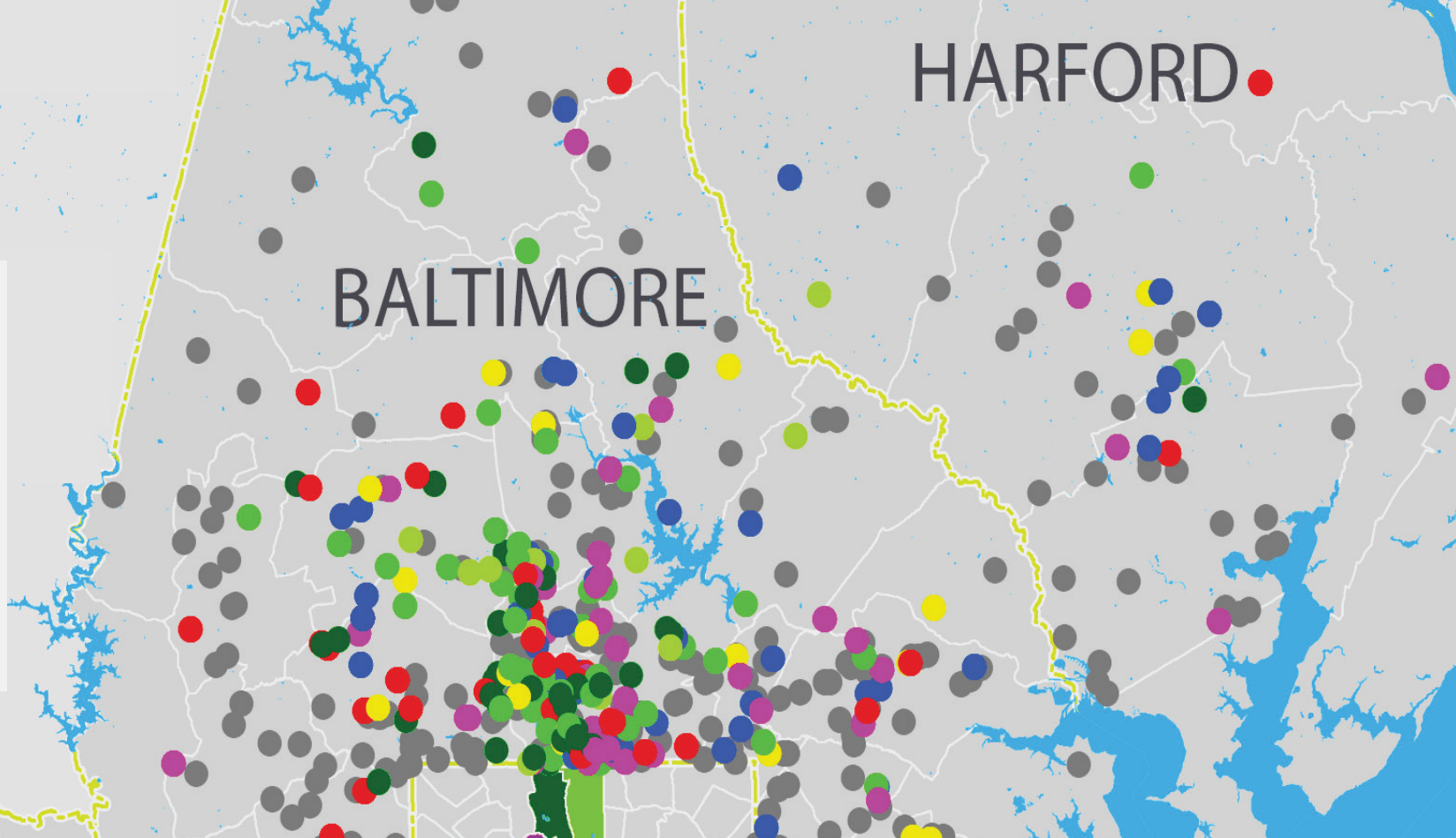




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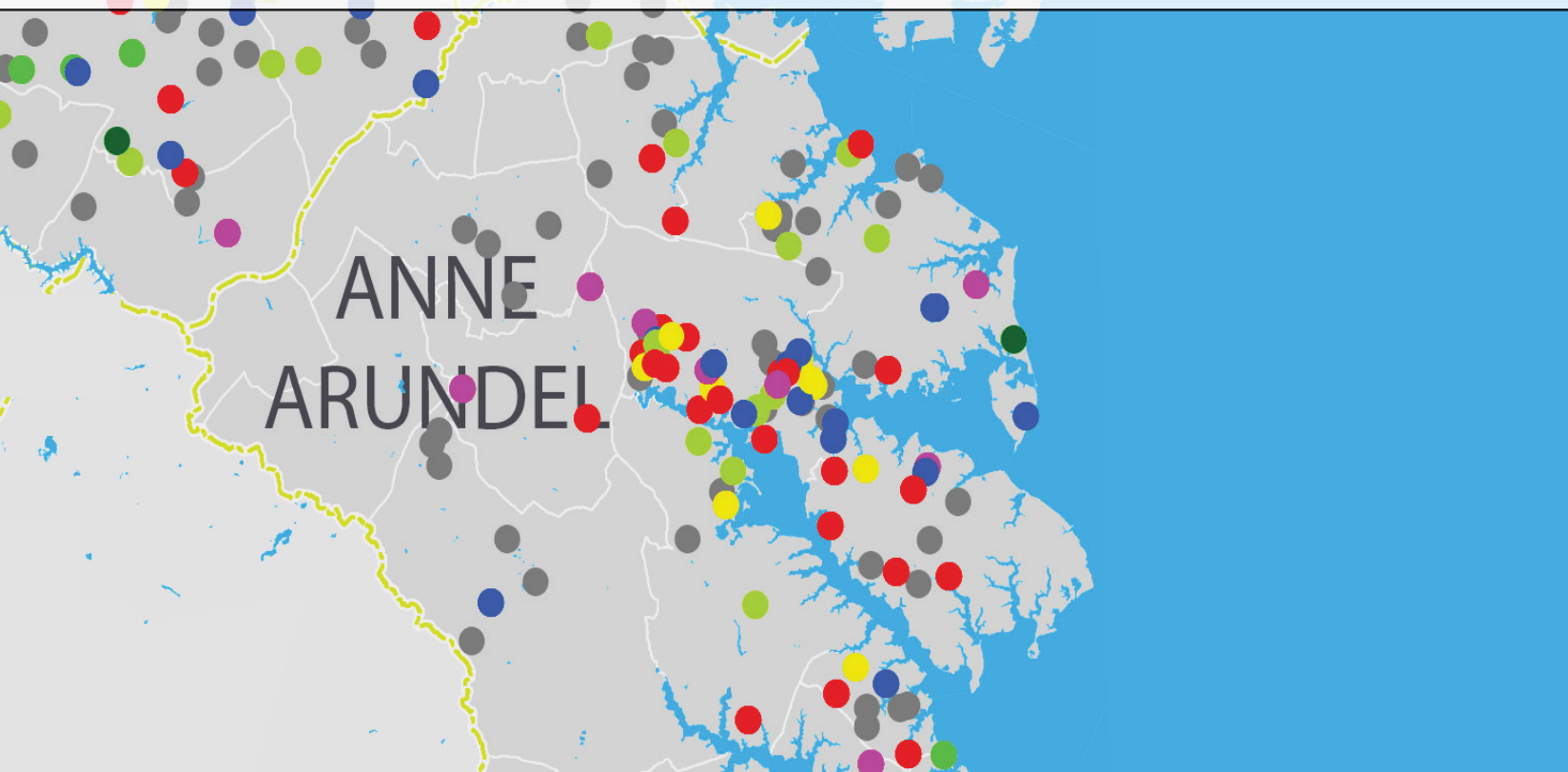
Jacob France Institute

