
Strategic demolition for shrinking and shrunken cities: A case study from Buffalo, NY, USA

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Abstract Shrinking cities are older urban settlements that played prominent roles in the industrial economies of developed nations, but have experienced substantial depopulation, economic contraction and undesirable physical change since at least the middle of the 20th century. To counter the problems that necessarily accompany massive depopulation, shrinking cities have aggressively used structural demolition as a right-sizing strategy. Right-sizing is both a policy objective and the set of strategies used to restructure the built environment of a shrinking city to meet its current needs, by aligning the supply of community assets (eg infrastructure, housing, services) with current and future demand. In practice, it appears that many shrinking cities equate right-sizing exclusively with large-scale demolition. The result is that demolition is implemented in a standalone fashion, which fails to meaningfully stem the tides of shrinkage and vacancy. This paper draws on a framework of strategic demolition for shrinking cities to analyse a well-publicised, 'signature' demolition programme in Buffalo, NY, USA. The critical analysis shows that Buffalo failed to take recommended actions that were within its reach, which likely contributed to perceptions that its signature programme was unsuccessful. The case study has several implications for planning and policy in shrinking cities.

Keywords: *shrinking cities, demolition, vacancy, abandonment, right-sizing, public policy*

INTRODUCTION

Shrinking cities, alternatively termed legacy cities or cities in transition,^{1,2} are a cohort of older urban settlements

that once played prominent roles in the industrial economies of developed nations, but have experienced substantial depopulation, economic contraction and

undesirable physical change since at least the second half of the 20th century. Due to a combination of deindustrialisation, suburbanisation and natural demographic change^{3,4} — and the interplay of these forces with one another and with context-dependent social, political and institutional variables^{5,6} — numerous cities across the globe have seen their populations cut dramatically, sometimes by half or more.^{7–12}

One consequence of massive population loss is what might be called a *scale mismatch*.¹³ Namely, taking scale to mean ‘relative size’,¹⁴ severe and persistent depopulation creates a situation in which the scale and geographic extent of a place’s built environment — which was constructed to serve the city at the height of its population, and where housing and other built structures tend to be relatively durable and are removed from cities only slowly under normal conditions¹⁵ — greatly exceeds the scale and spatial extent of the remaining population that is tasked with managing and maintaining it. Not only is this mismatch characterised by large stocks of vacant and abandoned structures,¹⁶ but it also generally means that municipalities are left with fewer tax-producing properties, and therefore fewer tax revenues with which to provide public services and amenities to the people still living in their hollowed-out boundaries.¹⁷ Simultaneously, this decrease in revenues not only lessens service delivery and amenity provision, it limits the ability of municipalities to directly address the growing vacancy problem. These circumstances result in a downward spiral, as additional residents become motivated to out-migrate, which, in turn, further reduces tax revenues and reinforces conditions of shrinkage and urban decline.^{18–20}

As it turns out, because the practice of urban planning emerged and largely continues to operate as a means

for controlling the rate, geographic distribution and consequences of urban growth,²¹ researchers have observed that the traditional tools of planning are poorly suited to the self-reinforcing woes of shrinking and shrunken cities.^{22,23} Perhaps most famously, near the beginning of the 21st century, Popper and Popper challenged academic and practising planners working in the area of urban regeneration to break from traditional growth-oriented planning tools and instead create a new paradigm of ‘smart decline’.²⁴ Smart decline, sometimes called ‘smart shrinkage’,²⁵ is a play on urban planning’s smart growth movement.²⁶ Just as smart growth calls for the creation of compact urban forms from dense, mixed-use urban fabrics,²⁷ smart decline is about re-establishing economies of scale in shrinking cities through denser and more vibrant settlement patterns that enhance the quality of life for their remaining citizens. Unlike smart growth, however, smart decline does not anticipate and lay the groundwork for absorbing future population increases. Instead, smart decline means ‘planning for less — fewer people, fewer buildings, fewer land uses’.²⁸ To achieve the more compact, higher-quality settlements envisioned by proponents of smart decline, strategies and actions for balancing the scales of shrinking cities’ built and social landscapes are badly needed.

