

Sex Offenders, Residence Restrictions, Housing, and Urban Morphology: A Review and Synthesis

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Abstract

Although residence restrictions for convicted sex offenders are widely enforced in the United States, these policies remain controversial. Most restrictions are defined geographically, prohibiting convicted offenders from establishing a permanent residence within a prescribed distance from sensitive facilities like schools, parks, and bus stops. Proponents argue that residence restrictions protect families and children from sexual violence, but others argue that these policies can produce a variety of unintended social, economic, and geographic outcomes, such as reducing available housing, forcing offenders to cluster in socially disenfranchised neighborhoods, limiting access to rehabilitation facilities, and generating spillover effects to nearby communities. This article provides an overview of sex offender laws in the United States and synthesizes the literature pertaining to sex offender policies and their geographic implications for housing availability and affordability. This article also addresses the effects of urban morphology on sex offender policies and outcomes, and it ends with an agenda for future research.

Introduction

The United States is home to a broad spectrum of sex offender policies. From community notification laws to residence restrictions, federal, state, and local legislation conceived for managing convicted offenders is both dynamic and controversial (Yung, 2010).¹ One of the more contentious legislative approaches for controlling offender whereabouts at the local and state levels, is the establishment of residence restriction zones around sensitive facilities, such as schools, daycare centers, parks, bus stops, and other locations where children congregate. These spatial restriction zones (SRZs) are defined by a distance criterion, typically ranging from 500 to 3,500 feet from a sensitive facility, within which a convicted offender may *not* establish a permanent residence. The goal of these restrictions is to minimize the potential for interaction between offenders and children, thereby reducing the risk of recidivism and enhancing public safety (Grubestic and Murray, 2010). Although this type of legislation is popular, little empirical evidence exists on the effectiveness, or lack thereof, of the legislation in achieving its intended goals and objectives (Tewksbury and Levenson, 2007). Nevertheless, the general public strongly supports these laws, further motivating continued implementation and enforcement of policies for managing convicted offenders (Mancini et al., 2010).

The effects of residence restrictions on both offenders and communities are the subject of intense scrutiny. Tewksbury (2005) suggested social or cultural implications, or “collateral consequences,” are associated with such restrictions. For example, residence restrictions are thought to create difficulties in reintegrating offenders into communities, causing social isolation and limiting offenders’ access to rehabilitation services (Burchfield and Mingus, 2008; Levenson, 2008; Levenson and Cotter, 2005; Zevitz and Farkas, 2000).

Similarly, significant effort recently has been dedicated to exploring the effects of residence restrictions on the availability and affordability of housing in communities. Much of this literature has suggested that larger SRZs decrease housing availability for sex offenders (Barnes et al., 2009; Chajewski and Mercado, 2009; Zandbergen and Hart, 2006; Zgoba, Levenson, and McKee, 2009). Although these observations are not particularly surprising, they provide the impetus for pursuing more nuanced and relevant matters associated with housing that may be the result of residency restriction laws. For example, residence restrictions not only limit housing availability, but recent work identifies potential effects of these policies on local housing values (Linden and Rockoff, 2008; Pope, 2008), affordability (Grubestic, Matisziw, and Murray, 2010; Grubestic, Murray, and Mack, 2008), and the emergence of sex offender clusters (Grubestic, 2010).

The purpose of this article is to provide an overview of how sex offender residency laws interact with local geography and urban morphology to generate both intended and unintended outcomes. We begin with a general review of sex offender laws at federal, state, and local levels. This review is followed by a brief historic overview of how local legislation is used to control the spatial distribution of undesirable facilities and populations in the United States. The next three sections explore the specific geographic manifestations of sex offender policies and also highlight how poor cross-jurisdictional coordination of offender laws can influence housing options and affordability and create geographic concentrations of offenders. We also review strategic options for communities

¹ For a thorough review of community notification laws, see Bedarf (1995), Hughes and Kadleck (2008), and Logan (2003).

dealing with unique local distributions of sensitive facilities, populations, and convicted offenders. We conclude by discussing the policy implications for sex offender laws and housing, highlighting the importance of urban morphology.

Sex Offender Laws

Numerous sex offender laws exist in the United States. Although many of these laws do not have an obvious link to housing issues for convicted offenders, a variety of externalities are associated with these policies that can affect housing availability and affordability. In an effort to better understand how such legislation is structured across political jurisdictions and the housing effects associated with these laws, this section reviews sex offender legislation at federal, state, and local levels.

Federal Laws

Perhaps the most widely recognized approach to managing sex offenders is community notification laws. These laws are instituted to monitor the whereabouts of convicted offenders once they have served their prison sentence and are released into the community. At the federal level, these laws were initially enacted in 1994 as the Jacob Wetterling Crimes Against Children and Sexually Violent Offender Registration Act² (Wetterling Act). The Wetterling Act mandated that each state implement a sex offender registry. Megan's Law³ amended this act in 1996, requiring states to establish a community notification system to alert residents when a sex offender moves into their community. Communities are given significant leeway in the approach used for notification; methods include phone calls, going door-to-door, or using some type of publicly accessible Internet database. The Lynchner Act⁴ (1996) also amends the Wetterling Act, requiring lifetime registration for recidivists and offenders that commit aggravated sexual offenses. The Lynchner Act, however, is largely subsumed by the more recent Adam Walsh Child Protection and Safety Act of 2006⁵ (Walsh Act). The Walsh Act organizes sex offenders into three tiers and mandates that the most serious offenders (Tier 3) update their whereabouts every 3 months for their lifetimes. Tier 2 offenders are required to update their information every 6 months for 25 years and Tier 1 offenders must update their information annually for 15 years.

Although community notification laws were initially developed to protect children from predatory sex offenders (Levenson, 2003), opponents of these laws argue that most sexual assaults committed against children are by acquaintances known to the victim (Catalano, 2006). They claim that this method of managing offenders is largely ineffective, and that it is a drain on human and financial resources for local law enforcement agencies (Zevitz and Farkas, 2000). The human resources required to maintain accurate offender information are substantial because these databases are relatively dynamic and quickly outdated. In part, this is because offenders are a highly mobile

² Jacob Wetterling Crimes Against Children and Sexually Violent Offender Registration Act. 1994. Violent Crime Control and Law Enforcement Act of 1994, H.R. 3355 C.F.R. § 170101.

³ Megan's Law, Public Law 104-145 C.F.R. § 170101 (d) of the Violent Crime Control and Law Enforcement Act of 1994.

⁴ Lynchner Sexual Offender Tracking and Identification Act. 1996. Public Law 104-236 C.F.R.

⁵ Adam Walsh Child Protection and Safety Act of 2006. Public Law 109-248.

population, changing residences within and between jurisdictions (for example, county to county, state to state) frequently (Murray et al., in press; Turley and Hutzler, 2001). Further, many offenders are simply noncompliant, failing to register, re-register, or de-register after they have moved. Therefore, it is common for law enforcement officials to lose track of an offender's whereabouts, leading to inaccurate and outdated registry databases (Cohen and Jeglic, 2007; Davey, 2006; Mack and Grubestic, 2010).

