

# Moving Toward a Shrinking Cities Metric: Analyzing Land Use Changes Associated With Depopulation in Flint, Michigan

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## Abstract

*Cities around the globe have experienced depopulation or population shrinkage at an acute level in the last half century. Conventional community development and planning responses have looked to reverse the process of depopulation almost universally, with little attention paid to how neighborhoods physically change when they lose population. This article presents an approach to study the physical changes of depopulating neighborhoods in a novel way. The approach considers how population decline creates different physical impacts (more or less housing abandonment, for example) across different neighborhoods. Data presented from a detailed case study of Flint, Michigan, illustrate that population decline can be more painful in some neighborhoods than in others, suggesting that this article's proposed approach may be useful in implementing smart decline.*

## Introduction

Many modern cities throughout the world are facing population declines at an unprecedented scale. Over the past 50 years, 370 cities throughout the world with populations of more than 100,000 have reported a decline in population of at least 10 percent (Oswalt and Rieniets, 2007). Wide swaths of the United States, Canada, Europe, and Japan are projecting double-digit declines in population in the coming decades. Internationally, scholars and practitioners of the built environment have responded to this crisis by reconceptualizing decline as shrinkage and have begun to explore creative and innovative ways for cities to successfully shrink (Hollander and Popper, 2007; Stohr, 2004; Swope, 2006).

Popper and Popper (2002) define smart decline as “planning for less—fewer people, fewer buildings, fewer land uses” (Popper and Popper, 2002: 23). The clearest practical example of smart decline is their proposal to establish a “Buffalo Commons” in severely shrinking parts of the Great Plains (Matthews, 1992). The Poppers’ research (1987) found that the preservation of a large portion of the Great Plains as “somewhere between traditional agriculture and pure wilderness” offered “ecologically and economically restorative possibilities” (Popper and Popper, 2004: 4). Vergara (1999) proposes an “American Acropolis” in downtown Detroit to preserve the scores of abandoned skyscrapers. He sees cultural benefit in establishing a park at the site to attract visitors to walk the crumbling streets. Also, Clark (1989) encourages preservation of declining areas as vacant, arguing that these areas can be converted to “parkland and recreational spaces” (Clark, 1989: 143)—a suggestion echoed recently by Schilling and Logan (2008). Armbrorst, D’Oca, and Theodore (2005) introduced the idea of widespread sideyard acquisitions of vacant lots as a means for reducing housing density, a process they described as “blotting.” They found that the urban fabric of Detroit was changing daily, not by city plan or regulation, but by the actions of individual landowners in expanding their lots to more closely mirror density patterns seen in suburbia.

In Youngstown, Ohio, a city that has lost one-half of its population since 1950, community leaders adopted this smart decline approach with a new master plan to address its remaining population of 74,000 (U.S. Census Bureau, 2008). In the plan, the city came to terms with its ongoing population loss and called for a “better, smaller Youngstown,” focusing on improving the quality of life for existing residents rather than attempting to repopulate the city (City of Youngstown, 2005; Hollander, 2009).<sup>1</sup>

Before the community development and planning fields move too far forward in “shrinking” these depopulating places through smart decline, practitioners need a clearer understanding of how neighborhoods physically change when they depopulate. A smart decline plan that ignores the projected quantitative change in structures or the qualitative change in use associated with depopulation will be hamstrung from the start.

A major stumbling block for scholars and practitioners is that current theory offers no widely accepted and intuitive measurement tool for studying the past and projected physical changes that occur in neighborhoods—the movement from active uses of land (such as homes and apartments) to successor land uses (such as vacant lots and abandoned buildings). The way we presently operationalize physical decline is by way of counting the number of vacant lots and abandoned buildings, a very labor-intensive approach that can make time series or longitudinal analysis challenging.

This article presents a thorough overview of how occupied-housing-unit density may be used as a metric to analyze changes in physical land use associated with population decline in urban neighborhoods. Such analysis can help local government officials and community leaders devise new plans and policies to respond to their problems resulting from fewer occupants and fewer occupied housing units. This article shows how a close examination of Flint, Michigan, through

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<sup>1</sup> *The New York Times Magazine* recognized the city’s plan as one of the most creative ideas in 2006 (Lanks, 2006).

census data analysis, data collected from direct observation of neighborhood conditions, and data from interviews of residents demonstrates the value of the metric and begins to address some limitations of conventional methods of studying depopulation.