Grow Baltimore

Brief #2: Migration Patterns by Community
in the Baltimore Region

May 2015

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Introduction

This is the second research brief in a series which focuses on the communities in Baltimore City that attract or receive migrants to and from the metropolitan region.

In 2011, Baltimore Mayor Stephanie Rawlings-Blake established the Grow Baltimore initiative and set a collective goal of increasing the city's population by 10,000 families by 2020. For Baltimore, like many other US cities on the eastern seaboard, such a goal is ambitious because it would reverse nearly 6 decades of population loss. However, since 2000, Baltimore has shown signs of being well-poised to grow so that the goal has the potential of being realized.

The Grow Baltimore Initiative aims to amplify the "pull" factors that both attract people to the city and retain the current population while also addressing and reducing the "push" factors that make the city less appealing. The purpose of this series of briefs is to help all stakeholders in Baltimore (public agencies, foundations, businesses, community organizations and residents) understand the trends that are already working to attract new residents to Baltimore and better identify the reasons why people are moving out.

Data Sources

In the previous brief, *Grow Baltimore Brief #1*, the patterns of migration to Baltimore City overall were analyzed using predominantly Census-based or national sources of data. This second brief aims to measure migration at smaller areas, using more fine-grained, local datasets that the Baltimore Neighborhood Indicators Alliance-Jacob France Institute (BNIA-JFI) has been collecting for more than a decade. Baltimore City is often referred to as a city of "neighborhoods" so it is important to understand the community-based context for growth, which areas

Key Findings

Overview of Community Change

- 19 Baltimore City communities experienced an increase in population between 2000 and 2010, with the greatest increase in Downtown/Seton Hill (+35.2%).
- 34 communities experienced a decrease in population between 2000 and 2010, with the greatest decrease in Greenmount East (-29.2%).

Homeownership Incentives and Migration

- 79% of city homeownership incentive recipients providing a previous address were already living in Baltimore City. 98% lived elsewhere in Maryland. About 1% stated that they came from DC.
- Recipients of these programs tended to buy in Cedonia/Frankford (137 instances) and Patterson Park North & East (126)

Homeownership Migration Flows

- One third of homeowners living in Baltimore City who sold their home and moved locally stayed within Baltimore City. Two-thirds moved to one of the surrounding counties.
- More than 50% of those homeowners selling in Mount Washington/Coldspring and Greater Charles Village/Barclay bought again elsewhere in the City.
- 24% of households selling in Greater Roland Park/Poplar Hill bought again in the same community.
- Towson/Loch Raven in Baltimore County attracted the most homeowner households (9%) from Baltimore City.
- Using the 5-year Homeowner Retention Index, Baltimore City retained 73.5% of owner-occupied households between 2008 and 2013. Loch Raven had the highest retention (82.5%) and Canton had the lowest (58.6%).

are receiving and/or sending migrants and what are the specific patterns to and between communities that might inform a retention strategy in the future. To describe communities, the findings in this brief utilizes Community Statistical Areas (CSAs) to represent communities in Baltimore City and Regional Planning Districts (RPDs) to describe communities in the broader metropolitan region¹. Both CSAs and RPDs are groups of US census tracts that respect local conceptions of neighborhoods and names/designations have been assigned so that data can be associated with a more familiar place (See Figure 1). This brief is organized around the following topics:

1. *Overview of Community Change*

Question: **Which communities grew in Baltimore between 2000 and 2010?**

Data Sources: U.S. Decennial Census.

2. *Homeownership Incentives and Migration*

Question: **What Baltimore communities are attracting residents based on the availability of homeowner incentives programs?**

Data Sources: Baltimore City's Department of Housing and Community Development.

3. *Migration Patterns of Homeowners in the Baltimore Region*

Question: **Are there specific migration patterns between communities inside Baltimore and other communities in the region?**

Part of BNIA-JFI's role as a local data intermediary in Baltimore is to issue the annual [Vital Signs](#) report, which "takes the pulse" of each CSA through 150 quality of life indicators. These indicators and the underlying datasets—drawn from 50 different sources including city administrative records—provide fine-grained information about migration in Baltimore City and the surrounding counties. Two datasets in particular were used to find patterns over time:

MdProperty View²: Maintained by Maryland's Department of Planning, this dataset includes information from all the jurisdictions in the state about every parcel (land) and structure (building). The 2013 file includes 1.3 million entries statewide and has averaged 234,747 entries in Baltimore City between 2000 and 2013. The data includes address, type of structure (residential or commercial), owners' names, cost, owner-occupancy and several other characteristics about real property in the state.