State Laws

Sex offender laws at the state level consist of a more varied mix of strategies for managing convicted offenders.⁶ First, registration requirements vary substantially between states. Although all offenders are required to register, as mandated by the Walsh Act, the information that is collected during the registration process differs. For example, in the state of Missouri, officials collect an assortment of personal information, including a DNA sample, but the state of Idaho does not mandate DNA collection. These same state-level differences also manifest in sex offender residence restrictions. These restrictions are designed to control the spatial distribution of convicted offenders, effectively limiting potential exposure to children by forcing offenders to establish a permanent residence beyond a prespecified distance from a sensitive facility. Because no consistent definition exists among states, restriction distances and the types of facilities deemed sensitive (schools, daycare centers, parks, and bus stops) vary considerably across states. This variability generates a haphazard landscape of restrictions for convicted offenders. Approximately 30 states maintain some type of residence restriction with little consistency among them. For example, Florida and Ohio mandate that offenders live outside a 1,000-foot SRZ from schools and daycare facilities; Mississippi stipulates a 1,500-foot SRZ; Illinois, 500 feet; and California, 2,000 feet. Amendments to the laws further complicate matters. For example, Georgia recently amended its sex offender laws with House Bill 571.⁷ Depending on when the offender was convicted, he or she may or may not have any residence and employment restrictions.⁸

Other state-level efforts designed to manage offenders include state-funded efforts to apprehend and prosecute offenders in violation of registration laws. Although these efforts are not generally classified as sex offender "laws," they are indicative of state-level efforts to monitor this population. For example, both Arizona and Wisconsin have implemented state-funded task forces to determine the whereabouts of absconded offenders and prosecute them (Groves, 2005; Rubiano, 2005).

Local Laws

Most of the local sex offender laws in the United States are largely derived from state-level policies. In particular, residence restrictions are often adjusted at the local level in an effort to reflect more conservative community standards and preferences regarding sex offenders. For example, Florida has nearly 130 different local residence restrictions in place. These restrictions range from the

⁶ Global Positioning Systems and lifetime supervision policies are also used in many states (Cohen and Jeglic, 2007).

⁷ Georgia General Assembly House Bill 571. 2010.

⁸ For a thorough summary of these amendments, see http://www.gachaplains.org/pdf/HB_571_Summary.pdf.

state-level minimum distance of 1,000 feet, up to 3,000 feet locally (Killian, 2008). Although the structure of the Florida residence restrictions is fairly standard, many other communities are developing and implementing alternative strategies for managing the spatial distribution of convicted offenders. For example, one alternative approach seeks to control the spatial density of convicted offenders. This approach uses laws that are designed to reduce the interaction between offenders and the exposure of communities to these potentially problematic populations (Grubestic and Murray, 2008). Specifically, in Brookhaven Town, New York, it is illegal for more than two registered offenders to live in the same single-family home (Whittle, 2008). The locality levies fines against both the offenders and the landlord in this case. Similarly, a senate bill in Arizona that did not pass attempted to limit the number of offenders in multiunit apartment complexes to at most 10 percent of the units.⁹ Further, a different bill in Arizona sought to prohibit convicted sex offenders from living in the same residential structure and no closer than 1,320 feet of each other.¹⁰ This type of dispersion strategy is increasingly popular, with similar approaches enacted in California (Eakins, 2008; Mazza, 2008; Sahagun, 2008), New York (Whittle, 2008), and Wisconsin (Boyd, 2008).

Typological Summary

The simple federal, state, and local typological framework of sex offender laws detailed above leads to the following four summary points pertaining to housing. First, residence restrictions can limit housing availability for convicted offenders (for example, Barnes et al., 2009; Chajewski and Mercado, 2009; Zandbergen and Hart, 2006). Although this fact is rather obvious, SRZs, by design, are meant to keep offenders from establishing a permanent residence near a school or other sensitive facility. As a result, the SRZs make large areas of potential housing in communities off limits. Second, after local jurisdictions begin to modify existing offender policies (for example, extending or contracting an SRZ based on distance) or develop new sex offender residence restrictions (for example, saturation statutes and dispersion ordinances), estimating the actual effects on housing availability within a community becomes challenging. Specifically, because housing availability is now codependent on the distribution of sensitive facilities and on offender distributions, expected outcomes are neither obvious nor intuitive. Third, this matrix of local restrictions can be complicated further by the influence of geographically proximate communities and their associated residence restrictions, particularly if no effort is made to coordinate policies across jurisdictions. For example, if SRZs spill over into adjacent communities, some offenders may be considered non-compliant by one community but compliant by the other. In a similar vein, repercussions are likely to emerge when one community is aggressively enforcing offender residency restrictions and their neighboring communities are not. This situation can result in an emergence of offender clusters. Finally, the affordability of available housing must be considered in communities that have enacted sex offender laws. As noted previously, all communities have unique morphological characteristics and have varied spatial distributions of sensitive facilities and available housing. Therefore, the ways in which these characteristics interact are important to consider when evaluating housing availability and affordability associated with sex offender laws.

⁹ Arizona State Senate Bill 1338. 2005.

¹⁰ Arizona State Senate. Amendment to H.B. 2332. 2005.

Geographical Regulations

This section provides a brief review of the geographic characteristics of sex offender laws in the United States. More importantly, these spatial approaches to sex offender management are set within the historical context of related socially unacceptable practices.

Socially Unacceptable Practices

The United States has a long history of legislative approaches to regulating the spatial distribution of undesirable facilities, socially unacceptable practices, and their negative externalities. Moreover, the use of such laws and restrictions are by no means limited to convicted sex offender residency issues. For example, Ryder (2004) noted that adult entertainment or “vice” districts exist in virtually every major city in the United States, from San Francisco (for example, the Tenderloin), to Philadelphia (for example, South Columbus Boulevard.), to Portland, Oregon (for example, Lower Burnside). These districts are often home to businesses that sell pornographic materials and provide topless entertainment (Papayanis, 2000). In many of these districts, drug dealing and prostitution are not uncommon (Cameron, 2004; Ryder, 2004). In other instances, adult-oriented districts may give way to smaller urban locales/nodes that serve a specific social purpose but are often deemed socially undesirable. For example, group rehabilitation homes for recovering drug addicts or sex offenders can be viewed as objectionable facilities within a community.

Although these undesirable districts and facilities may, in some cases, be transient, the approaches used to regulate their distributions are fairly standard. In fact, the strategies employed are nearly identical to the residence restriction ordinances implemented in many communities for sex offenders. Seattle, for example, had zoning laws that prohibited group homes from being located within 1,320 feet of each other (Mac Donald, 1994). In effect, this is a dispersion ordinance that seeks to maintain a prespecified distance between facilities. Moreover, regardless of the population being served (for example, drug addicts, victims of domestic abuse), this type of approach is undeniably a geographic-based management tool. In a slightly different context, there has been a relatively long history of communities attempting to control the operation and location of adult video stores, strip clubs, and pornographic movie theaters. Again, these laws often ban the operation of these businesses from within a prespecified distance of schools and churches (Cameron, 2004; Papayanis, 2000). In effect, these ordinances demarcate SRZs, much like those used to manage sex offender populations throughout the United States.