Re-framing these balancing acts as *right-sizing* is often credited to Schilling and Logan and their proposal to convert underutilised parcels in depopulated sectors of cities into ‘green’ land uses and infrastructure, such as open space and agriculture.²⁹ That being said, while theirs and numerous other right-sizing strategies have been proposed in recent years,³⁰ the leading action taken by shrinking cities in response to scale mismatches is arguably publicly funded demolition.³¹ To be sure, publicly funded demolition

is an unavoidable part of right-sizing.³² In practice, however, many cities — particularly American cities — have exercised demolition in relatively non-strategic ways.^{33–35} As such, the efficacy of large-scale demolition as a right-sizing tool is sometimes called into question.^{36–38} The remainder of this paper presents a case study of one US shrinking city's effort to use a large-scale demolition programme as somewhat of a silver bullet solution to its vacancy problem, and, in doing so, begin to right-size. The case comes from Buffalo, NY, where a signature demolition programme sought to demolish 5,000 vacant properties within a five-year time window and reduce the vacancy rate from 15.7 per cent to 'closer to 5 per cent'.³⁹ Not only did the '5 in 5' programme (as it was called) not achieve these quantitative targets, but it has been critiqued by urban regeneration scholars for its (lack of) prioritisation of demolitions,⁴⁰ failure to tie into the city's other planning programmes,⁴¹ and reactive nature and lack of funding.^{42,43} The contribution of this paper is therefore not to critique the '5 in 5' programme on the same grounds as past research. Rather, it aims to synthesise those extant critiques and situate them in a broader framework of strategic demolition from the urban regeneration literature.⁴⁴ The resulting critical analysis shows that Buffalo failed to take 'strategic' demolition actions that were within its reach, thereby undermining its signature programme's prospects for success. Lessons from this case study have several important implications for urban regeneration planning and practice.

RESEARCH CONTEXT: VACANCY, ABANDONMENT AND DEMOLITION IN SHRINKING CITIES

Vacancy, abandonment and real property disinvestment have become the visual and symbolic embodiments of urban

shrinkage.⁴⁵ These phenomena contribute not only to perceptions of urban blight and negative environmental images,⁴⁶ but also to local government fiscal crises.^{47,48} As implied above, the continued provision of municipal services and infrastructure maintenance both city-wide and within depopulated parts of a shrinking city is a vexing fiscal decision. In most cases of pronounced population loss, economies of scale in these activities break down. Moreover, vacant and blighted properties typically require costly government investments that extend beyond basic infrastructure and services, including increased attention to building (re)inspections and code enforcement, graffiti removal and related reactive measures.⁴⁹ Consequently, these so-called 'nuisance' properties are frequently ground zero for right-sizing efforts. The growing density of nuisance properties in shrinking cities acts as both a symptom and a disease that contributes to self-reinforcing neighbourhood decline — it is a deterrent for people seeking to move in, and it accelerates the exit of residents with economic mobility.^{50,51}

Before continuing, it is useful to differentiate between the terms 'vacant' and 'abandoned', which are often used interchangeably. Vacancy refers to a unit or structure that is unoccupied. Short-term vacancy is common in a well-functioning housing market, as homes have short periods without owner or tenant occupancy during which they are being bought, sold and rented. In shrinking cities, however, vacancy is often long-term and linked to abandonment. Abandonment implies that an owner has 'abandoned' their duties and responsibilities, including ongoing maintenance and paying taxes.⁵² Properties financially abandoned by their owners can technically be occupied by tenants who are paying rent despite owners not making improvements, paying taxes or completing

routine maintenance, but such cases are presumably rare.⁵³ Thus, vacant properties are not necessarily abandoned, and abandoned properties are not necessarily vacant — although in shrinking cities the two conditions are regularly found in tandem.⁵⁴

On that backdrop, observe that when population declines, housing does not leave with departing residents. Instead, housing's durability and fixity mean that it can only disappear over a long period of underutilisation, lack of maintenance and abandonment.⁵⁵ Therefore, long-term vacancy, abandonment and deterioration all leave shrinking and shrunken cities with massive, ever-increasing gluts of undermaintained housing. To push back against this 'wicked problem',⁵⁶ shrinking cities have aggressively adopted structural demolition as a right-sizing strategy. Right-sizing, as suggested earlier, is both a policy objective and the set of policies and strategies that seek to restructure the built environment of a shrinking city to meet its current needs and capacity, by aligning the supply of community assets (eg infrastructure, housing, services) with current and future demand. Structural demolition involves tearing down vacant, abandoned, blighted and/or dangerous buildings from the physical urban fabric that are judged by local stakeholders to be deleterious. Joining these two concepts together, it follows that demolishing unused and unwanted (nuisance) properties can play an important role in right-sizing a shrinking city, by better matching the scale of its built environment to the scale of its current population, and hence market demand. More specifically, according to Mallach,⁵⁷ structural demolition is an essential part of right-sizing for two reasons.