In the study, I calculated changing housing-unit density for three Flint neighborhoods and then validated the results through field research. Validation showed that some neighborhoods experience depopulation differently than others. The physical form of some neighborhoods changed to accommodate a smaller population and a smaller number of occupied housing units; other neighborhoods did not change, resulting in lower quality neighborhoods for the residents left behind. This finding initiates a new type of thought process for neighborhood-based community development that may be able to customize land use strategies to right-size the physical features of a neighborhood to match its smaller population. The remainder of this article presents relevant research on population decline, describes the data and methods used in the empirical study and the results, and concludes with a discussion about the implications of these results for federal and state policymakers, as well as local community development and planning practitioners.

## **Studying the Physical Form of Shrinking Neighborhoods**

Bowman and Pagano (2004) conducted an exhaustive study on this topic of shrinking neighborhoods, seeking to understand the extent of the vacancy problem in the United States. They administered written surveys to local officials and assembled a database of the number of abandoned buildings and the number of vacant lots across more than 100 cities in the United States. This survey-based method unfortunately has proved unreliable when cross-checked against housing-unit counts from the U.S. Decennial Census (Hollander, 2009). Local officials use very different strategies to account for vacancy and abandonment, making the use of locally distinct administrative data sources challenging. Hillier et al. (2003) examined Philadelphia's housing databases to track vacancy and abandonment data, but their systems are not interoperable,<sup>2</sup> making comparative analysis practically impossible. Wilson and Margulis (1994) developed a similar localized analysis in Cleveland. Ryznar and Wagner (2001) attempted to study the effects of population decline, using Geographic Information Systems and remote sensing techniques, but could measure only net change in forested and agricultural land, extrapolating their findings to housing and commercial land use changes.

One possible solution to this problem is to reconsider some of the data that are widely available from the Decennial Census. Data from the census provide total counts of occupied housing units for neighborhood-level census tracts every 10 years. Each housing unit in the United States is classified as either occupied or vacant. If vacant, the Census Bureau has devised several possible classifications to reflect different reasons for vacancy, including the house is for sale, it is a seasonal home, or it falls into a catch-all category—other vacant—that has been used by researchers to indicate abandoned homes (Hollander, 2009; HUD PD&R, 2004).<sup>3</sup>

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<sup>2</sup> Data cannot be viewed and manipulated from one system to another.

<sup>3</sup> The U.S. Census Bureau only collects vacancy data for residential properties and not on commercial properties.

It seems then that total numbers of vacant lots and abandoned buildings are not being generated through the census counts. A closer consideration reveals otherwise: if a given census tract comprising 5 acres has 250 units of occupied housing units in 1990 and then has only 150 units of occupied housing units in 2000, a major physical change has occurred in this neighborhood (going from 50 to 30 occupied housing units per acre).

Four possible pitfalls with this approach are listed below, along with possible solutions for avoiding or addressing them.

1. Census tract boundaries change over time. One solution for avoiding this pitfall is the Geolytics Neighborhood Change Database, which features 1970–2000 census tract level data—all available at fixed 2000 tract boundaries—allowing for time series analysis.
2. The factors affecting the decrease in the number of occupied housing units may be unrelated to neighborhood decline; rather, they may reflect the construction of a new civic center or a highway. A solution for addressing this pitfall is to validate some of this quantitative data through direct observation of neighborhood conditions and interviews with long-term residents and community development and planning professionals.
3. Land use change conceptually is not interchangeable with housing density change; measuring one is problematic when planning for the other. The two terms are conceptually distinct, yet have much in common in terms of examining depopulation. For depopulating neighborhoods, a decrease in occupied-housing-unit density may indicate something other than vacant lots and abandoned buildings; it could mean a change in land use from multifamily homes into single-family homes, a conversion of homes into offices, or perhaps a consolidation of apartments within an apartment building. The problem might be that this single measure conflates changes in the number of structures, the number of units, and the land use. Fortunately, when used along with other census data (such as number of multifamily housing structures or number of business establishments), the occupied-housing-unit density variable can be dissected for meaning.
4. Household size and composition change over time, blurring the value of understanding housing-unit density. Some critics might suggest that looking at occupied-housing-unit density masks the changes at work within households. I defend this approach on the basis that it simply does not matter what changes happen within households from a physical planning perspective—what matters is how many structures remain when a neighborhood depopulates. Conflating, in studying land use change, can actually be a good thing and aid in understanding broader changes occurring in a neighborhood. When considering an appropriate measure of physical change in depopulating neighborhoods, it is important to be aware of changing household compositions and the social dynamics at work. Those dynamics, however, are being captured by the occupied-housing-unit density measure, and this single measure reflects all the social, physical, environmental, and economic forces at work in a neighborhood that are generating a lower occupied-housing-unit density over time.<sup>4</sup>