The constitutionality of these types of spatial restrictions on undesirable facilities was upheld by the Supreme Court in 1976 (Papayanis, 2000). The legislation in question was the city of Detroit’s “Anti-Skid Row Ordinance,” which was developed to deter the local, negative externalities generated by the concentration of adult bookstores and movie theaters. As Finkelman (2006: 1808) notes:

[e]stablishments exhibiting material depicting specific sexual activities or ‘anatomical areas’ as outlined by the ordinances could not be located within 500 feet of a residential area or 1,000 feet of two other regulated uses that included such business as bars, pawnshops, pool halls and shoeshine parlors.

The written opinion by the Supreme Court found that Detroit's Anti-Skid Row Ordinance and its associated spatial restrictions were acceptable land use tools for managing the spatial distributions of these businesses and preserving the quality of Detroit's residential neighborhoods (Finkelman, 2006).

The historical use and application of geographic regulations across a range of social contexts is significant for sex offender residency laws for several reasons. First, it effectively set a precedence for spatially separating problematic establishments and practices from residential areas and each other. Second, these types of management approaches are community specific. In other words, after the constitutionality of these approaches was established, local community standards could be used to determine how rigorous the geographic restrictions could be. For example, while Detroit determined that 500 feet from residential areas and 1,000 feet from other regulated business was sufficient for restrictions, other communities could stipulate larger (or smaller) distances if necessary. These two elements of geographic regulation play an important role in residence restrictions for sex offenders, the specifics of which are detailed in the subsections that follow.

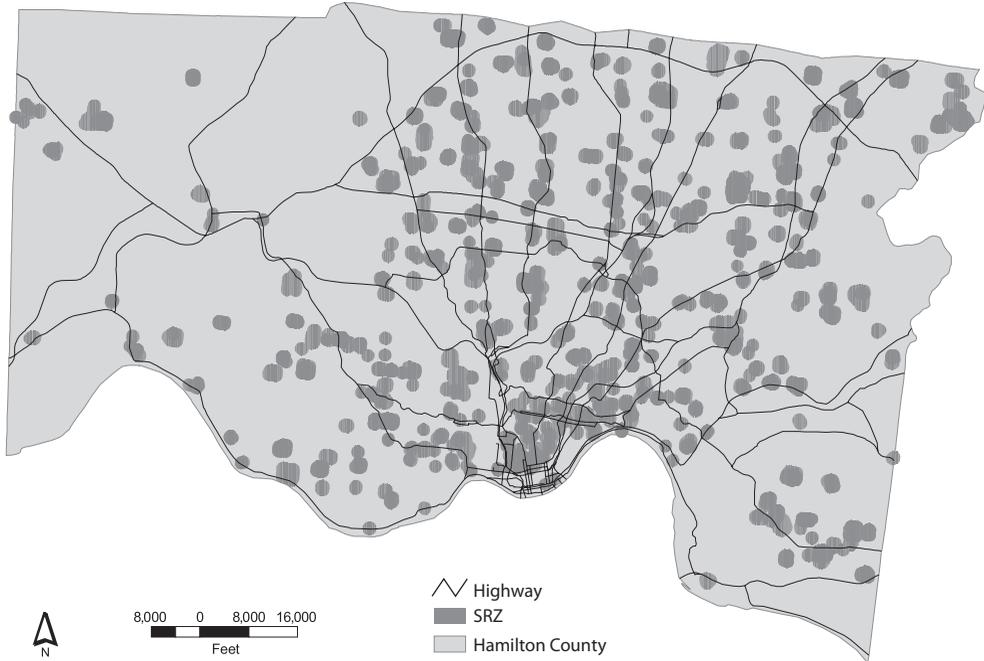
Sex Offender Residence Restrictions

As noted in the introduction, convicted sex offender residence restrictions vary substantially among states. Residence restrictions for sex offenders are very similar to the ordinances detailed in the Socially Unacceptable Practices section for geographically regulating establishments providing socially unacceptable practices. In essence, both types of restrictions seek to physically separate potentially problematic individuals or activities from sensitive facilities or areas within a community. Further, depending on community standards, the severity of these restrictions can vary. For example, California requires that offenders establish a permanent residence at least 2,000 feet away from schools or parks, whereas convicted offenders in Ohio must establish a residence at least 1,000 feet away from schools or daycare centers.

Although both geographic and contextual differences exist, the manifestation of SRZs in communities throughout the United States is quite similar. For example, consider the 1,000-foot restriction in Hamilton County, Ohio (exhibit 1). Each SRZ is based on a single parcel, or group of parcels, that correspond to school-owned property in Hamilton County. This includes both public and private schools for the county. As noted by Grubestic, Murray, and Mack (2007), the use of parcel data is critical for establishing SRZs. Specifically, if schools are represented as a single point for establishing SRZs, one would effectively ignore the presence of parking lots, athletic fields, and other school-affiliated grounds where sensitive populations (for example, children) congregate. As a result, parcel data are critical for both establishing SRZs and estimating their effects in a community. The interpretation of exhibit 1 is relatively simple: according to Ohio state law, areas shaded in dark gray are effectively off limits to offenders for establishing a permanent residence. Exhibit 2 provides a larger scale snapshot of how SRZs are structured locally. In this case, residential parcels colored dark gray are still available to offenders, but those colored light gray are not because some, or all, of the parcel is within 1,000 feet of one or more of the three school parcels, highlighted in black. As noted by Murray and Grubestic (in press), there are alternative approaches for delineating the specific geometries associated with SRZs and the parcels identified as off limits. For example, instead of using an intersection rule for identifying parcels, one might denote restricted parcels based on centroids within an SRZ, a parcel's furthest edge, or some combination of geographic

Exhibit 1

Regional Effects of SRZs: Hamilton County, Ohio (SRZ = 1,000 ft.)



SRZ = spatial restriction zone.

criteria. Regardless, exhibit 2 illustrates how SRZs manifest in most urban areas. Clearly, available housing is reduced, but as noted by Grubestic, Murray, and Mack (2007), more than 236,000 housing units, or roughly 63 percent of the total, remained available when the 1,000-foot SRZ is imposed in Hamilton County. This study also found that approximately 50 percent of all available rental units in Hamilton County are located outside the defined SRZs. Again, housing availability is diminished, but substantial housing options remain in Hamilton County for convicted offenders.

The residence restrictions detailed in this section represent the simplest strategy for geographically managing convicted offenders. In the next section, more punitive hybrid strategies for managing offenders are reviewed. Although similarities exist between hybrid approaches, SRZs, and the geographic management of socially unacceptable practices, a new layer of geographic complexity is introduced when dealing with hybrid restrictions.

