county-level analysis, census tract data may be

a better choice to support analysis of sub-areas that can help to direct policy decisions, given the greater reliability of the estimates. It is a good idea for decision makers to verify ACS data by using local data sources and community residents and partners to compare trends and ground-truth the reliability of the data.

Creating Compelling Data Stories Using Community-Level data and the Web-based Analysis and Visualization Environment (WEAVE)

In line with the project goal to collect, integrate and visualize data sets using a tool that meaningfully informs decision-makers, the Web-based Analysis and Visualization Environment (WEAVE) tool was presented. Large printed copies of the 15 Fair Housing Equity Assessment (FHEA) indicators that had been mapped individually in ArcGIS were displayed in the conference room. Participants perused these maps as they came into the meeting. This strategy was used to contrast the difference between a static single indicator map and a dynamic "live" WEAVE interfaces. A sub-set of the 15 indicators were aggregated into two WEAVE interfaces to demonstrate the technology (figures 1 & 2).

Figure 1: WEAVE story for Hollywood Housing Affordability for Owners and Renters
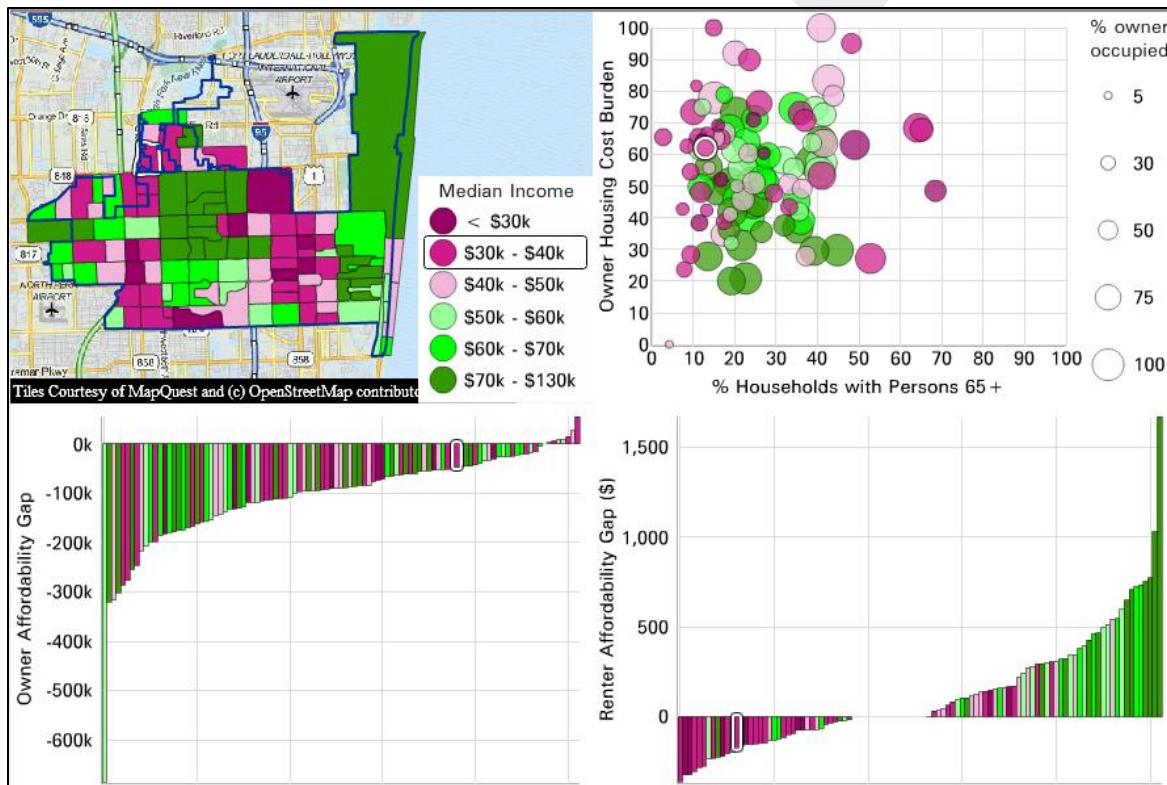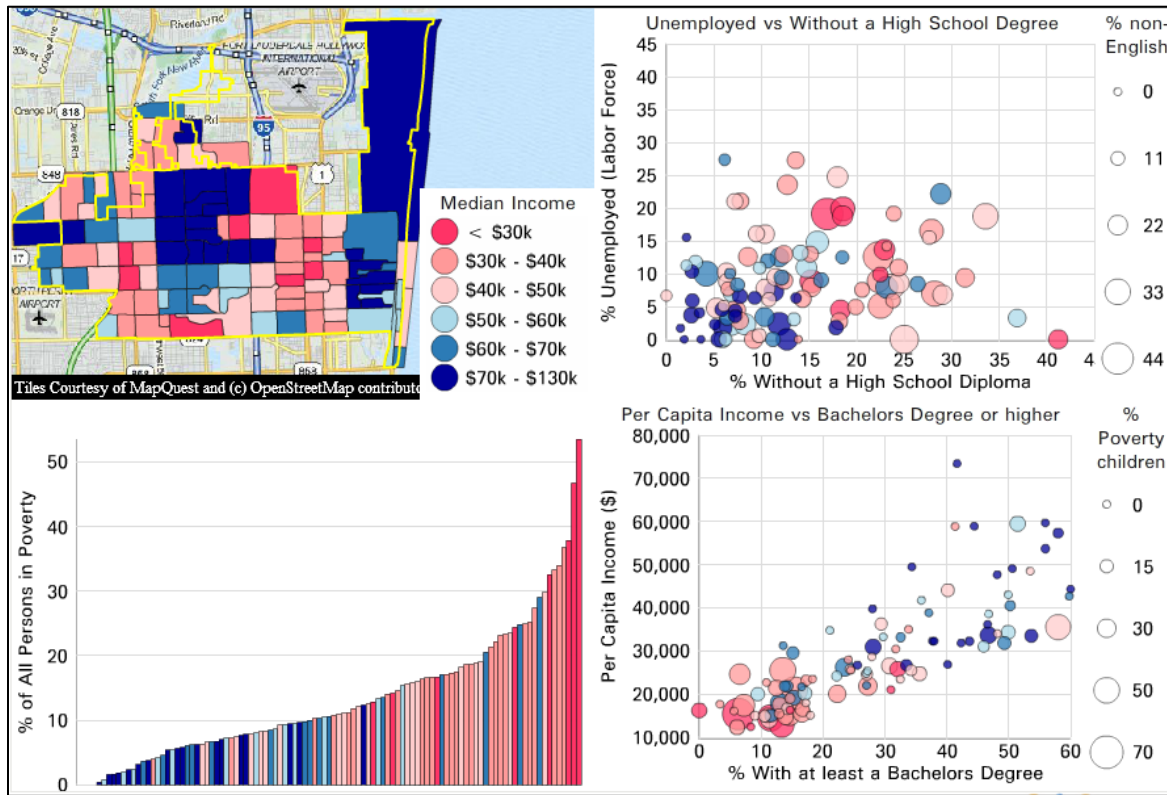
Figure 2: WEAVE story for Hollywood Education, Employment, and Income for Families and Labor Force