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<sup>4</sup> The most important caveat here is that the measure reflects only residential housing conditions, excluding other major land uses such as commercial, industrial, or institutional. The results presented here can only be generalized to neighborhoods that are predominantly residential, where mixed-use or primarily commercial neighborhoods would be expected to function differently.

The value of a metric based on readily available national data is immense, but it is worth noting that some local governments already regularly collect their own land use, housing, and abandonment data. For such communities, the occupied-housing-unit metric could be useful as a check against their own data sources. For communities without the resources to collect local data, a metric based on free federal data sources is quite valuable.

## **How Neighborhoods Physically Change When They Lose Population**

Much is known within the urban geography and economics literature about how neighborhoods physically change when they lose population. When speaking of population decline, no single rationale explains why a place depopulates. Depopulation has been explained by everything from natural disasters (Vale and Campanella, 2005) to deindustrialization (Bluestone and Harrison, 1982), suburbanization (Clark, 1989; Jackson, 1985), globalization (Hall, 1997; Sassen, 1991), and, of course, the natural economic cycle of boom and bust (Rust, 1975). This article gives no attention to explaining why a place loses population, instead it focuses on the usefulness of one measure of loss—occupied-housing-unit density. This section of the article presents a cursory review of the extant literature that addresses how places physically change.

When employment declines in a territory, some people who lose their jobs might need to leave that territory and relocate to a place where new employment exists. The consequences for those who stay behind is that, just because some of their neighbors have departed (without being replaced by new neighbors), the physical form of the city does not naturally shrink. Glaeser and Gyourko (2005) studied the durability of housing in their time series sample of 321 U.S. cities and towns with at least 30,000 residents in 1970, showing how housing prices declined at a faster rate in depopulating cities than prices grew in growing cities. Their research suggests that the durability of housing poses a long-term threat to neighborhood stability. Others come to the same conclusion: if housing does not disappear as quickly as people do, then those abandoned structures may drag down neighborhoods by serving as a haven for criminal activity (Wallace, 1989). People losing their jobs and refusing to relocate for new employment can have huge implications for neighborhood conditions. Without income, a resident is less capable of caring for his or her home, which can lead to the deterioration of a neighborhood's housing stock. When a bank forecloses on a resident's home, the home, because of its unoccupied status, may bring further drag on the neighborhood's quality.

Another problem resulting from population decline is that urban residents with means to relocate leave behind the poorest and most destitute residents. When fewer middle- and upper-income residents live in a neighborhood, fewer role models are available to youth, dimming prospects toward upward mobility (Sugrue, 1996; Wilson, 1987).

Over time, widespread racial discrimination, seen in hiring and in housing market trends, has systematically limited relocation options for African Americans (Massey and Denton, 1993; Sugrue, 1996). When a neighborhood loses jobs, African Americans have fewer housing choices, further increasing racial concentrations in ghettos.

As demand declines in depopulating residential neighborhoods, the housing demographic shifts from affluent residents paying higher rents to less affluent residents paying lower rents. Poor economic conditions decrease demand for housing through “filtering” economic classes of owners or renters (Hoyt, 1933; Temkin and Rohe, 1996). When demand ultimately sinks to certain threshold levels, owners tend to abandon their structures (Keenan and Spencer, 1999). Many abandoned structures become derelict over time and may become subject to arson. Thus, in a depopulating neighborhood, occupied housing units are replaced by unoccupied housing units, derelict structures, and, where fire consumed the unit(s), vacant lots. This process suggests it is appropriate to analyze physical change through the lens of occupied-housing-unit density.<sup>5</sup> Occupied-housing-unit density offers a clear picture of how a neighborhood’s physical form is changing and provides essential data to generate community development and planning strategies that respond directly to those changes. Flint, Michigan, is a true “poster child” for these very kinds of neighborhood changes, most notably through its depictions in Michael Moore’s infamous 1989 documentary, *Roger and Me*. As a place widely recognized as a victim of depopulation, Flint is an ideal location to test the usefulness of occupied-housing-unit density as a metric to be used in planning and policy practice. Field observations and interviews provide a check to the results of a quantitative calculation of occupied-housing-unit density in three of Flint’s depopulating neighborhoods.