Hybrid Residence Restrictions and SRZs: A Codependency

As discussed in the Local Laws section, hybrid residence restrictions implemented at the local level in the United States are growing in popularity. Hybrid restrictions typically make use of standard SRZs (for example, 1,000 feet from a sensitive facility), but also include some other geographic criteria to help manage offender distributions. For example, dispersion ordinances require that offenders establish a permanent residence outside of the standard SRZ, but also require that offenders maintain a prespecified distance between each other (for example, 1,320 feet). This type

Exhibit 2

Local Geographic Effects of SRZs



SRZ = spatial restriction zone.

of strategy is designed to minimize offender clustering within a community. Saturation statutes are structured in a similar fashion. Standard SRZs remain in effect, but the density and/or proportion of offenders are included as a secondary criterion. For example, a saturation statute may dictate that only 10 percent of residential units within a multifamily complex can be inhabited by offenders. Or, as structured in Brookhaven Town, New York, no more than two offenders may live in a single-family residence.

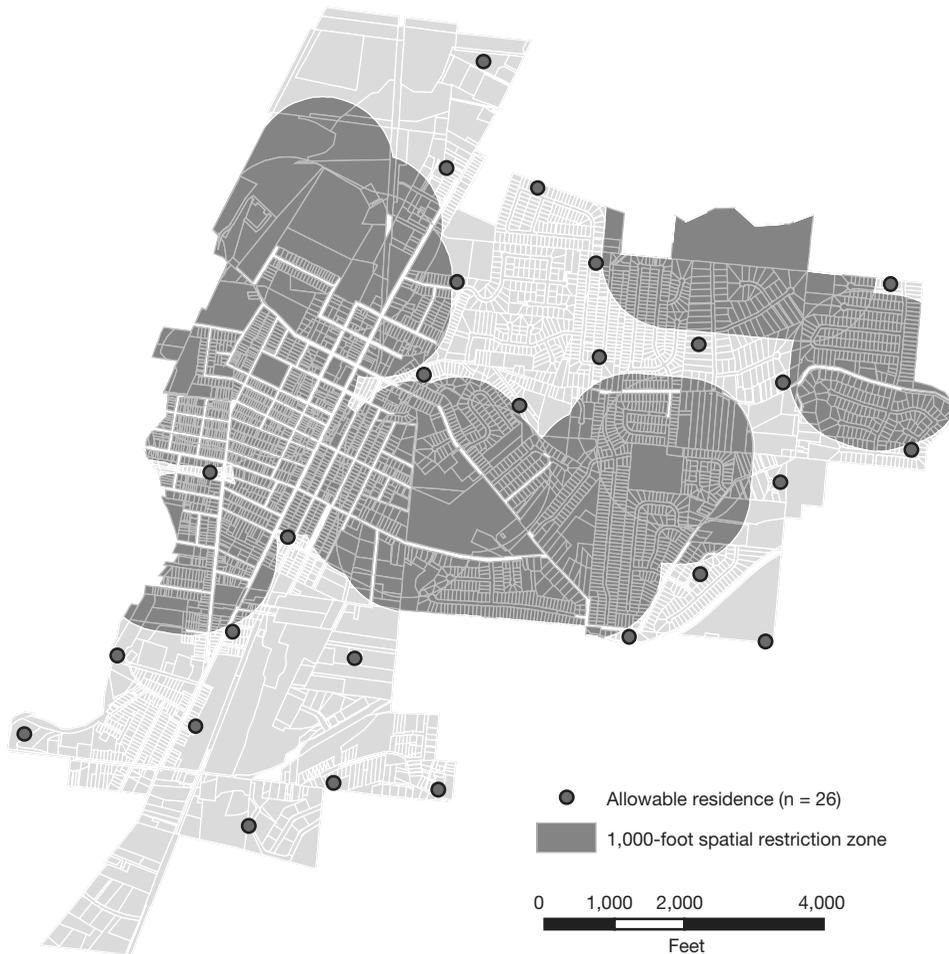
The effects of these hybrid residence restrictions are significantly more challenging to estimate because housing availability, as an example, is suddenly codependent on the distribution of sensitive facilities and on offenders. Consider the example drawn from Grubestic and Murray (2008) for Reading, Ohio. The goal of the Reading case study was to determine how the state-level 1,000-foot residence restrictions would interact with a supplemental dispersion ordinance of 1,320 feet between offenders. Specifically, Grubestic and Murray designed a mathematical programming model to determine how many sex offenders could reside in Reading while maintaining the stipulated spatial restrictions between offenders.¹¹ The results suggested that Reading could accommodate 26 offenders while

¹¹ See appendix for a full description of this model.

maintaining the criteria outlined by the hybrid strategy (exhibit 3).¹² Such an approach provides a benchmark to evaluate contingencies associated with implementing hybrid restriction strategies; one that can be used to compare existing distributions of offenders with other possible arrangement. This case study also highlights the awkward codependency between SRZs and hybrid strategies and their joint impacts on housing availability for offenders. Not only are offenders required to maintain an awareness of what housing stock is available outside the SRZ, they must also be cognizant of where other offenders have established a permanent residence in an effort to adhere to the hybrid restriction(s) that may be in place. Clearly, without advanced analytical and modeling approaches combined with detailed spatial information, the contingencies of these hybrid strategies are difficult to identify, especially for offenders, landlords, law enforcement agencies, and corrections officials.

Exhibit 3

Maximal Residency Distribution, Reading, Ohio



Source: Grubestic and Murray (2008)

¹² At the time of the analysis, Reading was home to 12 convicted sex offenders.

Given the number of potential variations for residence restrictions and their geographic ramifications, issues associated with policy coordination become more important. In particular, while residence restrictions are contingent upon local community standards, communities do not exist in isolation. As a result, locales with strikingly different approaches to managing sex offenders that are geographically proximal to each other may create some unexpected outcomes, particularly where the spatial distribution of offenders is concerned. These issues are explored in the next section.

Cross-Jurisdictional Coordination

Perhaps the greatest challenge in developing and implementing sex offender residence restrictions is coordinating ordinances and statutes between political jurisdictions. As noted earlier, although many states have established residence restrictions, these laws largely function as a minimum requirement. For example, Florida mandates that convicted offenders cannot establish a permanent residence within 1,000 feet of a school, playground, park, daycare center, designated school bus stop, or other places children regularly congregate, but counties and municipalities throughout the state have passed more restrictive legislation. Volusia County, Florida, provides an excellent example (exhibit 4). As of 2007, Volusia County (which has a population of 496,575) completely contained the Deltona–Daytona Beach–Ormond Beach metropolitan area, the 101st largest by population in the United States (Census, 2007). Volusia County has 16 incorporated cities and towns and nearly 70 unincorporated areas. Within the county, 8 different incorporated cities and towns have residence restrictions of 2,500 feet.¹³ Oak Hill, Florida, maintains a 1,500-foot restriction. Matters are further complicated by DeBary, Flagler Beach, Orange City, and Ormond Beach, all of which added libraries and churches to the list of sensitive facilities. Finally, Holly Hill, Florida, also stipulates that the restricted area is enforceable outside its city limits.