Richard illustrated how the navigation methods that the WEAVE interfaces allow an inquiry based, interactive, and engaging experience. Two WEAVE templates with a combination of four windows, composed of maps, scatterplots, and bar charts, were presented. The visualization had a pattern of color coding throughout that was associated with median household income. The data in each window was connected spatially by block group which allowed associated indicator relationships to be observed in all four windows by highlighting the block group data point. For example, hovering over a block group on the map will cause the block group shape, along with all associated data points in other windows, to be highlighted with a white outline (Figure 3). A text box also pops up the more information about the selected block group.

Figure 3: WEAVE story in action for Hollywood Education, Employment, and Income for Families and Labor Force (medium blue colored block group has been selected)
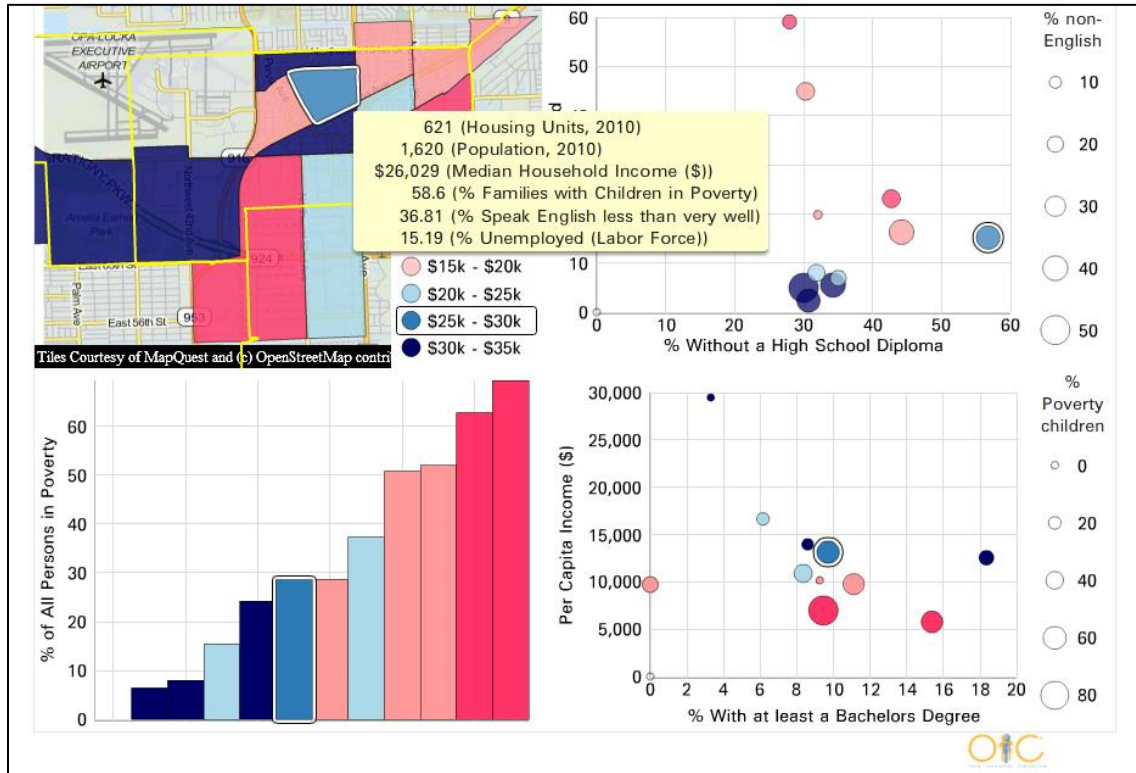
Response to WEAVE Demonstration

Participants were asked:

- In distinguishing the usefulness and applicability of the tool, which aspect of the data presentation was most meaningful to you?

Responses included:

- This is really a powerful tool to allow collaboration.
- It really shows the concentrations and relationships for the variables.
- It is a valuable tool that raises awareness about accuracy concerns.
- This can help to pinpoint areas to direct services towards.
- It is helpful to have all the data in one place to show the needs of the neighborhoods.
- The WEAVE is a more user-friendly environment.

SECTION 2: OPA-LOCKA COMMUNITY INDICATOR FOCUS GROUP

MEETING PURPOSE:

To understand how community level data can be used to enhance decision making by increasing understanding of areas of opportunity and inequity.

Participants

Participants included Opa-locka elected officials, among which were the mayor and vice-mayor as well as many city employees. Representatives from CITI Community Development, Opa-locka Community Development Corporation, Miami-Dade County Public Housing & Community Development, local businesses, Florida International University, and Florida Atlantic University were in attendance.

Welcome and Introductions

Isabel Cosio Carballo, the Southeast Florida Regional Partnership Coordinator, extended a warm welcome and summarized the Community Indicators Project goals. She emphasized the focus on creating policy for community development and creating opportunities.