## **Example of Using Occupied-Housing-Unit Density in Flint, Michigan**

First settled in 1818, Flint, Michigan, is located 60 miles northwest of Detroit along the Flint River. The city was largely dependent on the timber industry until General Motors (GM) was founded there in 1908, turning the city into a world capital of the automobile industry in just three decades (Edsforth, 1982; Matthews, 1997; May, 1965). As GM and the American automobile industry shrank its workforce in the 1970s, so went Flint’s fortunes. Unemployment and reduced taxes translated to a reduction in city services—firefighters and police officers were laid off (Matthews, 1997). City officials responded with hundreds of millions of dollars in tax abatements and redevelopment financing in the 1980s and 1990s to encourage new industrial development and bolster the city’s central business district and to market the city as a tourist center (Matthews, 1997). At the same time, the United States government and the Michigan state government invested tens of millions of dollars in grants and loans while local philanthropists pushed vast sums of money into rebuilding downtown (Gilman, 1997). In his review of 14 redevelopment projects executed in Flint from 1970 to 1992, costing \$568.5 million, Gilman (1997) found that 13 of these initiatives were explicitly intended to foster greater economic growth.

Although some benefits accrued to the city and its residents through these projects, the overwhelming evidence available shows that these efforts largely failed to reverse the city’s continuing

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<sup>5</sup> At a regional level, the causal order is clear: fewer people will decrease demand for housing, resulting in fewer housing units. At the local level, Myers (1992) has argued that housing causes population because without the actual units there is no way for people to live in an area. This reverse causal order can be valuable in studying growing local areas, but offers little in helping to measure the physical effects of depopulation. Therefore, the more standard causal order of population causing housing will be used here.

economic decline (Gilman, 1997; Matthews, 1997). Flint's total employment has gone down from 69,995 in 1970 to 40,213 in 2006 (42 percent) (U.S. Census Bureau, 2008). Although not all who cared to leave did, Flint's population fell by almost one-third in the past half century, declining from 163,143 in 1950 to 112,524 in 2000 (U.S. Census Bureau, 2008). The city's changing racial composition is harder to pin down because of the differing ways in which the Census Bureau characterized race and ethnicity between 1960 and 1980. From 1980 to 2006, when the definitions were being used consistently, the percentage of non-Hispanic African Americans in Flint increased from 41.1 to 56.3 percent.

## **Data and Methods for Flint, Michigan, Case Study**

For this study, I downloaded census data for Flint using the Geolytics software program for census tracts in Flint for 1970, 1980, 1990, and 2000.<sup>6</sup> The key variables that I examined from the census were population loss and occupied-housing-unit density. I also examined socioeconomic variables, including income, poverty levels, race, and age.

I narrowed my analysis to three neighborhoods, each of which experienced severe drops in population and occupied-housing-unit density over the preceding three decades.<sup>7</sup> Each of the three neighborhoods has a unique history, active community development organizations, and active residents groups. Carriage Town and Grand Traverse, which are in the city's downtown area, are contiguous. Max Brandon Park is several miles outside the downtown core in a primarily residential section of town.

Working with a research assistant, I conducted background research on each neighborhood through electronic database searches.<sup>8</sup> After completing the searches, we consulted with local experts to begin generating a list of potential interviewees.

From April through August of 2008, we conducted between two and four semistructured, in-person or telephone interviews with individuals in each of the following two categories for all three neighborhoods: (1) long-time residents and (2) professionals who work in the development, redevelopment, or planning fields in each neighborhood. In addition, we also conducted three interviews with individuals who are professionally involved in neighborhood development, redevelopment, or planning citywide but not necessarily in one of the study area neighborhoods. Finally, I conducted onsite visits at each of the three neighborhoods in June 2008 and directly observed and recorded my observations about current land use and signs of historic land use.