This patchwork of sex offender laws has significant implications. Consider, for example, how these laws manifest geographically in Volusia County. In a recent report, Longa (2009) noted that 748 convicted offenders had established a permanent residence in the county. Clearly, the complex mesh of restriction distances and sensitive facilities within the county create challenges for offenders in locating suitable housing that is not in violation of local laws. To better illustrate the complexities associated with the various regulations in place in Volusia County, a parcel-level analysis was conducted.

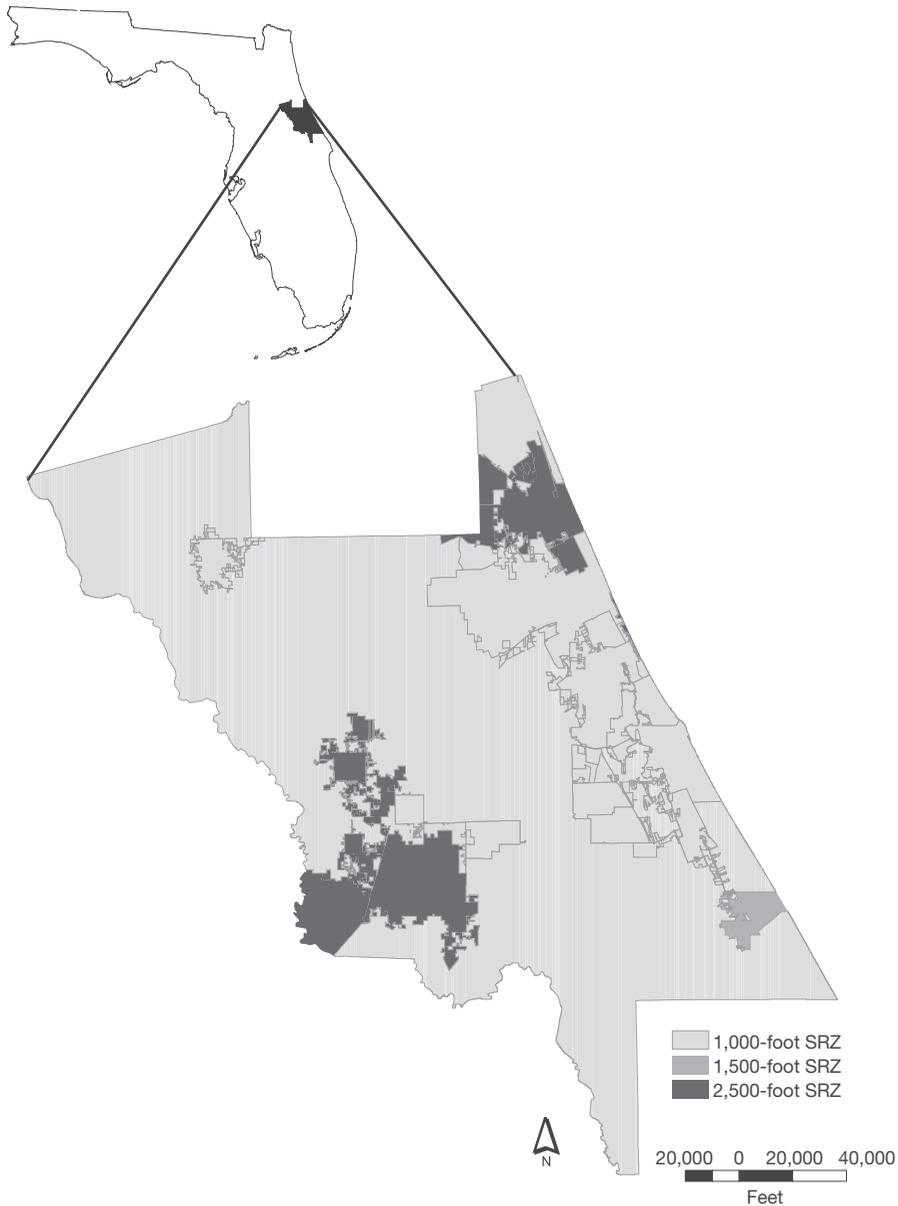
Parcel data for all schools, daycare facilities, and parks were acquired for analysis (Volusia, 2010). Parcels that correspond to libraries and churches were also acquired for communities that list these as sensitive facilities for residence restrictions. SRZs were generated for each parcel to provide a generalized map of areas designated as off limits for convicted offenders.¹⁴ The results strongly suggest that cross-jurisdictional coordination is a concern in Volusia County. For example, exhibit 5 displays the three different residence restrictions and the associated SRZs in effect for the county. Three major points need to be made here. First, large portions of Volusia County are off limits to

¹³ Daytona Beach Shores, DeBary, DeLand, Deltona, Flagler Beach, Holly Hill, Orange City, and Ormond Beach maintain a 2,500-foot SRZ.

¹⁴ This analysis is not completely representative of areas that are off limits to offenders. School bus stops and community centers were not included in the analysis.

Exhibit 4

Volusia County, Florida, and Associated Community Residence Restrictions



SRZ = spatial restriction zone.

convicted sex offenders. Many of the areas that are not off limits are primarily agricultural areas or protected wetlands and lakes. Second, when examining the SRZs for Holly Hill (2,500 feet), the community that stipulates its SRZs are enforceable beyond its municipal boundaries, it becomes increasingly clear that both housing selection for convicted offenders and the implementation of