First, the macro justification follows from the observation that the supply of housing units in shrinking cities greatly exceeds demand. Many areas of

shrinking cities are characterised by 'weak markets' or 'dead zones' in which real estate investment is negligible or non-existent.⁵⁸ The implications of this fact are twofold: 1) the majority of vacant and abandoned properties in shrinking neighbourhoods are likely to remain uninhabited for the foreseeable future; and 2) combined with the reality that vacant and abandoned properties are often subject to disinvestment and poor structural conditions, rehabilitating them rarely produces economic returns in the real estate market.⁵⁹ Accordingly, demolition is the most viable response. Second, the micro justification concerns the extent to which vacant and abandoned properties undermine quality of life and social relations in the communities where they are located. Blighted structures devalue nearby properties, which can trigger feedback effects whereby other property owners in the neighbourhood decrease their own investments⁶⁰ into maintaining the appearance of the shared 'urban commons'.⁶¹ To prevent such outcomes, ridding neighbourhoods of nuisance properties is warranted.⁶²

In light of these justifications, it is no surprise that structural demolition has a long history as a policy response to urban and neighbourhood decline and is receiving increased attention from researchers.^{63–68} Within this burgeoning literature, however, a common finding is that municipally funded demolitions are typically complaint-driven, unplanned and piecemeal rather than strategically focused.^{69–72} Concerning the former, demolition can either be 'product-driven' — ie used as a development tool to clear and prepare property for new redevelopment and reinvestment — or 'problem-driven' — ie applied to particularly problematic properties (eg safety hazards) as complaints are received.⁷³ Ideally, product and problem-driven demolitions are jointly and

strategically employed in communities. In shrinking cities, however, the majority of demolitions tend to be reactive and problem-driven, undertaken in highly distressed neighbourhoods where vacancy and abandonment are highly visible. For example, in Youngstown, OH, USA, demolitions are undertaken almost exclusively in response to community complaints, creating a patchwork of removals across the city at the expense of a more strategic geography of demolitions.^{74,75}

Apart from criticisms of spatially dispersed and problem-driven demolition, it must be emphasised that demolition alone cannot right-size a city if other variables remain unchanged.^{76–78} In fact, the problem with most municipal demolition programmes is that a demolition is both policy (blight removal) and objective (blight removal) — that is, by simply demolishing a problem property, regardless of the strategic imperative, is to implement the policy *and* achieve the immediate objective; lost are any considerations about how the property might be reused.⁷⁹ A vacant lot is not a guarantee of better neighbourhood conditions if it becomes an unmaintained dumping ground of miscellaneous debris or a site for other locally unwanted land uses. For these and more reasons, a broad chorus of voices in the urban regeneration literature is calling for communities to overhaul demolition practices to make them spatially focused, transparent and complementary to broader community policies and objectives.^{80–84}

STRATEGIC DEMOLITION FOR SHRINKING CITIES

To maximise the return from and impact of demolition, it is necessary for it to be transformed into a proactive neighbourhood stabilisation tool that is connected to broader policies and

programmes. Demolition policy must move away from blight removal as an objective and toward neighbourhood stabilisation, focusing on arresting and reversing distressed conditions and creating environments worthy of residential and business reinvestment. The high cost of demolition and limited funding available further requires cities to be strategic about which buildings to demolish and where.⁸⁵ Additionally, demolition programmes need to be connected to broader community plans, programmes and strategies that comprehensively and holistically seek to stabilise and revitalize a city and its neighbourhoods.

With these points in mind, Mallach proposes a framework for strategic demolition in American shrinking cities that consists of ten critical action steps (see Table 1). A close examination of these steps suggests that they fall into two general categories: 1) programme design and implementation actions; and 2) regulatory and legal actions. The former, steps 1–3 and 5–6 in Table 1, are actions that cities can typically take using their existing legal powers. Steps 4 and 7–10 from Table 1 represent necessary legal, legislative and or advocacy steps that require cities and local governments to engage with institutions of governance⁸⁶ within and beyond the community.

Because the actions categorised as ‘programme design and implementation’ in Table 1 refer to steps that can be taken by cities in the here and now using their existing powers, these actions are (relatively speaking) immediate leverage points for redesigning demolition programme in shrinking cities. As such, they function herein as a working evaluative framework for studying the efficacy of the large-scale, municipal ‘5 in 5’ demolition programme in Buffalo, NY. Prior to engaging in that activity, it is worthwhile to quickly unpack the five actions that make up the evaluative framework.