RBI MRIS³: The RealEstate Business Intelligence (RBI) is a compilation of the multiple listing service (MLS) and the Metropolitan Regional Information Systems (MRIS) and provides quarterly real estate sales information. The dataset includes the address, list price and date, selling price and date, as well as whether the transaction involved a foreclosure, short sale, or auction.

¹ For more information on CSAs and RPDs respectively, see <http://bniajfi.org/communities/> and <http://www.baltometro.org/information-center/documents/category/106-regional-planning-districts>

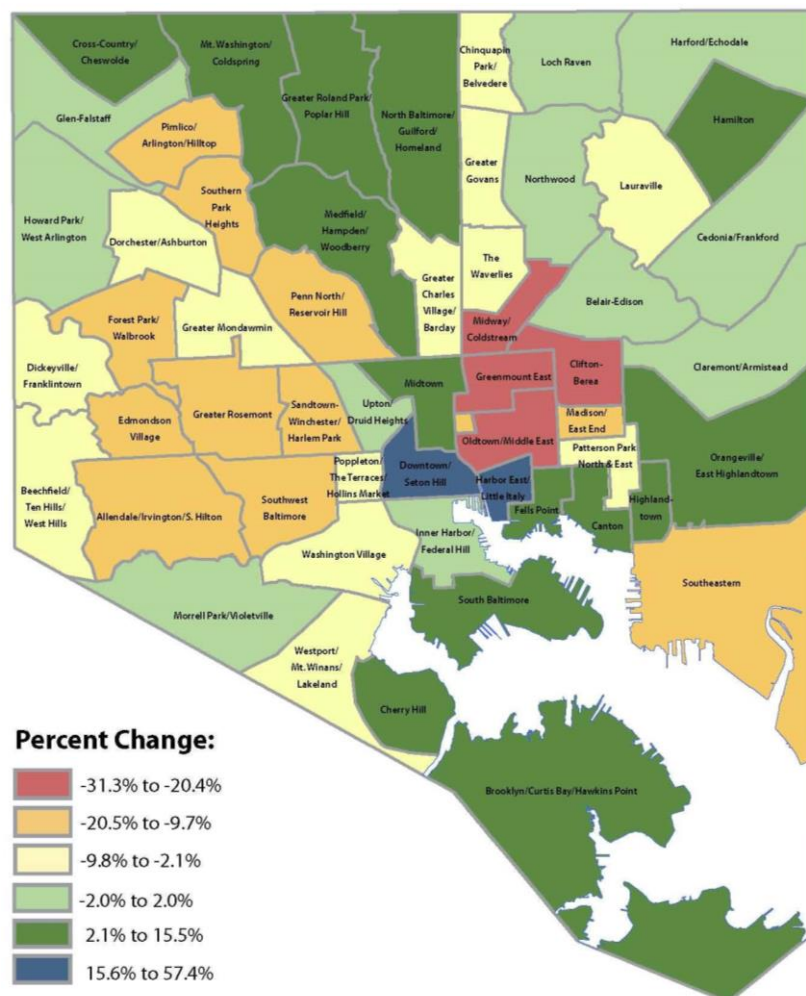
² MdProperty View is available online at <http://planning.maryland.gov/OurProducts/PropertyMapProducts/MDPropertyViewProducts.shtml>

³ For more information on RBIntel, see <http://www.rbintel.com/>

Overview of Community Change

Although the total population of Baltimore City declined 4.6% between 2000 and 2010, about a third of all communities in Baltimore (19 out of 55 CSAs) increased in population over the decade. Figure 1 shows the variation of population gains and losses by community between 2000 and 2010. The City experienced significant population growth in the Downtown (35.2%) and Harbor East areas largely due to the development of new residential housing opportunities from the conversion of Class B office space and the development of former maritime-related parcels such as the former Allied Signal building in Harbor East. Several other areas of the City experienced population growth as well including Canton (15.5%), Cross-Country/Cheswolde (10.5%), and South Baltimore (8.9%). Of the 34 CSAs that experienced a decline in population, the largest decreases occurred in Greenmount East (-29.2%), Clifton-Berea (-21.0%), and Midway/Coldstream (-20.4%).

Figure 1: Population Change by Community Statistical Area (2000-2010)



Source: U.S. Census 2000 & 2010

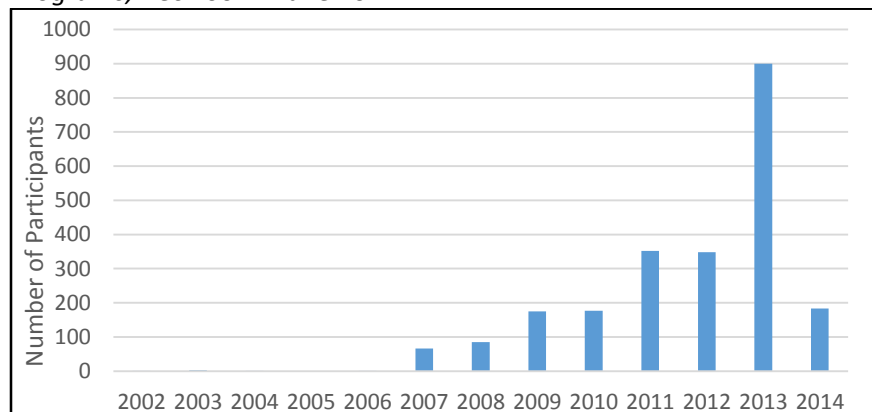
Homeownership Incentives and Migration

The decision to move for any individual or household is based on a complex set of considerations that takes into account economic, social and locational realities⁴. From a public policy perspective, homeownership incentives from the Baltimore Homeownership Incentive Programs (B-HiP) represent a key economic influencer in the decision to move to Baltimore City by lowering the upfront and in some cases longer time costs for potential homeowners. Homeowners who take advantage of these incentives are often new residents either to Baltimore City or to a particular community with the city⁵. Based on analysis of BHiP data between December 2002 and June 2014, uptake across all programs has steadily increased particularly after 2007 (See Figure 2).