Exhibit 5

Geographic Manifestation of SRZs in Volusia County, Florida



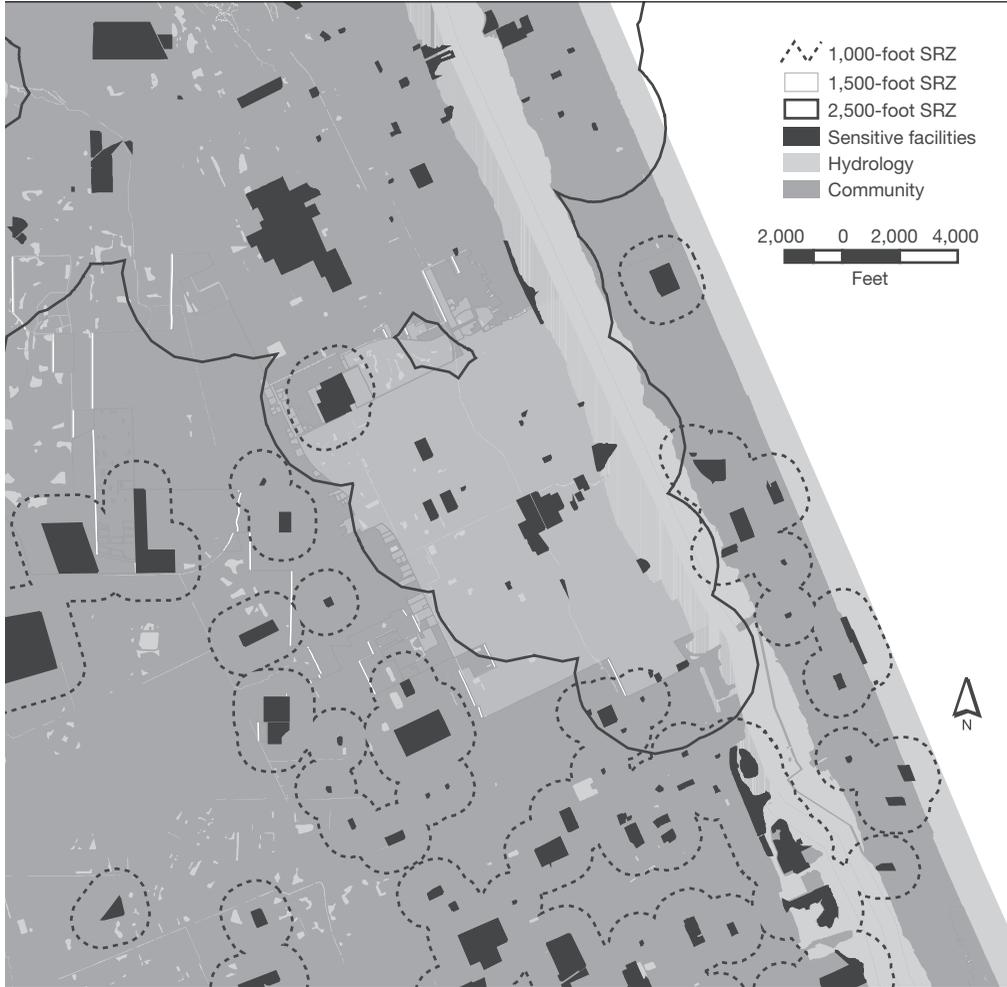
SRZ = spatial restriction zone.

residence restrictions for law enforcement agencies are exceedingly difficult (exhibit 6). Not only do Holly Hill's SRZs clearly spill over into neighboring communities, but neighboring communities that adhere to the baseline SRZ implemented by Florida (1,000 feet) are now subject to Holly Hill residence restrictions. Third, only small portions of Holly Hill that are without sensitive facilities are available for sex offenders to establish a permanent residence. Only a fraction of this area, however, is zoned residential. Of course, this patchwork of restrictions is associated with a single county in Florida. Considering that the state has nearly 130 unique residence restrictions implemented by counties and municipalities (Killian, 2008), understanding effects and implications is not easy.

Clearly, the lack of cross-jurisdictional coordination can be problematic both locally and regionally. The inability to unambiguously demarcate what housing units are available or unavailable to convicted offenders is one issue. Moreover, poor communication between communities also

Exhibit 6

Local Manifestation of Spatial Restriction Zones in Volusia County, Florida



SRZ = spatial restriction zone.

jeopardizes the ability for law enforcement agencies and corrections officials to monitor offenders. In the next section, we illustrate one significant outcome associated with the patchwork of offender restrictions and poor cross-jurisdictional coordination—sex offender clusters.

Offender Clusters

One of the collateral consequences of the seemingly haphazard landscape of residence restrictions is the emergence of sex offender clusters. Although much of the existing discourse regarding offender clusters is largely anecdotal (Gonnerman, 2007; Maloney, 2006), the general consensus is that communities with a higher geographic concentration of convicted sex offenders may be

exposed to an inordinate share of recidivistic risk. Such clusters are, in many cases, the byproduct of varied local laws. Grubestic (2010) provided a methodological framework for statistically evaluating offender concentrations, identifying several significant clusters of convicted offenders in Illinois. One important component to this analysis that directly relates to the problems with cross-jurisdictional coordination highlighted in the Volusia County case study is the movement of offenders from communities with rigorous sex offender laws into unincorporated or politically weak jurisdictions that do not have the ability to pass more stringent sex offender laws or do not have the ability to use human resources (for example, law enforcement) to manage offender populations effectively. As noted by Grubestic (2010), the Palace Mobile Home Park in the unincorporated community of Lealman, Florida (Pinellas County), is an example of this problem. Because it is located 2,100 feet away from the nearest school and has not passed more stringent restrictions than the state of Florida (1,000 feet), it exhibits a very high concentration of offenders. In fact, nearly 50 percent of its 200 residents are convicted offenders (Raghunathan, 2007). A similar situation existed underneath the Julia Tuttle Causeway in Miami, where severe residence restrictions in Dade County forced many convicted offenders to establish a tent community (Zarrella and Oppmann, 2007).

One final aspect of sex offender clusters relates to the locations of sex offender rehabilitation programs in a community. In many states, the social and psychological services that paroled offenders are required to receive are found in a very limited number of locales. For example, in Ohio, there are only three designated halfway homes for convicted offenders: one in Cincinnati, one in Mansfield, and one in Lebanon (Handwerk and Ali, 2009). Although a handful of other options are available in special circumstances, these alternative facilities review offenders on a case-by-case basis and have the right to reject offender participation.

Given a relatively limited distribution of rehabilitation facilities in Ohio and elsewhere, it is hardly surprising that many offenders concentrate in areas near rehabilitation services. As noted by Grubestic (2010), the Humboldt Park neighborhood in Chicago was identified as an offender cluster, but it is also home to the largest sex offender counseling service and rehabilitation facility in the state of Illinois. Simply put, one driving force behind this cluster of offenders appears to be related to access of court-mandated rehabilitation programs.

Given the results illustrated in the Geographical Regulations section and the Cross-Jurisdictional Coordination section, it is clear that residence restrictions for convicted offenders and housing availability in communities are closely intertwined. Many intricacies are associated with residence restrictions and hybrids that need to be considered when evaluating their potential social, economic, and geographic effects. Housing is a major concern, but so are issues associated with cross-jurisdictional planning for the geographic outcomes associated with sex offender laws and access to state, metropolitan area, or local community services. In the next section, we pull together all of these threads and illustrate how sex offender laws, urban morphology, and housing interact. Although the interactions are both complex and community specific, the next section further illustrates why spatial analysis is critical to better understanding the ramifications of sex offender laws and related public policies.

Urban Morphology and Housing Availability and Affordability

One final aspect of sex offender laws and the effect of their geographic manifestations concerns the morphological structure of communities where residence restrictions are imposed. Broadly defined, urban morphology refers to the “study of the city as human habitat” (Moudon, 1997: 3). Because communities are spatially and temporally dynamic, with their buildings, streets, parks, and monuments changing through time, communities represent an accumulation of many individual and collective actions; all of which are governed by social, economic, political, and geographic forces. As a result, housing availability and affordability in a community reflect a long history of urban development and governance, influenced by a wide variety of geopolitical and geoeconomic forces.