Table 1: Ten actions steps for strategic demolition

Step	Action	Category
1	Cities carrying out large-scale demolition activity should adopt transparent and efficient procedures to evaluate which buildings should be targeted for demolition.	Programme design and implementation
2	Cities should establish priority criteria for demolition, directing resources to those areas that contain features or ongoing activities that can leverage the value of targeted building removal.	Programme design and implementation
3	Cities should create a process for making demolition decisions that engages a wide range of interests and viewpoints, both within and outside city government.	Programme design and implementation
4	To the extent permitted by state law, cities should adopt efficient procedures to gain legal approval to demolish privately owned buildings, and to take title to vacant buildings and vacant lots.	Regulatory and legal
5	Local demolition programmes should incorporate specific steps to prevent the resulting vacant lots from becoming blighting elements and ensure that lots are used in ways that enhance neighbourhood stability.	Programme design and implementation
6	Cities should develop integrated neighbourhood stabilisation programmes where demolition, rehabilitation, vacant lot reuse and other activities are linked strategically into a comprehensive effort.	Programme design and implementation
7	State governments should review state statutes and regulations affecting demolition and modify or abolish those that impose unreasonable costs without commensurate public benefit.	Regulatory and legal
8	To the extent feasible, cities should aggressively use state legal tools to recover the costs of demolition, and where necessary, advocate for stronger state laws to facilitate cost recovery.	Regulatory and legal
9	States, local governments and others concerned about the future of the nation's distressed cities and towns, should actively support enactment — appropriately amended — of H.R.4210, the Restore our Neighborhoods Act of 2012.	Regulatory and legal
10	State governments should leverage federal and local funds with state resources to support demolition in conjunction with local stabilisation and redevelopment strategies.	Regulatory and legal

In the authors' view, the five 'programme design and implementation' actions from Table 1 can be classified into three non-mutually exclusive types: 1) prioritising demolitions through transparent, participatory processes (actions 1 and 3 most closely represent this type); 2) spatially targeting demolitions to create local synergies (action 2 most closely represents this type); and 3) explicitly linking demolition to existing plans, programmes and strategies (actions 5 and 6 most closely represent this type). The following sections explore these three types of action in further detail.

Prioritising demolitions through transparent, participatory processes

Strategic demolition demands that a locally tuned, explicit, unambiguous set of criteria, together with transparent

decision rules, guide demolition prioritisation and execution. As stated above, cities typically determine what to demolish based on immediate public safety threats and resident complaints. Unquestionably, buildings that pose an immediate threat to human health and safety require rapid response demolition; however, while demolishing buildings to quell repeated calls from residents solves politically expedient problems by creating perceptions of responsiveness to constituent complaints, such actions lack any strategy other than reducing the number of complaints. Accordingly, demolition rules must be well-established and based on both empirical data (action 1) and local, community-based knowledge (action 3). For example, Morckel designed a suitability model to prioritise demolitions in Youngstown, OH. In a geographic information system

(GIS), she selected theoretically grounded factors to assign each vacant property in Youngstown a demolition score to propose a prioritisation list for the city. At the same time, she stressed the importance of following traditional public outreach and engagement principles from community and urban planning when developing such a model.⁸⁷

Spatially targeting demolitions to create local synergies

Shrinking and shrunken cities have a long history of top-down planning, whereby decision makers rate the neighbourhoods of a city on their 'health' and subsequently identify spatially based policy priorities according to those ratings.⁸⁸ In practice, these activities were often aimed at directing resources toward 'healthy' or 'transitional' neighbourhoods, and away from 'unhealthy' ones. The purpose of doing so was to invest in viable areas — making them more viable — while 'eliminating pockets of deterioration' in distressed ones. As Hollander observes, this latter statement is a 'euphemism for demolition'.⁸⁹ Over time, such practices have come to be known by the pejorative term *urban triage*. While triage planning was rightly critiqued as a top-down method for using urban policy to hand-pick winners and losers among neighbourhoods,⁹⁰ the model is still used (albeit in disguised forms) in planning practice in today's shrinking cities.⁹¹

One reason that triage-like practices are still used is likely that planners and decision makers recognise that 'higher-volume investments in smaller regions are most likely to result in significant changes in quality of life ... and that geographically targeted investments are easier to manage than those scattered about the city'.⁹² With respect to demolition, removing an isolated eyesore property from a transitional area can

feasibly do more to push a neighbourhood toward stability than removing one of dozens of abandoned properties from a distressed neighbourhood. Similarly, demolishing derelict structures from an area experiencing modest reinvestment and development can create synergies that accelerate those trajectories, whereas demolitions in weak market or development 'dead zone'⁹³ spaces might simply replace abandoned, aesthetically displeasing buildings with abandoned, aesthetically displeasing lots.⁹⁴

Along those lines, there is merit in geographically targeting demolitions to create local synergies and, in turn, attempt to make the largest possible positive impact on quality of life. From a procedural standpoint, however, it is imperative to break away from the top-down triage models of the 1960s and 1970s. Rather, following from the preceding section, spatial targeting strategies must be informed by, and carried out in partnership with, local stakeholders representing the diverse interests of their communities. Collaborative planning processes, at their best, facilitate the production of reciprocal knowledge, whereby decision makers gain insight into local affairs, and citizens are educated on policies, programmes, and processes of governance.⁹⁵ As groups learn from one another, it is plausible, for instance, that buildings not initially targeted for demolition move up the priority list as citizens reveal their interest in acquiring and maintaining cleared lots adjacent to their properties.