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<sup>6</sup> I used the census tract as a unit of analysis because the Geolytics software has a special feature that normalizes the data to boundaries for the year 2000 across all four time periods, supporting time series analysis.

<sup>7</sup> I also chose these neighborhoods for close study based on preliminary interviews with local community leaders who assured access to further interviewees.

<sup>8</sup> We conducted searches in the following databases: Thomson Gale Expanded Academic ASAP and Academic OneFile, LexisNexis, ISI Web of Knowledge, ProQuest, Social Sciences Citation Index, Journal of Planning Literature, and CSA Illumina. We also conducted Google searches to identify relevant planning reports or news items for each neighborhood. We limited articles to those printed from 1980 to the present. We present the results of the searches as background information for each neighborhood profile.

## Results of Flint, Michigan, Case Study

As its population has fallen, Flint has changed dramatically. In some parts of the city, the rapid departure of people has resulted in a new pastoral landscape where houses once sat. In others, the derelict structures that once housed people now serve as a deterrent to investment and a haven for criminals. In each neighborhood, a certain percentage (often large) of the population has no place else to go. Many of the desperately poor huddle together and are stuck in an economic ghetto. In some parts of Flint, the ghetto is not just economic but also racial.

Putting socioeconomic and racial considerations aside, the analysis reveals that the Flint landscape has changed dramatically. The aim of this article is to probe the utility of using occupied-housing density as an indicator of residential land use change in shrinking cities. The following summary sketches the ways that residential land use changed in three of Flint's neighborhoods<sup>9</sup> as each faced significant population loss over the past three decades. For each neighborhood, the summary describes occupied-housing-unit density<sup>10</sup> and then contrasts it against results from field investigations and interviews.

## Grand Traverse: Open Spaces and Group Homes

Grand Traverse has experienced a dramatic decline in occupied-housing-unit density and population levels from 1970 to 2000. Since then, according to U.S. Census and county estimates, population levels have continued to drop, along with occupied-housing-unit density (Genesee County, 2007; U.S. Census, 2008). In 1970, the one census tract containing both Grand Traverse and Carriage Town, had 5,100 residents and 2,446 occupied housing units in its 614 acres, for a density of 3.6 occupied housing units per acre (exhibit 1). By 2000, the occupied-housing-unit density fell sharply to only 1.4 units per acre with a population of 2,562.

### Exhibit 1

Carriage Town and Grand Traverse Neighborhoods, Flint, Michigan

Variable	1970	1980	1990	2000	% Δ '70-'80	% Δ '80-'90	% Δ '90-'00
Population	5,100	3,536	3,203	2,562	-30.7	-9.4	-20.0
Total number of households	2,200	1,601	1,197	889	-27.2	-25.2	-25.7
Percent African American	11.4	18.4	41.5	49.0	61.4	125.3	18.2
Percent over 65 years old	17.1	16.7	8.6	3.4	-2.4	-48.7	-60.8
Percent living in poverty	22.4	31.8	48.8	45.0	42.0	53.5	-7.8
Total housing units	2,446	1,770	1,536	1,264	-27.6	-13.2	-17.7
Total occupied housing units	2,199	1,550	1,235	849	-29.5	-20.3	-31.3
Occupied housing units per acre	3.6	2.5	2.0	1.4	-29.5	-20.3	-31.3

Data source: U.S. Census Bureau

<sup>9</sup> I selected the three neighborhoods because each had experienced high levels of depopulation since 1970. Preliminary investigation showed that each had some level of formal community engagement in place, either through active neighborhood associations or professional community development agencies.

<sup>10</sup> Two of the neighborhoods studied, Carriage Town and Grand Traverse, share a single census tract.

For the Grand Traverse neighborhood, I validated the land use changes discovered through the census data analysis, through interviews, and by direct observation of current housing conditions. Hundreds of housing units throughout the neighborhood underwent a process described in the housing literature as “filtering,” but with a unique twist. As “white flight” and employment cuts reduced demand for housing in Grand Traverse since the 1960s, single-family homes (which accounted for a vast majority of the neighborhood’s housing stock historically) were divided into multifamily homes and rented. This phenomenon, in fact, would be expected to increase the occupied-housing-unit density of the neighborhood, but the period of multifamily use was often quite limited. According to interviews with long-time residents, many of these multifamily homes did not receive care and maintenance from their owners, leading to accidental fires and alleged arson (exhibit 2). Over time, the neighborhood association, working closely with foundation and city resources, arranged for the demolition of many (if not all) of these fire-damaged structures, which led to a further decline in occupied-housing-unit density and to the emergence of a more open, pastoral landscape in the city (exhibit 3). One long-time resident, active in the neighborhood association, celebrated the new feel of his neighborhood, expressing an idea similar to the blotting process described by Armbrorst, D’Oca, and Theodore (2005):

We’ve been able to sell a lot of side lots to homeowners, so it’s expanded the size of their properties and they have nice big green space on the side.... They use it for gardens and bigger yards.