Holly St. Clair, the Director of Data Services from the Metropolitan Area Planning Council, requested that each participant introduce themselves and share the types of data that they work with. The kinds of data that were brought up related to transportation, finance, crime, demographics, and health.

Opportunity and Equity

Next Holly led a group discussion on how equity is not just about need. It relates to the disparity between different groups, and it must be discussed in multiple contexts for municipal policy, planning and service delivery. One participant had looked at asset disparities coupled with unemployment to find that lack of disparities in income is still disproportionate in terms of loan disbursement. He also found that in Opa-locka, inequity was reinforced in terms of availability of services. For example, there is observably inequitable access to fairly priced financial services. The ratio of predatory lenders (such as pawn shops) to banks in Opa-locka is 39:1.

Stated meeting goals in reference to equity were related to education, ethnicity, transportation, affordable housing, health services, safety resources, and environmental justice. Participants expressed the need to understand how to capture these issues in a data assessment sense.

> **"We provide equitable access to charitable care, but we need to look at why it is needed in the first place."**
>
> -Representative from city of Opa-locka

Affordable Housing

Opa-locka is predominantly a rental community with renters in 65.2% of occupied housing units (2010 Census). The 2010 census estimated that in Opa-locka, 82% of renter households pay under $999 in rent, while owners pay a median mortgage of $1399. Throughout the city, there is an overconcentration of households receiving Section 8 rental assistance (www.olcdc.org). There is a need more for workforce housing to counter balance affordable housing and bring in a diverse working class. The money spent on affordable housing does not necessarily alleviate inequity because the housing is still not affordable for the residents of their community. Rather than creating new homes, we can implement strategies to allow homes to age in place. Better policy would allow residents to improve and rehabilitate their current homes.

We should respond to needs by changing densities for land-use and locating housing in a way that creates employment opportunities. The community needs to monitor trends to track progress for issues such as foreclosures, loans, and abandoned homes.

Health Services

We need to shift from increasing health care access to looking at other barriers, such as lack of preventative health care. It becomes an environmental justice issue when health outcomes correlate to environmental factors. One example is the brownfield site contamination in Cuyahoga that might be causing health issues, as well as other landfills and contaminated sites across the city (figure 3). The mayor of Opa-locka was dismayed to hear how many brownfield sites were concentrated in these areas, and how it has been correlated to cancer and other chronic illnesses. There is not enough county level enforcement for reducing environmental hazards. Who is accountable?

Figure 3: Contaminated Sites, Brownfields, and Landfills in Opa-locka
(Source: http://www.olcdc.org/docs/OLCurrentConditionsReport-Part2.pdf)
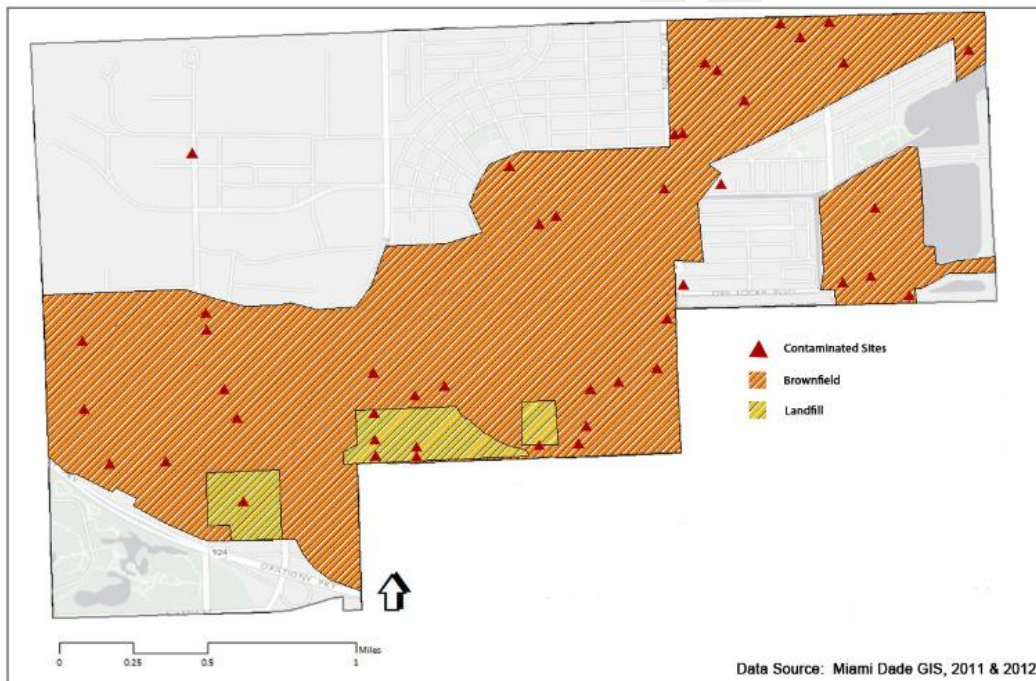
Public Safety Resources

Public safety in Northwest Miami-Dade limits investment preferences for certain businesses. The city has a noted lack of family restaurants, with most dining investments limited to fast food. It was hypothesized that these investment choices that limit access to healthy foods are likely to be related to issues of public safety, and that community-oriented policing would be better than adding police substations.

The Ecology of Policy

The key message from the conversation was that the "one-policy-fits-all" does not apply. We tend to focus on the median, but we need to know the distribution. There are some extremes that are most dramatically affected and require a tailored approach. There are dramatic disparities that exist that might impact the influence of policies in different areas where they are implemented. You cannot make assumptions about services that will be provided when you implement a policy. This is why ground truthing and understanding communities in a holistic sense are essential considerations. We must consider all of the factors in terms of stabilizing neighborhoods.

FHEA Indicators Methodology and Analysis and WEAVE Demonstration

Richard Ogburn, the Director of Research at the South Florida Regional Planning Council, described the FHEA indicators and demonstrated the data stories, as described in the previous section for the Hollywood Focus Group and modified for Opa-locka as displayed in figures 4 & 5).