Explicitly linking demolition to existing plans, programmes and strategies

In addition to using participatory processes to prioritise demolitions according to explicit, transparent spatial and aspatial criteria, strategic demolition requires planning for vacant land management

and reuse. These strategies should be connected to a community's broader planning and sustainability efforts to achieve environmental, social, and economic goals. Vacant land management strategies include the development of urban gardens to provide healthy and secure food options; stormwater collection and treatment projects to support ecological and environmental habitat restoration; and simple clean and green strategies to empower residents and stabilise and support neighbourhood property values. Concerning the latter, simple clean and green strategies are low cost and can empower local stakeholders to take the lead on vacant land management. As such, these actions can have substantial impact. In Cleveland, for example, a community organisation spearheaded the development of the Vacant Land Re-Use Pattern Book, which is based on the vacant land reuse recommendations adopted by Cleveland's City Planning Commission.⁹⁶ The pattern book acts as a guide for neighbourhood organisations and residents to develop reuse strategies that fit the interests of their neighbourhoods. It recommends and offers guidance on developing pocket parks, trails, rain gardens, community gardens and more. The driving force is the realisation that such reuse and maintenance create stable, higher quality neighbourhoods compared to when vacant lots are unmaintained.

Recap

Of Mallach's ten action steps for strategic demolition (see Table 1), five are arguably programme design and implementation activities that municipalities can undertake using their existing powers and decision-making frameworks. Those five activities fit into the three non-mutually exclusive categories/objectives of: 1) prioritising demolitions through transparent,

participatory processes; 2) spatially targeting demolitions to create local synergies; and 3) explicitly linking demolition to existing plans, programmes and strategies. In crafting and executing large-scale demolition programmes, then, municipalities would be well served to attend to these three objectives. In that sense, the three categories act as somewhat of an evaluative framework that researchers can appeal to in case studies of the efficacy of local demolition programmes. The remainder of this article attempts such an exercise.

CASE STUDY: DEMOLITION IN BUFFALO, NEW YORK, USA

Buffalo, NY is a classic example of a shrinking city. Its location on the Great Lakes and the development of the Erie Canal provided it unparalleled site and situational advantages beginning in the early 1830s. Just prior to the opening of the Erie Canal, Buffalo was a small village of 8,668 people. But, over the next 70 years, water transport and then railroad systems linked the port city to the national economy, changing the fortune of its local economy forever. By 1900 the city had 352,386 people and would continue to grow for the next 50 years, peaking at 580,132 people in 1950. The population has, however, declined by more than 50 per cent since the mid-20th century, due to the reinforcing forces of deindustrialisation, suburbanisation and demographic change.

One of the most noticeable consequences of massive depopulation is an increase in vacancy. Buffalo currently has a substantial portfolio of vacant and abandoned properties, thousands of which it has taken title to as they have filtered through the property tax foreclosure and auction process and gone unsold. Yet, while vacancy had been a problem in Buffalo for decades, it became a true public enemy in 2007.

The '5 in 5' demolition programme

On 10th June, 2007, the Buffalo Fire Department responded to a house fire in a vacant two-storey residential structure in the eastern portion of the city. At the time, the planning neighbourhood in which the fire occurred (East Delavan), along with the three planning neighbourhoods contiguous to it (Ellicott, East Side and Masten), had four of the five highest vacancy rates among Buffalo's 12 planning communities (with rates of 19.2, 24.5, 22.5 and 21.0 per cent, respectively). (Note: Figure 1, which appears later in this section, shows the distribution of the city's planning communities.) From July 1999 until the date of the fire, 2,559 of the 3,332 (67.8 per cent) demolitions performed by the city were in these four neighbourhoods. The particular block where the fire occurred had seven parcels among 43 where the city conducted demolitions from July 1999 to the date of the fire.