⁴ See *Grow Baltimore Brief #3* for full discussion on “Determinants of Migration”

⁵ More information about the Baltimore Homeownership Incentive Program (B-HiP) is available at <http://www.vacantstovalue.org/Incentives.aspx>

Figure 2: Number of Participants in Baltimore City Homeownership Incentive Programs, Dec 2002 – June 2014



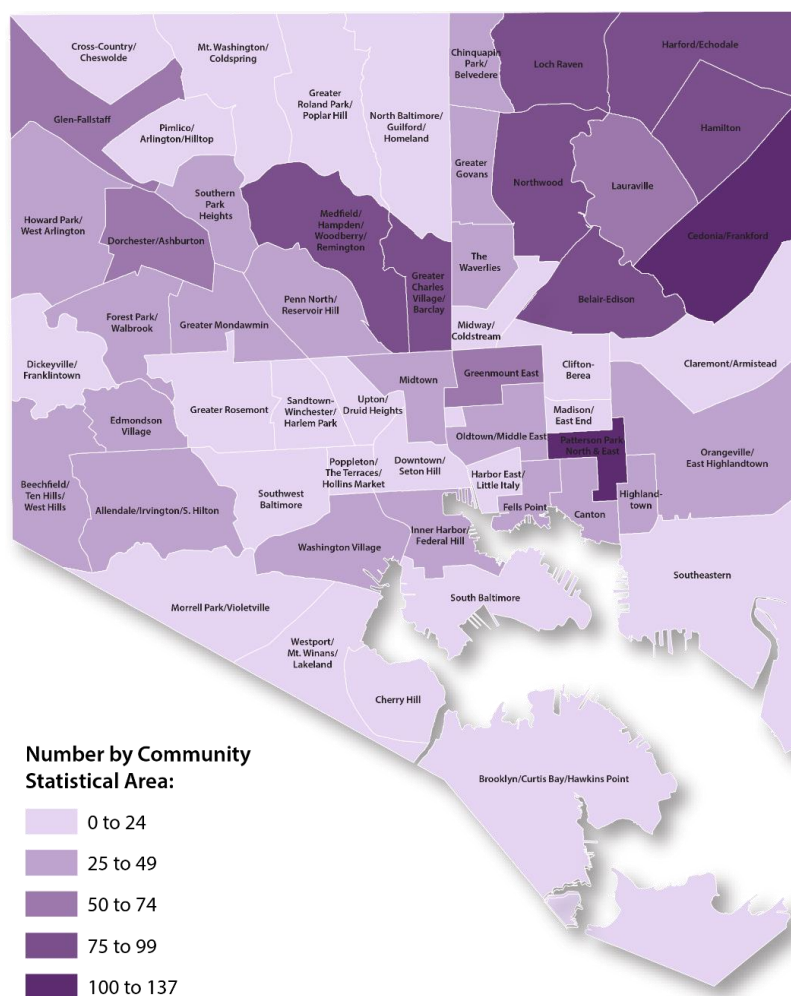
Source: Baltimore City's Department of Housing and Community Development

Homeownership Incentives by Community

Since many of the incentive programs target specific types of properties (i.e. Vacants to Value) or specific types of households (i.e. Community Development Block Grant Homeownership Assistance Program), the overall impact to communities can only be understood by analyzing all the incentives together. As Figure 3 shows, the homeownership incentives overall are clustered in specific Baltimore City communities, such as Cedonia/Frankford (137) and Patterson Park North & East (126).

The spatial distribution varies for each specific homeownership incentive program (see Table 1). For example, the Community Development Block Grant Homeownership Assistance Program and Baltimore City Employee Homeownership Program have heavy concentrations in Cedonia/Frankford, with 60 and 30 participants respectively. Buying into Baltimore (32) and Live Near your Work (35) have high concentrations in Patterson Park North & East. To date, the Vacants to Value program has high concentrations in Greater Charles Village/Barclay (34).

Figure 3: Distribution of Homeownership Incentives by CSA, 2002-2014



Source: Baltimore City's Department of Housing and Community Development

Table 1: Number and Location of Homeownership Incentives by Program Dec 2002 – June 2014

Program	Total	Earliest Date	Latest Date	Most frequent CSA (No.)	Second most frequent CSA (No.)
Community Development Block Grant Homeownership Assistance Program	539	10/29/2006	4/3/2014	Cedonia/Frankford (60)	Belair-Edison (38)
Buying into Baltimore	443	12/21/2002	1/6/2014	Patterson Park North & East (32)	Cedonia/Frankford (24)
Baltimore City Employee Homeownership Program	417	1/2/2009	4/18/2014	Cedonia/Frankford (30)	Hamilton (26)
Vacants to Value	354	8/31/2011	4/14/2014	Greater Charles Village/Barclay (34)	Greenmount East (25)
Wells Fargo City Lift	299	1/17/2013	2/27/2014	(no address available)	
Live Near Your Work	270	6/29/2003	6/16/2014	Patterson Park North & East (35)	Greater Charles Village/Barclay (28)
Total	2,322	12/21/2002	6/16/2014	Cedonia/Frankford (137)	Patterson Park North & East (126)

Source for Tables 1, 2 & 3: Baltimore City's Department of Housing and Community Development

Are Homeownership Incentives For Residential Attraction or Retention?

While the BHiP programs are clearly impacting the decision to move to specific communities within Baltimore, the question as to whether the incentives attract or retain people in Baltimore remains to be analyzed. Although only 75% (1,730) of incentive program participants provided a previous address, the vast majority (79%) of these participants previously lived in Baltimore City. Even presuming the participants without a previous address all came from outside Baltimore City, the BHiP programs serve as an effective program to retain existing residents within Baltimore. Nearly all of analyzable records (98%) had a previous residence in Maryland (see Tables 2 & 3). Within the Baltimore metropolitan region, 11% of the participants came from Baltimore County.