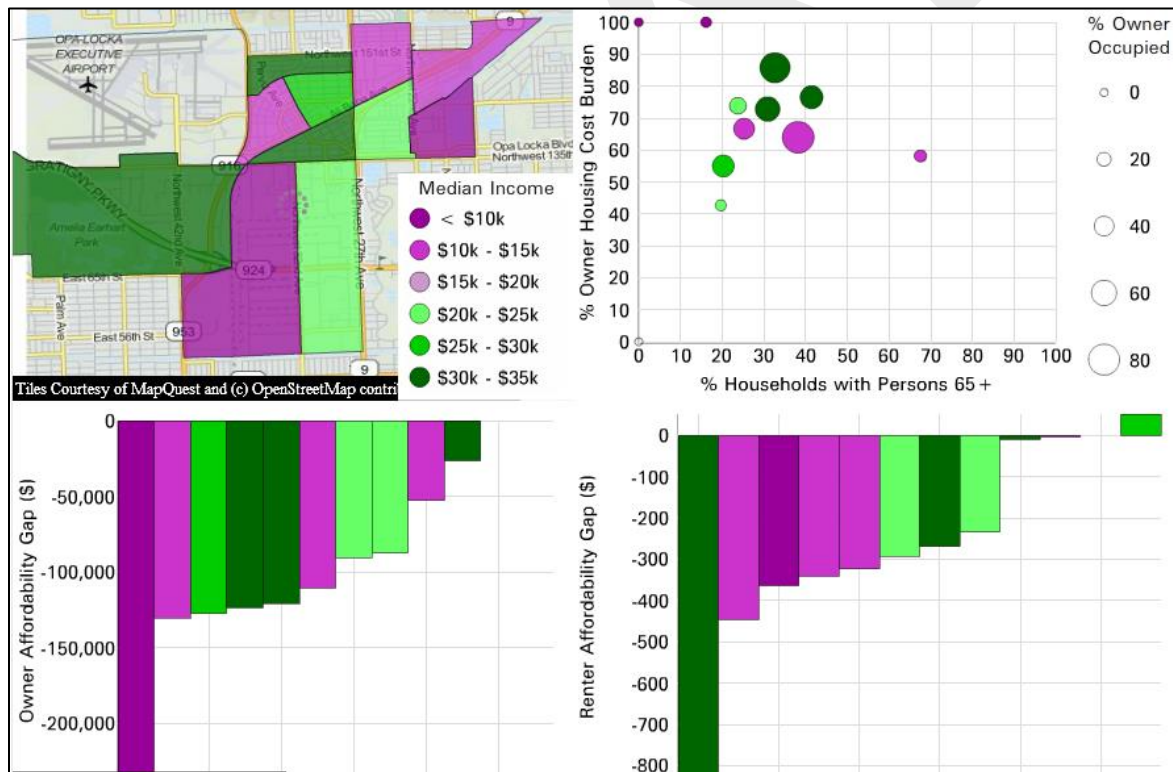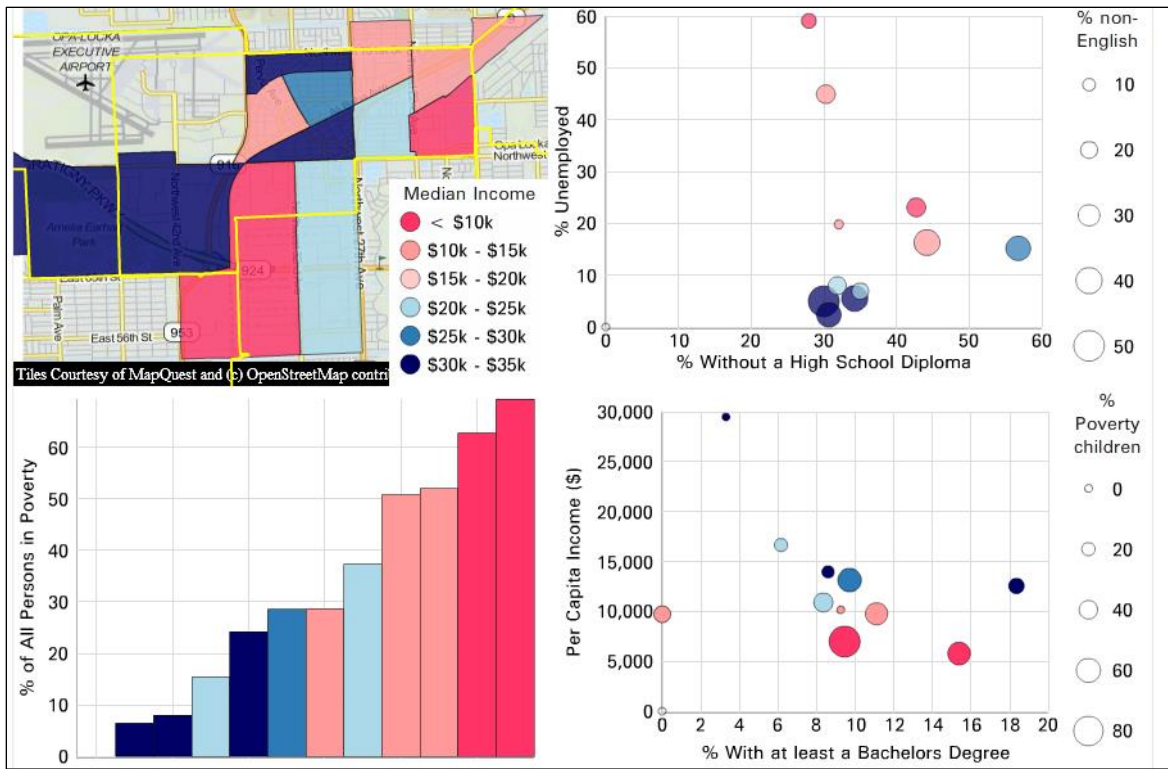**Figure 4: WEAVE story for Opa-locka Housing Affordability for Owners and Renters**

Figure 5: WEAVE story for Opa-locka Education, Employment, and Income for Families and Labor Force

Group Discussion Response to WEAVE

There was a wholehearted agreement that the dramatic lack of opportunities in Opa-locka were apparent in the data. Furthermore, making connections between the various indicators provided a unique perspective on the linkages and trends. Low median household income was correlated to unemployment, poverty, reduced education, and reduced affordability of housing. Participants were interested in seeing data that represented race and ethnicity, but the margin of error for these variables was so wide that it would significantly reduce the reliability of the data.