That being said, when the firefighters arrived on 10th June, 2007, on a block where demolitions were completed on 16.3 per cent of the lots during the prior eight years, the likelihood of a vacant structure fire was as high as anywhere in Buffalo. Unfortunately, unlike hundreds of fires in vacant structures annually throughout the city, a responding firefighter suffered facial and skull fractures, broken ribs and the amputation of his right leg above the knee when a chimney fell on him. The fact this was an arson fire in a vacant structure was met with severe backlash from leaders and the community. Ten days after the fire, City Council members angrily discussed the issue, one going so far as to blame 'decades of self-serving leadership'.⁹⁷ The firefighter's mother and fellow firefighters suggested more needed to be done to reduce the number of vacant structures in the city, which city officials estimated would cost about US\$170m to demolish.⁹⁸

Facing public and political backlash, the

mayor and his administration hurriedly put together a demolition programme. Although Buffalo had been demolishing properties for decades, it had taken place as an informal programme that focused on addressing demolitions on an 'as needed' basis — with a focus on properties posing the greatest risk to public safety, or 'squeaky wheel' properties that were linked to the most constituent complaints or public pressure. Thus, the expectation was that a new demolition programme would be more aggressive, more strategic, or perhaps both. On that note, the response from the city was swift in the policy arena: within two months, Mayor Bryon Brown announced, 'Mayor Brown's "5 in 5" Demolition Plan'.⁹⁹ Calling vacancy 'one of the most important issues facing our community', the mayor's plan was a highly aggressive programme aimed at demolishing 5,000 structures over a five-year period. For some context, however, prior to the fire, in November 2006, the city's head of Economic Development, Permit, and Inspection Services announced the city was on track to demolish 1,000 properties by June 2007. In that sense, the quantitative target of the policy seems no more aggressive than earlier practices. Yet, even still, Buffalo fell well short of its goal, and only demolished around 3,500 structures during the five-year programme.¹⁰⁰

The '5 in 5' plan was estimated to cost US\$100m, and funding was predicated on US\$60m in unallocated money from New York State and US\$15m in unallocated funding from the federal government. The goal of the plan was to reduce the number of vacant structures in the city and get the vacancy rate 'closer to 5 per cent'. Demolitions were prioritised as follows:

1. Emergency demolitions that are an imminent threat to public safety;
2. Public safety demolitions targeted around school facilities;

3. Strategic neighbourhood development;
4. Economic development/urban renewal projects.

As indicated by these priorities, the ‘5 in 5’ programme would function in a similar manner as city demolitions had in the past, with emergency demolitions and public safety taking precedence over ‘strategic neighbourhood development (ie planning) and ‘economic development/urban renewal projects’. Because of the swiftness with which the programme was crafted, and the similarity to prior demolition practices, it is safe to assume that ‘5 in 5’ was developed without meaningful public participation. Rather, the exercise appears, at least at face value, to have been one of re-branding. What is more, even though Buffalo had just adopted its comprehensive plan, ‘The Queen City in the 21st Century’, the ‘5 in 5’ programme mainly functioned outside of these larger planning contexts. For example, while Queen City plan included a vacant property asset management strategy, the ‘5 in 5’ programme conspicuously was not linked to it.¹⁰¹ In these respects, perceptions of the programme are that it largely failed to engage with the first and third objectives outlined above: 1) prioritising demolitions through transparent, participatory processes; and 3) explicitly linking demolition to existing plans, programmes and strategies.^{102–104}

Augmenting these lines of critique, the ‘5 in 5’ programme has also been called out for its seemingly arbitrary approach — both geographically and in terms of connecting to broader policies and after-action programmes and strategies — to removing structures from the landscape. Indeed, in speaking of ‘5 in 5’ and related programmes from other cities, Ryan observed that the ‘simple imperative [was] to demolish vacant buildings, with little idea about what the vacant lots would be used for’.¹⁰⁵ That is,

‘Buffalo simply demolished buildings where it was politically expedient or where life safety issues drove demolition crews to act quickly. This parcel-by-parcel removal strategy effectively led to random vacant lots scattered among remaining properties.’

These lots, in turn, ‘were more or less unmarketable, both because they were scattered and because they were in depressed neighbourhoods where there was little market demand for land either before or after demolition. Demolition removed abandoned structures, but it *did not generate spatial strategies for depressed neighborhoods*.’¹⁰⁶ Residents and community organisations from Buffalo, based on their personal observations and experiences, have similarly wondered whether the city is following any plan or merely going about demolition in a reactionary manner.¹⁰⁷

Thus, piling onto the earlier critiques, there is no compelling evidence to suggest that Buffalo’s ‘5 in 5’ programme attended to the second objective from above: spatially targeting demolitions to create local synergies. In fact, there might be evidence to the contrary. In a recent empirical evaluation of the ‘5 in 5’ programme, researchers identified a spatial cluster of demolition activity in the central-eastern portion of Buffalo. Figure 1 shows the distribution of ‘5 in 5’ demolitions by city planning community, where shaded cells represent locations of hotspots that emerged at some point during the approximate time period of the demolition programme. (NB: analyses were performed here using the ‘Emerging Hot Spot Analysis’ tool in Esri’s ArcGIS.) Despite this evidence of local clusters of demolition activity, the researchers’ statistical analyses revealed that the clusters were more a reaction to perceptions of vacancy than some sort of proactive spatial targeting aimed at neighbourhood stabilisation.¹⁰⁸ At bottom, then, the ‘5

in 5' programme failed to meaningfully grapple with any of the three objectives that were used above to characterise strategic demolition from a municipality's

perspective. Consequently, it can be reasoned that the '5 in 5' programme did not live up to its promises not simply because: 1) it was underfunded and could