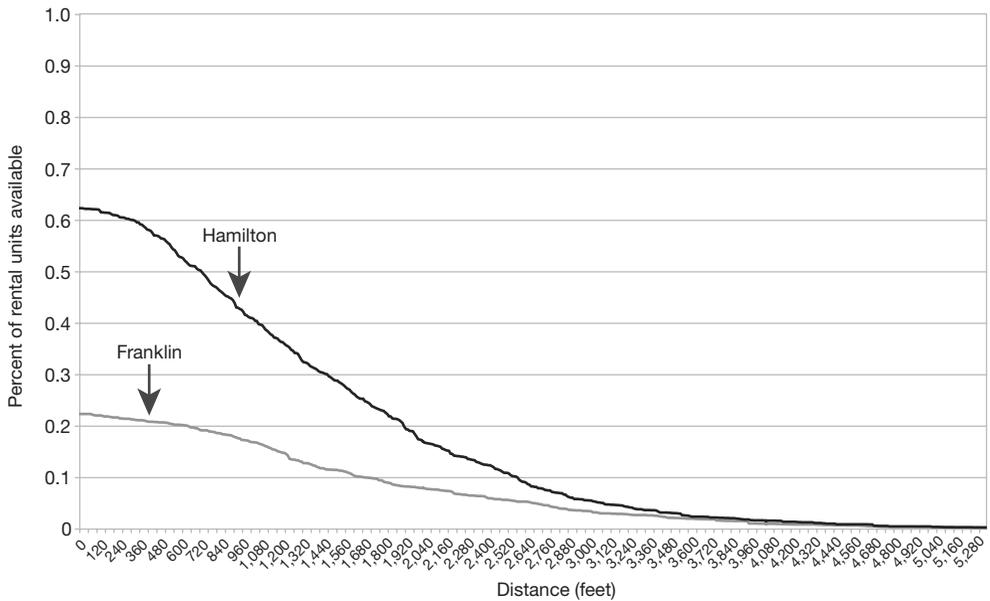
With this history in mind, the somewhat generic and arbitrary residence restrictions for convicted sex offenders, which state legislatures ratify, may be problematic. As noted previously, restriction distances range from 500 feet in Illinois to 2,000 feet in California. What remains unclear is why these particular distance restrictions are imposed. Are these restriction distances based on the morphological structures of these communities? If so, how is the distribution of sensitive facilities and populations different in Illinois when compared with California, which has more aggressive statewide restrictions? These questions have no obvious answers, but better ways of framing these policy changes exist. First, a positive aspect of uniform restriction distances is that they provide law enforcement agencies and corrections departments a regularized framework for managing convicted sex offenders. Second, by reducing variations in residence restrictions, uniformity provides offenders with an easily understood target restriction distance during their search for permanent housing. A weakness of this approach is that the one-size-fits-all strategy can create spatial inequities. Because each community has a unique distribution of housing, rents, and sensitive facilities, generic residence restrictions may predispose certain communities to a disproportionately higher number of convicted sex offenders (Grubestic and Murray, 2008) establishing a permanent residence. As noted earlier in this article, the formation of sex offender clusters is fueled by a combination of generic policies and poor cross-jurisdictional coordination.

A comparative analysis of Franklin and Hamilton Counties in Ohio reveals the effects of urban morphology on housing availability and affordability (Grubestic, Matisziw, and Murray, 2010) and demonstrates the need for considering the unique morphology of places when implementing various spatial restriction zones in communities. Using a Geographic Information System-based (GIS-based) approach for evaluating the geographic implications of different restriction distances for sensitive facilities across a suite of rental cost thresholds produced a number of interesting results.¹⁵ For example, exhibits 7a through 7d highlight variations in the availability and affordability of housing across four average monthly rent thresholds for each county. In this instance, the percentage of rental units potentially available (0 to 100 percent) within the county is summarized on the y-axis, and the variations in restriction distances (0 to 5,280 feet, in 10-foot increments) is summarized on the x-axis. Exhibit 7a suggests that, with rent levels at \$500 or less, Hamilton

¹⁵ In Franklin and Hamilton Counties, 98.5 percent of all elementary and secondary schools were used in this analysis. Data were missing largely because of incorrect addresses in the Ohio State Department of Education databases or indeterminate errors associated with the geographic base files used for analysis.

Exhibit 7a

Housing Availability at Different Contract Median Rent Levels With Varying Restriction Distances in Franklin and Hamilton, Ohio: \$500 and Below



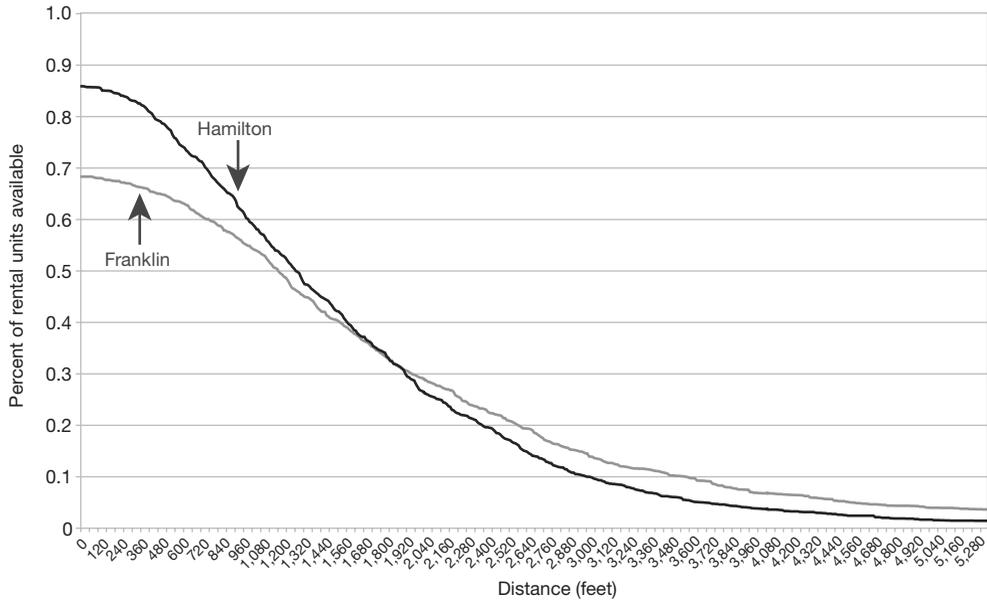
Source: Grubestic, Matisziw, and Murray (2010)

County always displays a higher percentage of housing availability than Franklin County, regardless of the restriction distances used. When the average rent threshold is set to \$650 or less, however, Hamilton County has a higher percentage of units available up to 1,900 feet from sensitive facilities. Beyond this restriction distance, Franklin County has a higher percentage of its housing available.