The participants felt that the data represented in the visualization accurately portrayed their community, and they offered intuitive explanations for various trends. The block group with the highest percentage or residents without a high school diploma, at nearly 60%, was in the center of the City. A city official explained that the City of Opa-locka does not have a high school within its boundaries. This limits access for the residents in the heart of the city, as students must travel to other cities for their education. A discussion ensued on the ethnic inequity in public schools. This is a perfect example of how data is about what you are going to use it for. What is the story that you want to tell? Having a variety of data can allow meaningful linkages to be made. Once distinguished, these connections can provide guidance for more effective policy.

SECTION 3: DATA COMMON CONVERSATION

The Data Common project promotes the availability of data on a broader scale through the sharing and maintaining of a growing collection of spatial data, data visualization tools, and technical assistance. It is implemented through a regional partnership aimed at understanding the challenges and opportunities of using data to drive positive change in Southeast Florida.

The purpose of the Data Common meeting was to convene a small focus group of regional stakeholders who routinely collect and work with myriad data for a presentation and discussion about web-based data application typologies. SFRPC staff sought to gauge whether regional partners felt that a Southeast Florida Regional Data Common would add value to their work and if so, whether they would be interested in working collaboratively to explore the opportunity further. This facilitated discussion made it possible to gather input, feedback, and advice from key partners.

OPPORTUNITY STATEMENT

Working together, public, private, nonprofit, civic, and philanthropic organizations can develop a Southeast Florida DataCommon that will provide the region with greater data, information, and understanding about key issues and opportunities in Southeast Florida. A DataCommon is an online application and interactive resource of information. It brings data into a new environment which allows data comparisons to be made and trends to be observed. It provides visualization tools that enable new levels of analysis that would not otherwise be possible.

DataCommons can enhance communication, improve policy making, support the development of grant proposals, highlight issues of community importance, and enhance meaningful community participation and engagement in policy making. Because issues such as economic and community development, transportation, education, health, and housing often transcend local governmental jurisdictional boundaries, these issues are oftentimes better understood and addressed when data at a larger than local scale is also considered. Robust DataCommons can support community dialogue and enhanced decision making by providing a venue for technical assistance and training that allows diverse users to access and work with data, and communicate information to others.

STATEMENT OF CURRENT CONDITIONS

While public, private, nonprofit, civic, and philanthropic organizations within the seven-county Southeast Florida region (Monroe-Indian River counties) are collecting data and information about their respective communities, service areas, and constituencies, data is not easily shared among organizations in the Region. As a result, data, analysis, and the lessons learned from the data largely reside in organizational "silos." This limits shared learning, regional understanding of the interconnectedness of the region and issues impacting the region, and the creation of regional identity and cohesiveness. With limited sharing of data, analysis, and interpretation, it is more difficult to understand and address in a holistic and comprehensive manner the opportunities and challenges facing Southeast Florida, its residents, and future sustainability. There is an inherent inefficiency related to multiple organizations collecting the same time-dated information time and time again. Through a collaborative effort of stakeholders, this information could be collected by one organization and shared with all partners. This would make it possible for partner organizations to use their limited resources in the collection of more detailed information and analysis in focused issue areas.

More details about the Data Common Conversation can be found at the Southeast Florida Data Common Report Published at......???

SECTION 4: PROJECT BACKGROUND AND TECHNICAL DATA
We as a Region Know Very Little About Ourselves

While there is a lot of data and information available from myriad sources, we lack a process for interacting systematically with data providers across the region on the one hand, and the users of information on the other, to create useful data sets, analytical visualizations and presentations. We need to be able to collect, integrate and visualize myriad data sets to tell the "compelling stories" that can spur policy making, community support and strategic investment in the region's human, physical, and natural infrastructure to create transformational change and maximize outcomes.

For many years, the decennial census long form has been one of the most important sources of the socio-economic data we use to analyze and develop policy interventions for the communities in which we live and work. Until recently, there could be a lag time of as much as 13 years between the reference period (April 1 of years ending in "0") and the release of published census data. This created issues of timeliness and accuracy that were particularly problematic in communities such as South Florida, where the pace of demographic change has been so fast. With the development of the American Community Survey (ACS), which replaces the decennial census long form, we now have an annual flow of current data that can be used to improve the accuracy of the analysis we can do and the appropriateness of the policies we develop. In addition, other sources of data are becoming more readily available at the community level, such as property, vital statistics, health outcomes, crime and school and student performance, making it possible to better understand our communities.

As the timeliness and breadth of the data we can use have increased dramatically, there also has been a significant improvement in the analytical tools we have to conduct analysis. Primary among these is geographic information systems (GIS), which enable us to carry out spatial analysis with greater ease and precision. Still, the sheer volume and frequency of new data, and the prospect of seeing even more in the coming years, make it essential to develop additional tools that enable us to mine the data more effectively, and present it in ways that better support understanding and decision-making.

The Citi Indicators Project

In October 2011, Citi Community Development awarded $100,000 to the Southeast Florida Regional Partnership (Partnership), through the Institute for Community Collaboration (ICC), an affiliate of the South Florida Regional Planning Council (SFRPC). This grant provided an opportunity to address this challenge in a way that has the potential to empower communities through information while enhancing decision-making at all levels.

Through the grant from Citi, SFRPC was able to join the Open Indicator Consortium (OIC), a national consortium of partners from across the United States. The OIC is a multi-stakeholder partnership in the development of an open source platform in collaboration with the Institute for Visualization and Perception Research at the University of Massachusetts Lowell. The OIC aims to spur the democratization and use of high quality data and data-driven problem-solving within and across neighborhoods, municipalities, sectors, states, regions and the nation, by transforming publicly available data into visually compelling and actionable indicators to inform public policy and community-based decision-makers.