Table 2: Incentives by State of Origin

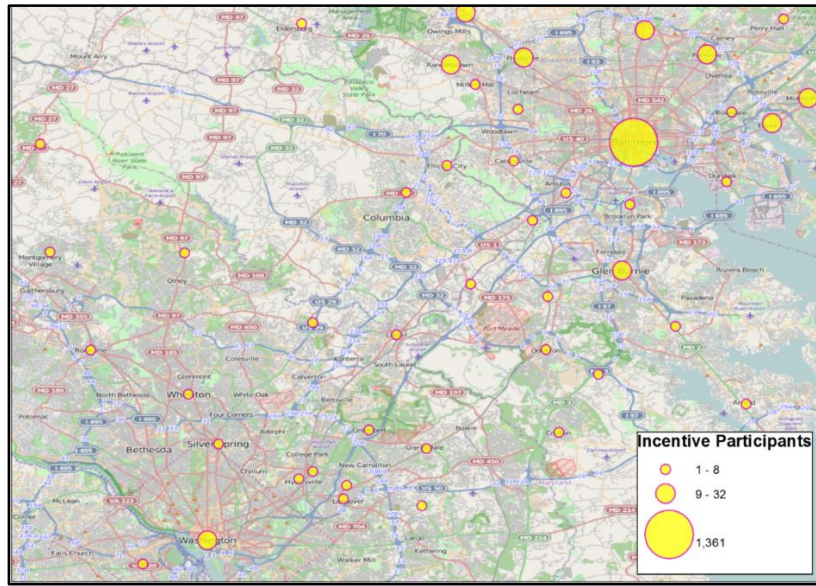
Origin	State	Count	%
Maryland	MD	1,691	97.7
Outside Maryland	DC	12	0.7
	VA	11	0.6
	PA	6	0.3
	NJ	3	0.2
	NY, TX	2 ea.	0.1
	CT, LA, OH	1 ea.	0.1
Total		1,730	100

Table 3: Incentives by MD County of Origin

County in MD	Count	% MD	% Total
Baltimore City	1,369	81.0	79.1
Baltimore County	188	11.1	10.9
Anne Arundel County	31	1.8	1.8
Montgomery County	29	1.7	1.7
Harford County	22	1.3	1.3
Prince George's County	20	1.2	1.2
Howard County	20	1.2	1.2
Other Counties	12	0.7	0.7
Total	1,691	100	97.9

Figure 3 (below) displays the previous place of residence for homeownership incentive recipients with a listed prior address in the mid-Atlantic region. The size of the circles reflects the number of recipients moving to Baltimore City from their original location. The vast majority of participants in the BHIP incentives were from Baltimore City.

Figure 3: Distribution of Homeownership Incentives by City of Origin



Source: Baltimore City's Department of Housing and Community Development; Background: OpenStreetMap; Analysis: BNIA JFI 2014

Migration Patterns of Homeowners in the Baltimore Region

As *Grow Baltimore Brief #1* shows, the vast majority of moves by Baltimore residents were to the surrounding jurisdictions in the metropolitan area. However, to understand what specific communities within the counties tend to be the destinations for movers out of Baltimore, this section provides findings from analysis of five years of MdProperty View records to match new residences for any Baltimore City resident-owners who may have sold their home between January 2009 and March 2014. Based on a qualifying sale in the database, the name of the seller and date of sale were checked against purchases in the four surrounding counties (Anne Arundel, Baltimore, Harford, and Howard). If the first and last name matched and the purchase in the county was within one year of the sale in the city, the linked records were identified as the origin and destination of a move. This method identified 1,769 movers in 1,460 households⁶. As implemented here, the technique detects moves within Baltimore City and from Baltimore City to the surrounding counties. A major advantage of this approach is that it allows migration tracking down to the parcel level, providing a greater volume of migration data and more details about geographic patterns and housing characteristics than sources provided by the U.S.

⁶ As will be discussed in more detail in the *Grow Baltimore Brief #3*, postcards were sent to the 1,460 county addresses with an invitation to participate in a focus group of recent movers. Only 11 (0.7%) were returned as undeliverable and 3 recipients (0.2%) reported that they had, in fact, not moved from Baltimore City.

Census⁷. However, this method has inherent biases as well. Matches work best with individuals whose names are relatively unique and do not change after a move; the technique does not enable tracking of renter-occupants who may move even if the property owner does not change. Based on this method, 34% of the matched households stayed within Baltimore City and 66% of the moving households migrated to one of the surrounding counties⁸ (Table 4). The most matches occurred in Baltimore County (632 households, 43% of the total).

Table 4: Overview of All Baltimore City Movers' Destinations

Rank	County	Count	%
1	Baltimore County	632	43
2	Baltimore City	501	34
3	Anne Arundel	143	10
4	Howard County	119	8
5	Harford County	65	5
Total		1460	100

Source: MdProperty View data (2009-2014)

This analysis allows for more detailed destinations at the sub-county level within the region. Towson/Loch Raven was the destination for the greatest number (115) of homeowners migrating out of Baltimore (See Table 5). Many existing Baltimore City homeowners did also purchase again in the city, with North Baltimore/Guilford/Homeland and Greater Roland Park/Poplar Hill being the most popular destinations.

Table 5: Top 10 Destinations of Migration by Number of Moves

Rank	Community	County	Households
1	Towson/Loch Raven	Baltimore County	115
2	North Baltimore/Guilford/Homeland	Baltimore City	79
3	Greater Roland Park/Poplar Hill	Baltimore City	68
4	Greenspring Valley/Pikesville	Baltimore County	64
5	Lutherville	Baltimore County	58
6	Perry Hall/Whitemarsh	Baltimore County	47
7	Ruxton	Baltimore County	44
8	Severna Park	Anne Arundel County	43
9	Ellicott City	Howard County	36
10	Edgewood/Joppa	Harford County	32

Source: MdProperty View data (2009-2014)

⁷ The [Census Flows Mapper](#) provides county level flows and therefore see Baltimore City as a single geographic area. The current [Public Use Micro Sample](#) divides Baltimore City into only five geographic areas. In contrast BNIA-JFI divides the city into 55 community statistical areas.