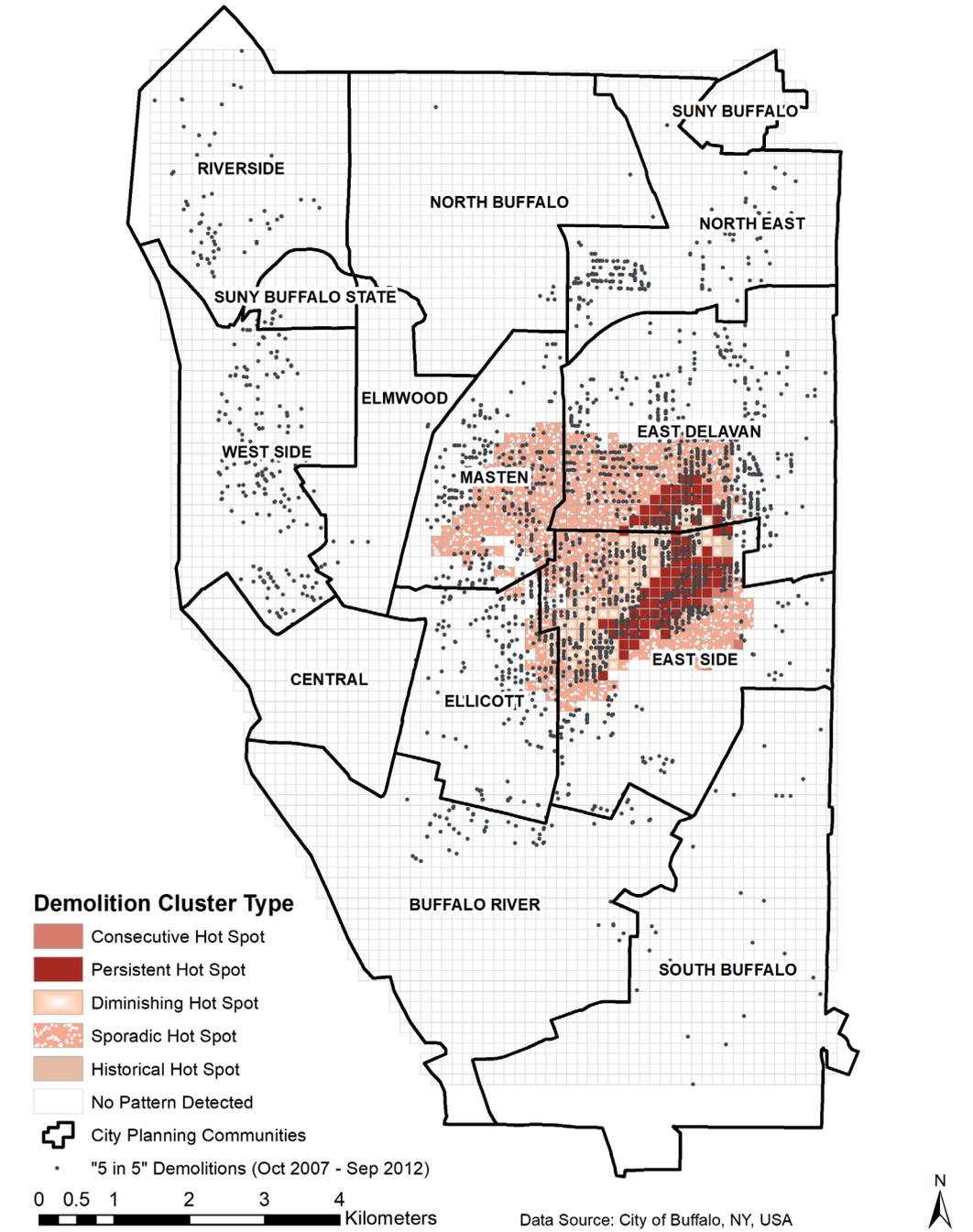


Figure 1: Distribution of the city's planning communities

Source: City of Buffalo, NY, USA

not demolish its targeted number of properties;¹⁰⁹ 2) it lacked connections to broader planning efforts in the city;^{110,111} or 3) it proceeded in a relatively random fashion with little to no attention to after action.¹¹² Rather, the programme underperformed relative to its hype for all three of these reasons together. In short, it lacked the qualities that constitute strategic demolition.