The OIC came together to support and guide the development of WEAVE (Web-based Analysis and Visualization Environment) and its application as a high-performance open source data analysis and visualization platform free to all.   The WEAVE platform is designed to inform public discourse and policymaking, to stimulate innovation, and to support community decision-making and government

transparency and accountability. Once it is fully developed, WEAVE will enable policy makers, leaders, advocates, researchers, media professionals and the general public to end the cycle of being "data rich but insight poor."

WEAVE will allow SFRPC, on behalf of the Partnership, to create integrated data, tools, and models to assess the region today, understand the region's future, and track progress toward a regional vision. In addition, we will be able to initiate a broad educational effort to increase understanding of shared regional assets; issues, challenges and opportunities facing the region; and the necessity for cooperation to sustain the economy, environment, and quality of life as the region moves into the future. WEAVE will provide the Partnership with the tools needed to improve regional information sharing and communication and facilitate enhanced participation in ongoing planning and decision-making in the region.

DATA ISSUES

American Community Survey

The Census Bureau transition from the long form of the decennial census to the continuous measurement of the American Community Survey (ACS) has led to the annual production of a wealth of new socio-economic data in support of analysis and policy development for areas small and large. Beginning in 2005, the ACS has completed a monthly sample of approximately 250,000 housing units, touching each county in the United States. This represents the Census Bureau's largest household survey conducted on a continuing schedule.

The tabulated results of the survey are accompanied by the publication of sampling margins of error, which enable the user to determine the reliability of the data for understanding the socio-economic characteristics of the population. These margins of errors can be used to define the 90% confidence intervals for each statistic published – the upper and lower limits within which 90% of the time the true estimate is expected to fall.

Data is released in three phases for each year:

- **1-year period** estimates for areas with a population of 65,000 or more are based on the housing units sampled during the year of reference. These estimates produce the most current data, with moderate margins of errors, but many jurisdictions and most communities are below the threshold and are not included in the publication of this data.

- **3-year period** estimates for areas with a population of 20,000 or more are based on the housing units sampled during the 36 months ending with the year of reference. The first 3-year estimates were released in 2008 for the period 2005-2007. These estimates provide tabulated results for more areas, as well as lower margins of errors for large jurisdictions. However, because they present data for housing units sampled over three years, the results are less useful for understanding the current status of socio-economic indicators, or how they may have changed from year to year.

- **5-year period** estimates for census block groups and all larger tabulation areas are based on the housing units sampled during the 60 months ending with the year of reference. The first 5-year estimates were released in 2010 for the period 2005-2009. These estimates provide tabulated results for all counties, places, census tracts, block groups, tribal areas, congressional districts and other areas of interest. They present generally lower margins of error for larger areas, but very large margins of error for the smallest areas. They are not as useful for analyzing the current status of socio-economic characteristics of the population, or for analyzing changes over time, except in long-term trend analysis.

The table that follows shows the number of sampled housing units in each county, for each of the two most recent years of the American Community Survey, along with the estimated total number of housing units. The

5-year period estimates for the three counties in South Florida are based on a cumulative sample of almost 100,000 housing units, a bit over 5% of the total. It is helpful to note that all of the data released for 2010 and 2011 was calibrated to reflect the results of the 2010 Census, while prior releases were calibrated to projections based on the 2000 Census.

Table 1. South Florida: American Community Survey Housing Unit Sample Size, 2010 and 2011

Samples for ACS Releases	Monroe	Miami-Dade	Broward	Total
2010				
1-Year Estimates (2010)				
Sampled Housing Units	614	10,491	8,726	19,831
Estimate of Housing Units	52,766	989,439	810,410	1,852,615
Sample Size as % of Housing Units	1.2%	1.1%	1.1%	1.1%
3-Year Estimates (2008-10)				
Sampled Housing Units	1,844	31,347	26,296	59,487
Estimate of Housing Units	52,856	987,995	809,752	1,850,603
Sample Size as % of Housing Units	3.5%	3.2%	3.2%	3.2%
5-Year Estimates (2006-10)				
Sampled Housing Units	3,147	51,761	44,482	99,390
Estimate of Housing Units	52,847	980,580	806,858	1,840,285
Sample Size as % of Housing Units	6.0%	5.3%	5.5%	5.4%
2011				
1-Year Estimates (2011)				
Sampled Housing Units	715	9,818	8,332	18,865
Estimate of Housing Units	52,550	990,579	810,795	1,853,924
Sample Size as % of Housing Units	1.4%	1.0%	1.0%	1.0%
3-Year Estimates (2009-11)				
Sampled Housing Units	1,921	30,837	25,769	58,527
Estimate of Housing Units	52,730	989,772	810,427	1,852,929
Sample Size as % of Housing Units	3.6%	3.1%	3.2%	3.2%
5-Year Estimates (2007-11)				

Sampled Housing Units	3,180	51,317	43,547	98,044
Estimate of Housing Units	52,818	986,723	809,226	1,848,767
Sample Size as % of Housing Units	6.0%	5.2%	5.4%	5.3%

Source: Census Bureau, American Community Survey

Pilot Communities

In order to demonstrate the ability of the WEAVE platform to help decision-makers understand their communities and enhance policy development, we selected two municipalities for a pilot effort – a small city in Miami-Dade County (Opa-locka), and a large city (Hollywood) in Broward County. The choice of very different municipalities reflects the desire to better understand how the ability of the tools to organize, analyze and display data may be influenced by the different size of the jurisdiction, and the nature of the issues identified. Opa-locka contains all or parts of 6 census tracts and 12 census block groups; Hollywood contains all or parts of 36 census tracts and 103 census block groups.