⁸ The property records analysis did not capture homeowner moves to other counties in Maryland, to elsewhere in the U.S., or to other countries.

The analysis shows which communities in Baltimore have the most homeowners originating moves in the region. Across all matches, Inner Harbor/Federal Hill originated the greatest number (160) of migrating households (see Table 6).

Table 6: Top 10 Origins in Baltimore City by Number of Moves

Rank	Community	Households
1	Inner Harbor/Federal Hill	160
2	North Baltimore/Guilford/Homeland	133
3	Medfield/Hampden/Woodberry/Remington	111
	Canton	111
4	Greater Roland Park/Poplar Hill	92
5	South Baltimore	78
6	Fells Point	61
7	Highlandtown	56
8	Mount Washington/Coldspring	51
9	Harford/Echodale	49
10	Patterson Park North & East	45

Source: MdProperty View data (2009-2014)

Many Baltimore City homeowners sell and buy again in the *same* community (see Table 7). For example, 28 homeowners living in North Baltimore/Guilford/Homeland during the five years under analysis sold their home and purchased another home in the same community.

Table 7: Top 5 Moves Within the Same Community

Rank	Origin & Destination Community	Households
1	North Baltimore / Guilford / Homeland	28
2	Inner Harbor / Federal Hill	26
3	Greater Roland Park / Poplar Hill	22
4	South Baltimore	13
5	Midtown	8

Source: MdProperty View data (2009-2014)

Homeowners in some communities are more likely to buy and live in Baltimore City again, even if they move out of their current community (Table 8). For example, a significant portion of owner occupied housing sold in Mount Washington/Coldspring (57%) and Greater Charles Village (56%) resulted in a purchase elsewhere in Baltimore City; these neighborhoods appear to enable residents to develop a positive view of the city as whole which influences the decision to stay.

Table 8: Top 5 Origins by Percent Buying in Baltimore City (at least 30 sales)

Rank	Community	% Buying in Baltimore City	% Buying in same CSA
1	Mount Washington/Coldspring	57	14
2	Greater Charles Village/Barclay	56	5
3	Fells Point	49	8
4	Greater Roland Park/Poplar Hill	46	24
5	North Baltimore/Guilford/Homeland	43	21

Source: BNIA-JFI 2014 using MdProperty View data (2009-2014)

Identifying and Mapping the Primary Homeowner Migration Flows

Matching the top origin communities with the top destination communities identifies the primary homeowner migration flows within and from Baltimore City. Several origin-destination combinations appear suggesting that residents in specific Baltimore communities tend to move to specific destinations with similar characteristics (see Table 9). For example, 17 North Baltimore/Guilford/Homeland homeowners sold their home and moved to the Ruxton area of Baltimore County. In general, there are clear migration flows to the communities in the central portions of Baltimore County.

Table 9: Top 5 Moves with a Different Origin and Destination

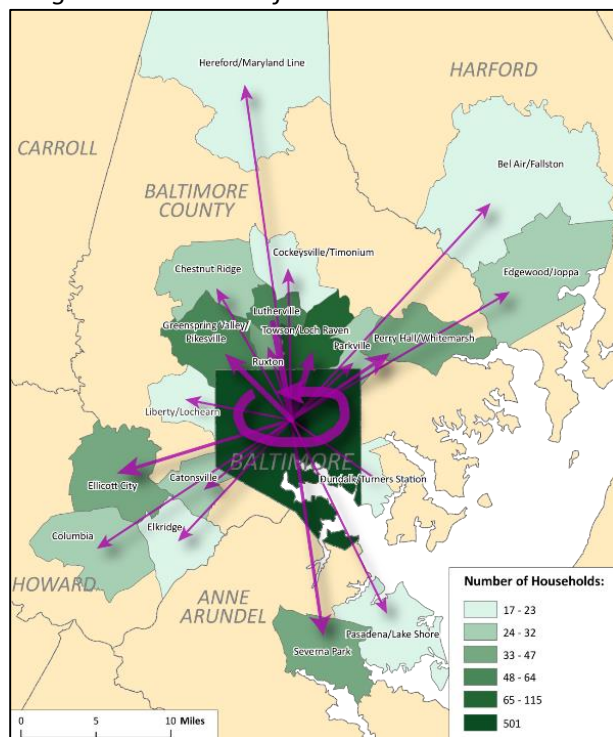
Rank	Origin Community in Baltimore City	Destination Community		Households
1	North Baltimore/Guilford/Homeland	Ruxton	Baltimore County	17
2	Inner Harbor/Federal Hill	Towson/Loch Raven	Baltimore County	15
	Cross-Country/Cheswolde	Greenspring Valley/ Pikesville	Baltimore County	15
	Medfield/Hampden/Woodberry/Remington	Towson/Loch Raven	Baltimore County	15
3	North Baltimore/Guilford/Homeland	Towson/Loch Raven	Baltimore County	14
	Greater Roland Park/Poplar Hill	Towson/Loch Raven	Baltimore County	14
4	Medfield/Hampden/Woodberry/Remington	North Baltimore/Guilford/Homeland	Baltimore City	13
	North Baltimore/Guilford/Homeland	Greater Roland Park/ Poplar Hill	Baltimore City	13
5	Inner Harbor/Federal Hill	South Baltimore	Baltimore City	12

Source: MdProperty View data (2009-2014)

The community-to-community migration flows described in Tables 5 and 9 (above) point to a pattern of relatively short-distanced moves for out-migrants of Baltimore City to specific communities in Baltimore, Howard, Anne Arundel and Harford Counties (see Figures 4 and 5 below). This analysis in particular