It should also be noted that the programme was unrealistically ambitious given the historic and current state of affairs within the city, especially persistent depopulation, the continued development in its suburbs, and the early whispers of impending stress within the national housing market. In simple terms, getting the vacancy rate from 15.7 per cent to ‘closer to 5 per cent’ seems to have been a number chosen without some simple back-of-napkin calculations and a willingness to grasp the aforementioned realities. Even if on the day the programme was adopted, the number of occupied housing units were to remain steady through the next five years and no new units were added, removing 5,000 units over those five years would only have resulted in a vacancy rate of 12.7 per cent. Under these conditions, the city would have had to remove 16,000 units in five years to get the vacancy rate close to 5 per cent. In 2010, three years into the programme, the vacancy rate in Buffalo was unchanged from 2000 at 15.7 per cent. In 2017, the city’s vacancy rate was estimated to be 16.9 per cent. Table 2 presents the starting year data that formed the basis of the city’s programme,

albeit from 2000 Census data, as well as the projected vacancy rates if 5,000 and 16,000 units were removed under the assumption of no new units and a steady number of households.

CONCLUSIONS

In sum, demolition is a necessary and important strategy used to right-size the housing stock and built environment in cities, especially shrinking or legacy cities. Its efficacy beyond blight removal is, however, contingent on the degree to which demolition programmes are *strategic*. In Buffalo, NY, a hastily developed signature programme that was merely a more official recognition of ongoing demolition practice in the city failed to achieve its intended outcomes. As the authors suggest, the reason for the programme’s underperformance was at least in part because it lacked the strategic elements proposed by Mallach.¹¹³

More specifically, the five action steps from within Mallach’s framework (see Table 1) that the authors characterised as key design and implementation steps were absent from Buffalo’s demolition programme. The plan did not prioritise demolitions through transparent, participatory processes (Mallach’s actions 1 and 3); spatially target demolitions to create local synergies (action 2); or explicitly link to existing plans, programmes and strategies (actions 5 and 6)

Although city officials often have limited, if any, control over exogenous economic and social factors that influence neighbourhood change, they do have

Table 2: Estimated vacancy rates under demolition target scenarios

	Starting year*	5,000 demos	16,000 demos
Units	145,5474	140,574	129,574
Occupied units	122,270	122,270	122,270
Vacant units	22,854	17,854	6,854
Vacancy rate	15.7%	12.7	5.3%

*2000 US Census Bureau, Decennial Census

control over the policies and programmes, to a large degree, that they design and implement. It is, in fact, the design and implementation steps that appear crucial to success and what cities such as Buffalo must get right in order to effect positive change.

Strategic demolition is underutilised in American cities and Mallach's framework offers not only a guide for communities developing large-scale demolitions programmes, but also a useful evaluative tool — as demonstrated above for a case of Buffalo, NY — for assessing existing demolitions programmes. Evaluating Buffalo's demolition plan through the lens of Mallach's framework provides at least four broad lessons for practitioners and public officials in shrinking cities:

- Strategic demolition is a necessary component of right-sizing and urban stabilisation in cities faced with an expanding scale mismatch between the size of its built environment and its population, households, and service scope;
- Mallach's actions steps, particularly the five steps categorised hereinbefore as 'design and implementation' steps, provide policymakers and practitioners with both a framework for strategic demolition programme design and a basis for ongoing evaluation and assessment;
- As utilised above, the evaluative framework applied to the city of Buffalo clearly shows that the city's programme lacked the initial design elements suggested as necessary by Mallach. In that sense, the framework allowed the authors to conclude that the '5 in 5' demolition programme cannot be categorised as a 'strategic demolition' programme per the parameters listed in Table 1;
- Looking ahead, it is clear that, holding all other factors within a local housing

market equal, demolition alone is limited, if not outright ineffective, as a standalone action intended to reduce vacancy and improve overall conditions.

Research focusing specifically on demolition, strategically or otherwise, is limited but also emergent. Conspicuously missing from Mallach's approach and this work is any discussion of arguably the most critical issue in American cities, both shrinking and growing: affordable housing. There are simultaneously 7,100 city-owned vacant residential lots in Buffalo and 37,000 households which cannot buy or rent a quality, affordable unit. Future research on demolition must do more than suggest linking demolitions to existing plans, programmes and strategies and leaving it to others. Rather, researchers should labour to connect demolition policy to affordable housing policy by examining existing and potential relationships between cities, land banks, land trusts, community development corporations, non-profit affordable housing organisations and residents in order to create a comprehensive system of grave to cradle (demolition to construction) affordable housing provision that identifies the legal, financial and political to utilising the continually growing portfolio of vacant lots created by demolition to address the affordable housing challenge.

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