Fair Housing Equity Assessment Indicators Selected

Carras Community Investment prepared the Fair Housing Equity Assessment (FHEA) for the Partnership's Seven50 project, which created a framework of useful indicators to be used for this effort. The FHEA defined a total of 33 indicators that were collected for the seven counties of Southeast Florida at the census tract level, 27 of which from the 2006-10 ACS. The smallest level of geography for tabulated socio-economic data from the ACS is whole census block groups, from the 5-year period estimates. Most tables are available at that level, but not all. For example, FHEA11 – the % of Households Receiving Supplemental Nutrition Assistance Program (SNAP) Benefits – is not available for block groups. Margins of error for block groups are often very large, making it difficult to develop reliable policy analysis. The data reflects the characteristics of the housing units and the population from a cumulative sample of households taken over 60 months. The next tier up is census tracts, also from the 5-year period estimates. The areas are larger and the margins of errors tend to be smaller, but it is harder to tailor the data to specific neighborhoods within the municipal jurisdiction. On the positive side, data is published for the portions of census tracts that fall within municipal boundaries, making it possible to analyze sub-areas within municipal jurisdictions with more precision.

Although the original indicators were not collected for race/ethnic sub-groups, SFRPC identified those indicators for which such data is available from the ACS 5-year estimates for either census tracts or census block groups. In most cases, the race-ethnic breakout is available only at the census tract level.

Data Collection

The SFRPC collected and analyzed this data from the 2006-10 ACS at the census block group level (where available), in order to view the data at its level of greatest spatial detail. In coordination with the staff of the two pilot cities, 15 of the 33 FHEA indicators (all from the ACS) were selected for mapping and the development of "data stories" using WEAVE. Table A-1 in Appendix F presents the list of all indicators, along with the 15 selected by the pilot cities (in yellow) and the results of the verification of availability of the data

at different levels of geography and subject matter detail. Appendix G provides detailed definitions of the 15 selected indicators, as well as the source tables in the ACS from which the data was extracted.

Reliability Analysis

The reliability of the data depends, among other things, on the size of the sample for each publication period. There are trade-offs in the degree of reliability of the data as we choose the level of spatial detail, subject matter detail, and time-span of the data we use. Generally, as we look at smaller geographies and more detailed characteristics, we find higher margins of errors. By way of example, for median household income from the 2006-10 ACS for the Cities of Hollywood and Opa-locka, only one-third of the 114 block groups had margins of errors of less than 25%, while 78% of the 41 census tracts had margins of errors of less than 25%. The 5-year period estimates of median household income for 2007-11 showed 29% of block group margins of errors and 73% of census tract margins of errors were below 25% of the corresponding estimates (see Table 2). On the other hand, for a given larger geography, the 1-year estimates generally will have higher margins of errors than the 5-year estimates, but they are more useful for analyzing the current characteristics of the population.

Table 2. Median Household Income in Opa-locka and Hollywood: Frequency Distribution of Margins of error as a Percent of the Estimate for Census Block Groups and Census Tracts, 2006-10 and 2007-11

Range of Margins of error as a % of the Estimate	Census Block Groups				Census Tracts			
	Frequency		Percentage		Frequency		Percentage	
	2006-10	2007-11	2006-10	2007-11	2006-10	2007-11	2006-10	2007-11
<10%	0	1	0.00%	0.88%	1	5	2.44%	12.20%
10% to <25%	38	32	33.33%	28.07%	31	25	75.61%	60.98%
25% to <50%	51	57	44.74%	50.00%	9	10	21.95%	24.39%
50% to <75%	16	15	14.04%	13.16%	0	1	0.00%	2.44%
75% to <100%	6	6	5.26%	5.26%	0	0	0.00%	0.00%
100%+	3	3	2.63%	2.63%	0	0	0.00%	0.00%
Total	114	114	100.00%	100.00%	41	41	100.00%	100.00%

Source: Census Bureau, American Community Survey

Figure 6 illustrates the different range of confidence intervals (plus and minus the margins of error) for median household income by census block group in Opa-locka for the two most recent ACS 5-year releases. It includes the confidence interval for the City as a whole as well, which illustrates the greater reliability of the estimates as the geographic aggregation increases. The Margins of error of the median household income estimate for Opa-locka in 2006-10 was 23.9% of the estimate, falling to 12.4% of the estimate in 2007-11.

Figure 6. Opa-locka: Median Household Income Estimates and Confidence Intervals by Census Block Group, 2006-10 and 2007-11
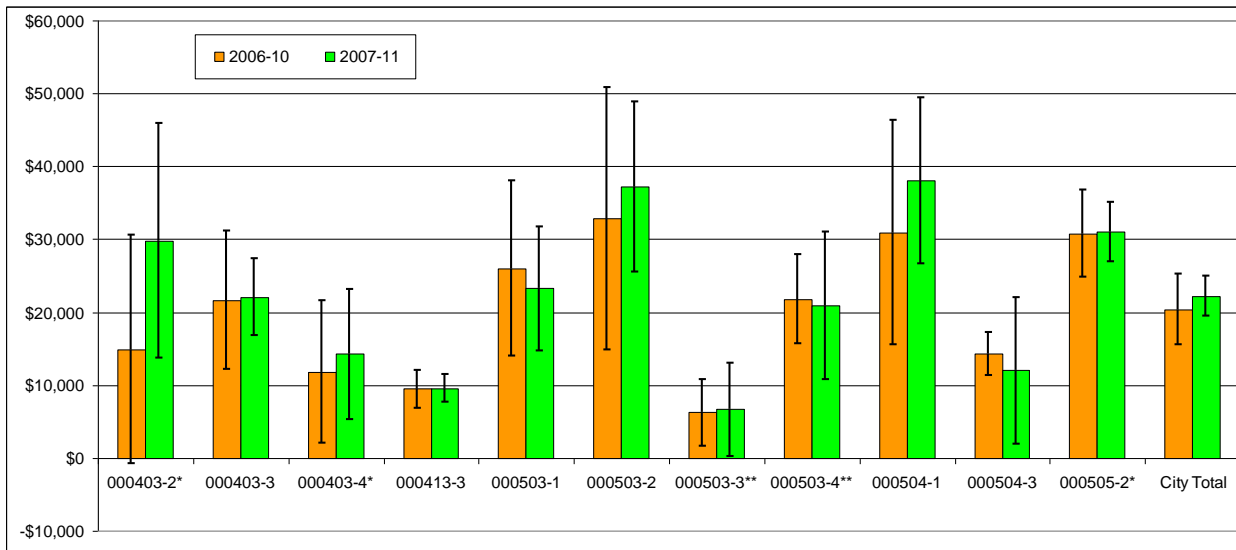
Source: Census Bureau, American Community Survey

The values for the City totals of the 15 FHEA indicators selected for analysis are presented in Table 3 (Hollywood) and Table 4 (Opa-locka), along with the lowest to highest range of the values for the block groups in each city.