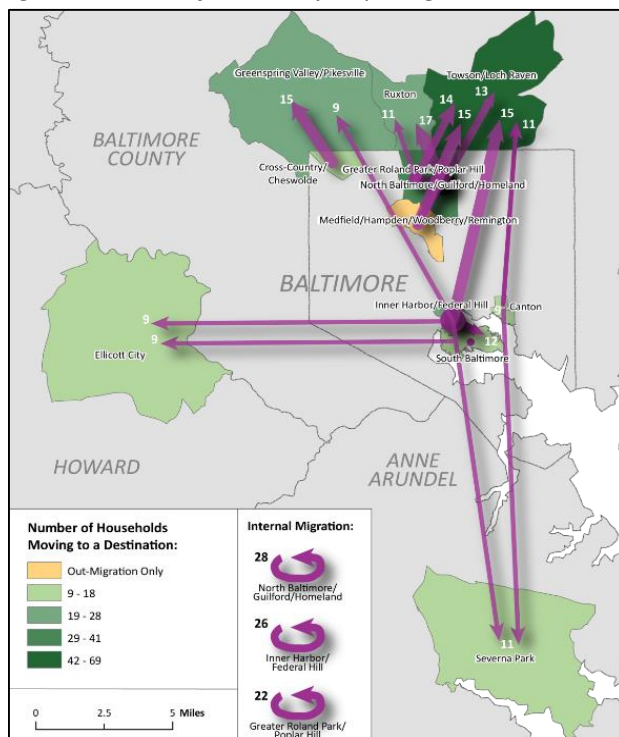
shows the clear attraction to the central portions of Baltimore County, the northeast portions of Howard County, the Annapolis region of Anne Arundel County and the Aberdeen/Bel Air area of Harford County.

Figure 4: Overview of All Moves From Baltimore



Source: MdProperty View data (2009-2014)

Figure 5: Detail of Moves by Top Origin Communities



Source: MdProperty View data (2009-2014)

The text box below shows another perspective on the trends in the previous tables (Figure A) and discusses a new tool for analyzing and visualizing migration flows.

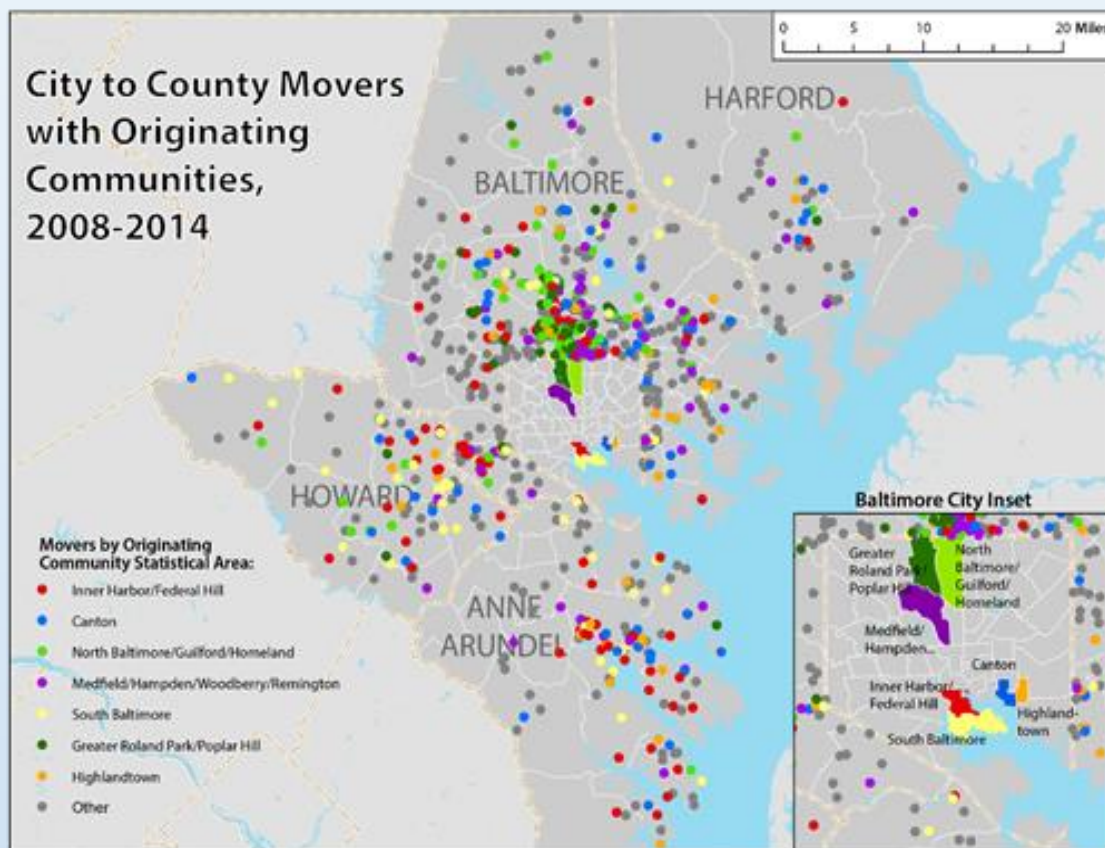
Visualizing and Analyzing Migration: *Flow Baltimore*

The migration pattern, based on many individual decisions, is a complex phenomenon. Specialized visualization and analysis tools can help community stakeholders discover trends of where residents from their communities are moving. BNIA-JFI has developed an interactive website of homeowner migration data called *Flow Baltimore* at flowbaltimore.bniajfi.org. This migration analysis system permits examining the number of households moving to, from, and between specific communities as well as home characteristics such as price, year built, and square footage.



The underlying data in the *Flow Baltimore* analysis comes from five years of MdProperty View records. Baltimore City resident-owners who may have sold their home between January 2009 and March 2014 were matched based on a qualifying sale in the database, the name of the seller and date of sale were checked against purchases in the four surrounding counties (Anne Arundel, Baltimore, Harford, and Howard). Figure A shows more detailed migration flows of migrants from the top 6 communities in Baltimore with matched records. Each point represents the new location of a migrating household. The color of the point reflects a household's previous location. Common migration routes are also readily discernable; for example, the Towson / Lock Raven reflects the substantial flows from Greater Roland Park/Poplar Hill and Medfield/Hampden/Woodberry/ Remington respectively.