## **Exhibit 2**

This home was partially damaged by an accidental fire in the Carriage Town neighborhood. (Photo credit: Justin B. Hollander)



### Exhibit 3

A pastoral landscape graces the Grand Traverse neighborhood. (Photo credit: Justin B. Hollander)



Other researchers have examined blotting or sideyard acquisitions as vacant-land management approaches; in this article, I tie that action to a measurable change in housing density. In Grand Traverse, because some residential parcels are more than 2 acres, the neighborhood feels more rural than suburban (the blotting has been part of how the neighborhood moved from a suburban-quality 3.6 units per acre in 1970 to a very rural 1.4 units per acre in 2000). Perhaps more important, the active control and management of vacant land and abandoned buildings have contributed to a sense in the neighborhood that it is safe from crime. One long-time resident commented on the issue of crime and safety in the neighborhood:

The main social change is, I think, that crime is way, way down. It used to be scary to go out at night and it just isn't anymore. There are a lot more people active and aware; a lot more eyes on the streets. I think that has been a real improvement and I attribute that to the removal of the worst of the housing. There are just very few places for criminals to hang out anymore.

Two other factors that influenced land use change in Grand Traverse during this time period are the conversion of homes to offices and the conversion of homes to group living quarters. Grand Traverse is strategically located in close walking distance to city, county, and federal courthouses and, during the 1960s and 1970s, several dozen homes in close proximity to the courts were converted into office use for local attorneys. At the same time, local and regional social service agencies orchestrated the conversion of dozens of owner-occupied and rental housing into group living

quarters for mentally disabled adults throughout the Grand Traverse neighborhood. Although these new uses can have a range of effects on the neighborhood, ultimately, they bear little overall effect on the broader shift toward lower occupied-housing-unit density in Grand Traverse. In sum, the quantitative results in exhibit 1 accurately reflect the widespread change in the physical form of Grand Traverse, with dramatically fewer homes and new vast stretches of open space.

## **Carriage Town: The Historic Preservation Conundrum**

The Carriage Town neighborhood is located within a city-designated historic district. The benefits that accrue to the neighborhood due to that designation are accompanied by restrictions placed on the demolition of derelict structures. As a result, Carriage Town has an inordinate number of derelict, historic structures in contrast with Grand Traverse. Direct observation of neighborhood conditions, as well as interviews, validated the quantitative evidence presented in exhibit 1 that Carriage Town has experienced a dramatic fall in occupied-housing density over the past several decades. Unlike the Grand Traverse neighborhood, where that change was accompanied by demolition and the creation of wide-open spaces, the Carriage Town neighborhood has experienced that same change with restrictions on demolishing historic structures, which means that far fewer derelict (or even partially burned-down) structures have been razed.

As with the homes in Grand Traverse, single-family homes in Carriage Town have historically accounted for most of the neighborhood housing stock, and as with the homes in Grand Traverse, scores of these homes in Carriage Town have gone through a process whereby owners convert them into multifamily rentals; then, because of owner neglect, the homes are (partially) consumed by fire. Also, like Grand Traverse, the Carriage Town neighborhood has seen a major influx of group homes. Despite restrictions on demolishing historic homes, Carriage Town has still experienced massive population and housing unit decline over the study period. “There are now half the homes in our neighborhood as there were 30 years ago,” said one long-time resident. Both new and long-time residents agreed that, as demand for living in Carriage Town dropped precipitously, the neighborhood halved its supply of housing over the past three or four decades.