Table 3. City of Hollywood (103 block groups, one with no residents)

Variable Name	Description	Hollywood		
		City Total	BG Low	BG High
FHEA06	Median Household Income ($)	$45,699	$17,034	$126,339
FHEA08	% of All Persons in Poverty	13.67%	0.00%	53.54%
FHEA09	Of Families with Children, % in Poverty	12.90%	0.00%	66.67%
FHEA10alt	% Unemployed (Labor Force)	9.51%	0.00%	27.36%
FHEA12	% Without a High School Diploma	14.04%	0.00%	41.22%
FHEA14	% With at least a Bachelor's Degree	27.53%	0.00%	60.00%
FHEA18	% Owner-Occupied Housing Units	63.11%	4.81%	100.00%
FHEA19	% Vacant Housing Units	19.24%	0.00%	69.95%
FHEA20	% Single Parent Households with Own Children	8.54%	0.00%	35.51%
FHEA21	% Households with Children Under 18	27.18%	0.00%	61.71%
FHEA22	% Households with Persons 65+	26.20%	2.78%	68.48%
FHEA24	Renter Affordability Gap / Median Gross Rent	$179	-$363	$1,671
FHEA25	% Owner Households Spending 30%+ (Owner Costs)	55.36%	0.00%	100.00%
FHEA33	% Households without a Vehicle	9.09%	0.00%	39.46%

Source: Census Bureau, 2010 American Community Survey

Table 4. City of Opa-locka (12 block groups, one with no residents)

Variable Name	Description	Opa-locka		
		City Total	BG Low	BG High
FHEA06	Median Household Income ($)	$20,379	$6,268	$32,895
FHEA08	% of All Persons in Poverty	31.85%	6.41%	69.40%
FHEA09	Of Families with Children, % in Poverty	39.48%	0.00%	85.71%
FHEA10alt	% Unemployed (Labor Force)	13.51%	2.34%	59.09%
FHEA12	% Without a High School Diploma	38.51%	27.95%	56.76%
FHEA14	% With at least a Bachelor's Degree	8.16%	0.00%	18.35%
FHEA18	% Owner-Occupied Housing Units	30.86%	3.04%	82.06%
FHEA19	% Vacant Housing Units	13.65%	0.00%	22.82%
FHEA20	% Single Parent Households with Own Children	22.76%	0.00%	41.22%
FHEA21	% Households with Children Under 18	35.56%	13.55%	51.85%
FHEA22	% Households with Persons 65+	25.64%	0.00%	67.56%
FHEA23	Owner Affordability Gap / Median Value	-$102,863	-$236,933	$0
FHEA24	Renter Affordability Gap / Median Gross Rent	-$245	-$834	$52
FHEA25	% Owner Households Spending 30%+ (Owner Costs)	70.06%	42.68%	100.00%
FHEA33	% Households without a Vehicle	21.99%	7.44%	45.79%

Traditional Maps for Analysis

To provide a contrast with the innovative WEAVE approach, GIS was used to create maps of each city's block groups reflecting single indicators. Appendices H and I contain maps for each of the 15 FHEA indicators for the cities of Hollywood and Opa-locka, respectively.

Summary and Conclusions

• Socio-economic data released annually by the Census Bureau is a valuable tool for performing analysis of cities and neighborhoods and developing policy alternatives to address equity issues.

• For small cities and neighborhoods, there is little choice but to use census block groups as the basic unit of analysis, while recognizing that the margins of error for American Community Survey data will often be very high.

• For larger cities and neighborhoods, as well as county-level analysis, census tract data may be a better choice to support analysis of sub-areas that can help to direct policy decisions, given the greater reliability of the estimates.

• The FHEA indicators represent a very useful set of measures for local governments and community stakeholders to be able to use in analyzing their communities and developing policy alternatives. It may be useful to expand the availability of those indicators for all of the 121 municipalities in Southeast Florida, with data at the census block group level.

• Much of the data in the 5-year period estimates from the American Community Survey can be used to develop profiles of the municipalities and communities of the region, and should be another high priority.

GLOSSARY OF KEY TERMS

A F F O R D A B L E   H O U S I N G housing units with restrictions on rent or price to no more than 30 percent of a household's monthly income. The lack of affordable housing is a significant hardship for low-income households preventing them from meeting their other basic needs, such as nutrition and healthcare, or saving for their future and that of their families (www.hud.gov).

C O M M U N I T Y   I N D I C A T O R measurements that provide information about past and current trends and assist planners and community leaders in making decisions that affect future outcomes (APA report 517).

D A T A   C O M M O N S an online application that serves as storage space for data, an interactive platform for exploring data, and a collaborative space for engaged indicator analysis.

D A T A   W A R E H O U S E A system to store, retrieve, and manage large amounts of data accumulated from a wide range of sources for potential use to guide management decisions.

E Q U I T Y fair and just inclusion in distribution of access to economic, social, and environmental assets, including affordable housing, health services, safety resources, and education opportunities. A state where every person has the opportunity to fully participate in the economic, social, and political life, regardless of race, ethnicity, income, age, gender, or locality.

I N E Q U I T Y a lack of justice through the uneven dispersion of resources and opportunities. An example of inequity is when two people have the same illness, but only one person gets treatment because he can afford healthcare.

I N Q U I R Y - B A S E D   L E A R N I N G learning that is facilitated through interactions to explore possible answers for a given question, that then lead to more questions and investigations.

O P P O R T U N I T Y the set of conditions that limit or permit possibilities and advantages such as education, healthcare, and other services. It is augmented with ethical behavior or reduced through unethical behavior.

W O R K F O R C E   H O U S I N G housing which is affordable to those whose total household income does not exceed 140 percent of the area median income, adjusted for household size.

A P P E N D I X   L I S T