Figure A: City to County Movers with Originating Communities 2008-2014

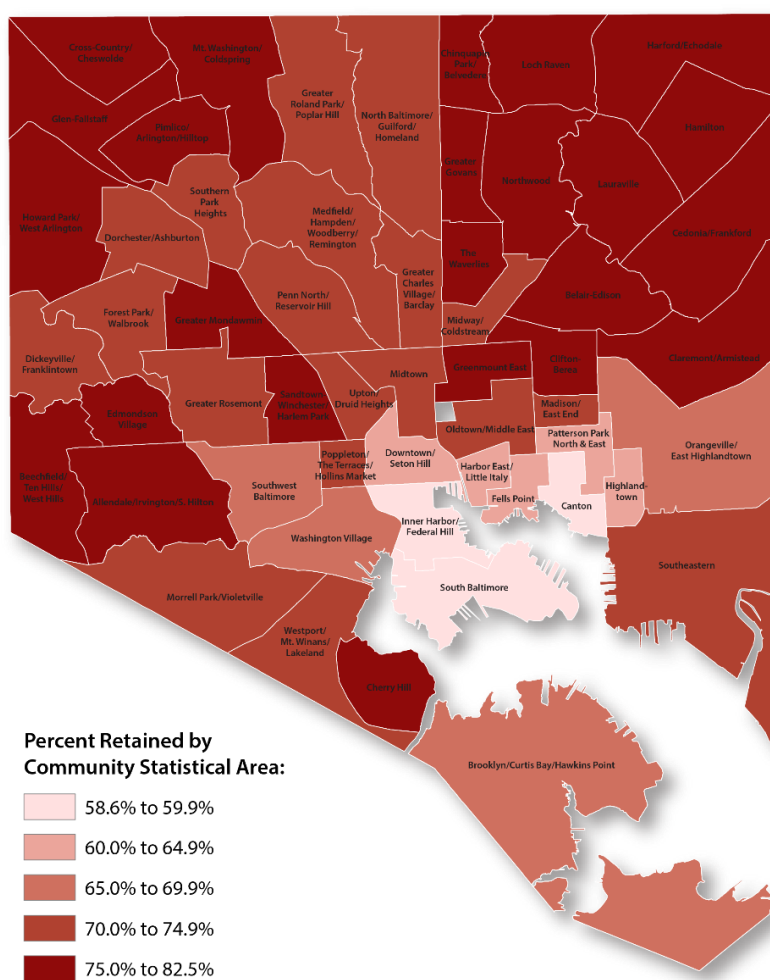


Source: MdProperty View data (2009-2014)

New Community Indicator for Grow Baltimore

To help communities track progress towards Baltimore's attainment of the Grow Baltimore goal of netting 10,000 more families, BNIA-JFI has developed a new community-based indicator⁹ to track residential retention at the CSA level. The **Five-Year Homeowner Retention Index** measures the percentage of owner-occupied households that remain under the same ownership for a five year period. Between 2008-2013, Baltimore City as a whole retained 73.5% of its owner-occupied households. There is wide variation by community (see Figure 7) with the highest retention level in Loch Raven (82.5%) and the lowest in Canton (58.6%). While some turnover is expected in any community, very high turnover communities may be where retention efforts should be strategically targeted.

Figure 5: Five Year Homeowner Retention Index (2008-2013)



Source: MdProperty View Data.

⁹ To find more information on other indicators for Baltimore's CSAs, see the *Vital Signs* report and website at www.bnijafi.org/vital_signs

Table 10: Highest 5 – 5-Year Retention Index

Rank	Community	Percent	Number
1	Loch Raven	82.5	3,516
2	Northwood	81.9	4,015
3	Beechfield/Ten Hills/West Hills	80.2	2,897
4	Cherry Hill	80.1	544
5	Glen-Fallstaff	80.0	2,989

Source: MdProperty View Data 2008-2013

Table 11: Lowest 5 – 5-Year Retention Index

Rank	Community	Percent	Number
1	Canton	58.6	2,816
2	South Baltimore	59.7	2,198
3	Inner Harbor/ Federal Hill	59.9	3,829
4	Highlandtown	61.3	2,020
5	Patterson Park North & East	62.9	3,145

Source: MdProperty View Data 2008-2013

Conclusion

The purpose of this second research brief was to provide more fine-grained details about the communities within Baltimore that tend to receive and send migrants and the specific destinations within the metropolitan region to which Baltimore homeowners are moving. In general, the Downtown areas of Baltimore, including Fells Point and South Baltimore, as well as communities in northwest Baltimore have been growing over the past decade. Homeownership incentives from the Baltimore Homeownership Incentive Programs (B-HIP) especially help to retain residents. The vast majority (79%) of participants previously lived in Baltimore City. The incentives are positively impacting several communities, especially Cedonia/Frankford and Patterson Park North & East.

Based on analysis of Baltimore homeowners between 2009 and 2014, there are specific community-to-community moves discernible throughout the region. For homeowners who left Baltimore, there are clear attractions to the central portions of Baltimore County, the northeast portions of Howard County, the Annapolis region of Anne Arundel County and the Aberdeen/Bel Air area of Harford County. Conversely, several communities in Baltimore City already retain residents according to several measures. For example, 24% of owners living in Greater Roland Park/Poplar Hill bought within the same community again. While only 14% of owners living in Mount Washington/Coldspring bought within the same community, 60% of them purchased again elsewhere within the city.

Based on a newly-developed 5-year homeowner retention index, Baltimore retained 73.5% of homeowners overall between 2008 and 2013. The vast majority of owners living in Loch Raven (83%) and Northwood (82%) in 2008 were still there over the 5 year period. By contrast, only 59% of the owner-occupied units in Canton and 61% in Highlandtown remained owners between 2008 and 2013.

These findings provide community stakeholders with vital information about household preferences by identifying specific areas in neighboring counties that compete for current and potential city residents. Individuals and organizations seeking to move Baltimore City closer to the Grow Baltimore goal of netting 10,000 more families can use this information to guide attraction and retention programs.

Acknowledgements: Special thanks to the Mayor's Grow Baltimore Advisory Team for the members' thoughtful comments throughout this project. This research was funded by the Goldseker Foundation.



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