Although the rural feel of Grand Traverse is absent in Carriage Town, the remaining residents are comfortably spread out on large lots with ample green space, providing somewhat of a suburban quality to the neighborhood form (exhibit 4). Just as happened in Grand Traverse, homeowners in Carriage Town bought abutting parcels after the homes were demolished to add additional yard space or room for more parking, blotting the physical form of their neighborhood. By reclaiming these abandoned spaces, residents leave no space untamed, no place in which to hide, and few structures for turning into criminal havens. The residents that I interviewed in Carriage Town did not perceive crime to be a serious issue in their neighborhood. One resident recounted what happened when he invited friends from the suburbs over for dinner: “They can’t believe how beautiful my home is. ‘We don’t feel like we’re in Flint,’ they always say. Which on the one hand feels good, but on the other it’s like ‘what do you mean it doesn’t feel like Flint?’ ‘Why is Flint a bad thing?’” These friends from the suburbs were accustomed to the idea that Flint was a dangerous place; in fact, neighborhoods such as Carriage Town, although they have depopulated and have lost huge numbers of housing units, have become quite attractive places to live.

#### **Exhibit 4**

The Carriage Town neighborhood reflects a distinctive suburban quality. (Photo credit: Justin B. Hollander)



### **Max Brandon Park: Lack of Community, Lack of Commitment**

Max Brandon Park, the final neighborhood studied, was different in four main ways from Grand Traverse and Carriage Town: (1) its location is outside of walking distance to downtown, (2) its racial composition (exhibit 5) is not diverse, (3) it lacks a vital neighborhood association or even large numbers of homeowners, and (4) its population is almost twice that of the other two neighborhoods combined. In the three census tracts that make up Max Brandon Park, the occupied-housing-unit density fell by 27 percent from 1970 to 2000 and the population dropped 40 percent.

Unlike the Grand Traverse and Carriage Town neighborhoods, which are diverse racially and in terms of housing tenure, the residents of the Max Brandon Park neighborhood are primarily African American and their housing tenure is primarily rental. Houses throughout the neighborhood have been demolished, but many derelict structures remain. Unlike the unimproved lots in Grand Traverse and Carriage Town, which are adopted by neighbors or used for park space, the lots are mostly left fallow in Max Brandon Park (exhibit 6). Large tracts of vacant land are untamed and uncared for. These wild, vacant lots provide habitat for vermin, hiding spots for criminals, and dumping grounds for others.

In Max Brandon Park, when owners of single-family homes left the neighborhood, the homes were most often reused for single-family rentals, thus keeping the occupied-housing density constant. Because of the same kind of lack of care and responsibility that occurred in other parts of Flint, many of these rentals were also victims of arson. When I asked a long-time resident about other uses in the neighborhood, beside residential, she said, “The only other use is a drug house.” The quantitative results show how occupied-housing-unit density has fallen in Max Brandon Park over the past several decades, but the qualitative investigation has highlighted the successor land uses to housing units: drug houses and vacant lots have validated the overall finding that the physical form of the neighborhood has shifted with its depopulation.

**Exhibit 5**

**Max Brandon Park, neighborhood, Flint, Michigan**

Variable	1970	1980	1990	2000	% Δ '70-'80	% Δ '80-'90	% Δ '90-'00
Population	16,189	14,426	11,432	9,831	- 10.9	- 20.8	- 14.0
Total number of households	4,745	4,372	4,119	3,459	- 7.9	- 5.8	- 16.0
Percent African American	60.2	87.1	93.5	95.9	44.6	7.4	2.6
Percent over 65 years old	8.2	6.0	8.8	9.8	-26.6	45.9	11.6
Percent living in poverty	16.6	20.5	41.4	38.8	23.5	102.0	- 6.3
Total housing units	4,981	4,657	4,473	4,106	- 6.5	- 4.0	- 8.2
Total occupied housing units	4,744	4,378	4,055	3,463	- 7.7	- 7.4	- 14.6
Occupied housing units per acre	5.0	4.6	4.3	3.6	- 7.7	- 7.4	- 14.6

*Data source: U.S. Census Bureau*

**Exhibit 6**

As with most empty lots in the Max Brandon Park neighborhood, this lot is overgrown with weeds and appears unattended. (Photo credit: Justin B. Hollander)



## Discussion

The inability of the city or the neighborhood association to effectively reuse or demolish abandoned buildings makes Carriage Town susceptible to higher levels of criminal activity than Grand Traverse. For example, one neighborhood leader in Grand Traverse said she could count on a single hand how many drug houses were in the neighborhood. In Carriage Town, however, the squatters, who occupy the vast supply of abandoned and semiabandoned structures, are more commonplace. Interviews with long-time residents revealed that homeowners in Carriage Town hold the neighborhood as beloved because of its historic charm, but property owners' ability to demolish or rehabilitate derelict structures is limited.

Both in Grand Traverse and Carriage Town, local residents and community development professionals have successfully used the blotting process to change their urban appearance, while moving from high-density to low-density neighborhoods. From the Max Brandon Park case, we learn that the lack of strong community organizing and low levels of homeownership may have played a role in a different outcome. There, few examples of blotting are apparent and what typically succeeds a demolished home is perhaps qualitatively worse than a derelict structure with the presence of dumping and overt criminal activity. Where both Grand Traverse and Carriage Town have recoded their neighborhood physical form to be more rural and suburban, respectively, after decades of declining occupied-housing density, Max Brandon Park remains a high-crime, predominantly rental, and an unstable community. Both Grand Traverse and Carriage Town have evolved into a rural-to-suburban density level (1.4 units per acre), signaling perhaps a slowdown in their continued depopulation. Max Brandon Park, however, was still a somewhat urban neighborhood, with 3.6 units per acre in 2000; it likely will experience more shrinkage in the near future.

By closely investigating three Flint, Michigan, neighborhoods, I successfully confirmed the results pertaining to occupied-housing-unit density analysis: substantial change has occurred in the physical form of each neighborhood. The occupied-housing-unit density metric masks the different outcomes from each neighborhood because shrinkage has affected each differently.

## Conclusion

The case study of Flint shows the value of using occupied-housing-unit density to study depopulating neighborhoods. By examining census data, ground observations of neighborhood conditions, and interviews with local officials, residents, and community leaders, I can make some conclusions about the value of using occupied-housing-unit density in studying and planning for shrinking cities.

Although each neighborhood witnessed change, the change was most painful in the Max Brandon Park neighborhood. This finding suggests that depopulation, physical neighborhood deterioration, and decline in quality of life are not all perfectly correlated but, rather, are subject to variation. As a neighborhood's occupied-housing-unit density declines, quality of life does not necessarily fall concomitantly. By focusing on the value of the single occupied-housing-unit density measurement, it is possible to capture all the social, physical, environmental, and economic forces at work in a neighborhood that are shaping its physical form, while allowing for varying outcomes in quality of

life. Some places will shrink well, while others will not—community development and planning interventions can potentially make the difference.

This study has two important limitations. First, by looking at only the neighborhoods that experienced heavy population decline, the results can be generalized only to other such neighborhoods. Second, by looking at only a single city and only three neighborhoods in it, my ability to understand what other new uses replaced the decreased number of previously occupied housing units in general is limited. The assumption that much of what replaced occupied housing units was unoccupied housing units or vacant lots, an assumption that was supported by the case study, was hardly proven. Future research could address these weaknesses and also explore how neighborhoods with higher or lower density housing might change differently. Does occupied-housing-unit density work as an effective measure in depopulating suburban areas? How does this measurement work in regions outside the industrial Rustbelt of the United States?

Community development and planning practice has traditionally been geared toward issues of growth and development. Community development strategies that assume decline are only beginning to emerge as alternatives. Communities currently lack the skills and resources to respond to decline in an effective and positive way. Community development plans and design strategies for shrinkage need to be built on sound empirical evidence about the ways cities decline. This article introduces a potentially valuable metric for studying the land use effects of population decline and lays a potential foundation for developing planning and urban design tools that respond to the unique needs and characteristics of shrinking cities. Leadership at the federal level through the new Sustainable Communities Initiative at the U.S. Department of Housing and Urban Development could be valuable here to provide incentives and support to communities that plan for their anticipated smaller populations. With or without federal or state support, cities and towns that are losing population should use the occupied-housing-unit density measure in their own planning to monitor land use changes in a systematic way. Flint recently hosted a series of open meetings to debate the future of the city; shrinking was part of the discussion. The findings here demonstrate that occupied-housing-unit density is a valuable metric for approaching shrinkage and aiding Flint's leaders and residents in devising strategies and approaches. For example, blotting and sideyard acquisitions could be encouraged explicitly by local planning and zoning ordinance in support of changing densities in depopulating neighborhoods.

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