These results are important for several reasons. First, a one-size-fits-all strategy to restrict the residency of convicted offenders ignores the community-specific impacts of these policies. In fact, the effects of residency restrictions are highly variable because of the heterogeneous nature of community morphologies (for example, distributions of sensitive facilities, rental housing, and average rents). Franklin and Hamilton Counties provide an example of this variability; each county displays a different level of housing availability across average rent thresholds and restriction distances. Second, these results suggest that the ability to balance residence restriction parameters with the goal of ensuring the availability of affordable housing for convicted sex offenders requires significant analytical exploration. Specifically, if communities are too aggressive in defining residence restrictions, all housing options for offenders may be eliminated and encourage offenders to abscond or live in violation of local regulations. If communities are too lenient, they may increase the recidivistic risk for sensitive populations. Therefore, although a generic, state-mandated SRZ is convenient, restriction ordinances tailored to community characteristics and needs will likely be more effective. To achieve the delicate balance of protecting vulnerable populations while ensuring the availability of suitable housing for offenders, these policies require empirical evaluation before

Exhibit 7b

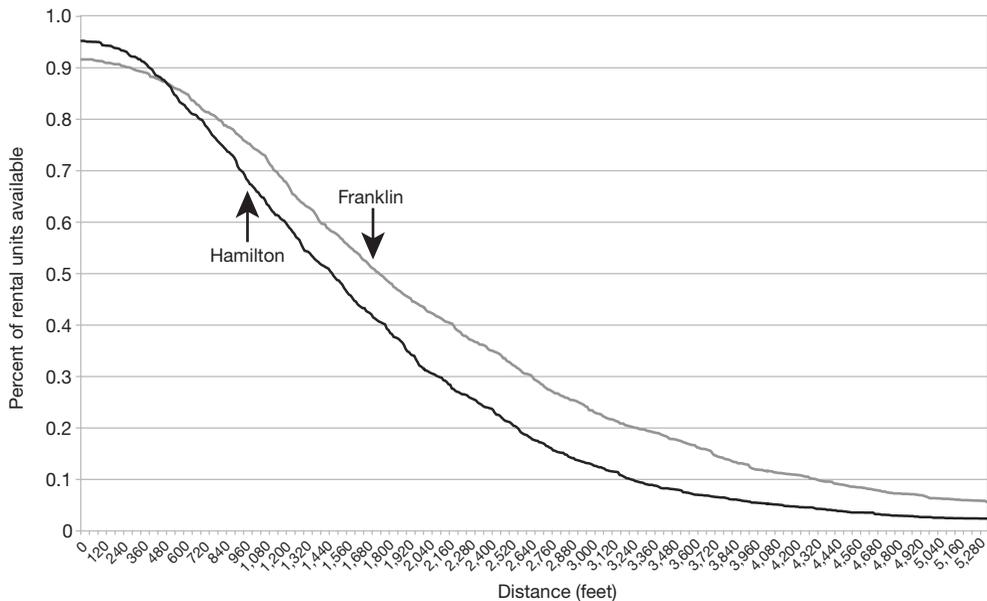
Housing Availability at Different Contract Median Rent Levels With Varying Restriction Distances in Franklin and Hamilton, Ohio: \$650 and Below



Source: Grubestic, Matisziw, and Murray (2010)

Exhibit 7c

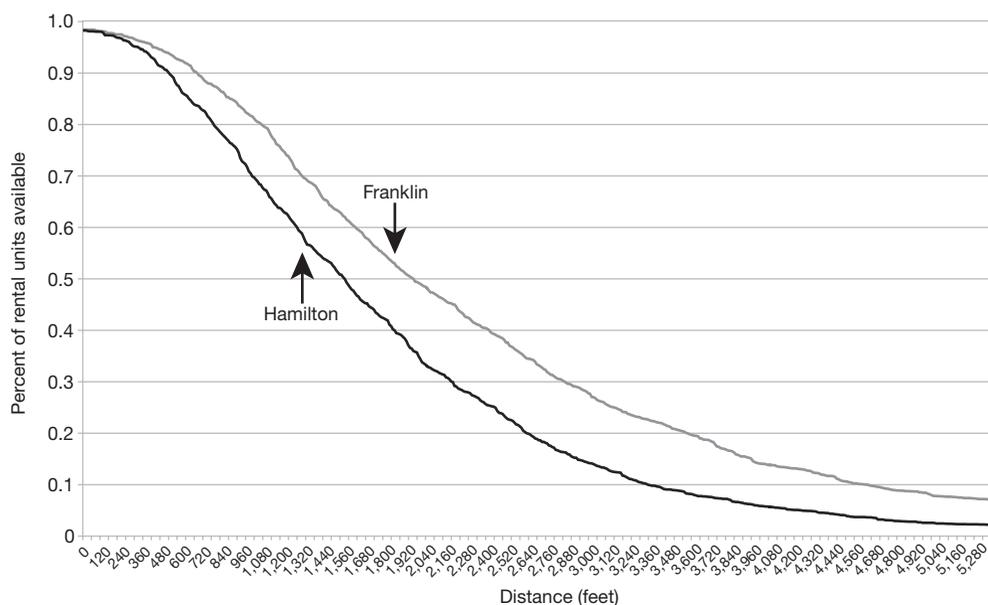
Housing Availability at Different Contract Median Rent Levels With Varying Restriction Distances in Franklin and Hamilton, Ohio: \$800 and Below



Source: Grubestic, Matisziw, and Murray (2010)

Exhibit 7d

Housing Availability at Different Contract Median Rent Levels With Varying Restriction Distances in Franklin and Hamilton, Ohio: \$1,000 and Below



Source: Grubestic, Matisziw, and Murray (2010)

their implementation. Research on this topic thus far clearly suggests that objective evaluations of these policies are an important first-step in developing reasonable and actionable public policies for managing convicted offenders.

Discussion and Conclusion

Given the variation in sex offender laws in the United States, regulating offenders will continue to challenge federal, state, and local officials for many years to come. This article provided a review of community notification laws, the modern genesis of sex offender management, and the history of regulation of socially unacceptable practices. The review of sex offender laws and regulations highlighted both the geographical implications and the jurisdictional issues confronting policy-makers and law enforcement officials now and in the future. The discussion of the effect of urban morphology on housing availability and affordability for offenders clearly illustrated the need for place-specific policies and the need for objective evaluations of policies before their implementation.

This review also suggested three major themes worthy of further discussion. First, implementing residence restrictions is unlikely to abate in the United States, regardless of their controversial nature and likely inefficacy. Currently, these laws receive too much public and legislative support in state and local communities to make their removal realistic (Mancini et al., 2010; Schiavone and

Jeglic, 2008). In fact, not only are these restrictions more popular than ever, recent evidence suggests that these laws are becoming increasingly punitive (Mack and Grubestic, 2010), often morphing into hybrid restrictions such as dispersion ordinances and saturation statutes (Grubestic, 2010).

Second, although residence restrictions and their associated SRZs are relatively simple in structure, they are implemented in highly complex community systems. As a result, the outcomes of sex offender laws, both locally and regionally, can be unexpected and challenging to predict without detailed analysis. For example, the haphazard landscape of residence restrictions and poor cross-jurisdictional coordination in Florida has created a highly confusing environment for both law enforcement officials and convicted sex offenders. It is extremely difficult to determine where one set of residence restrictions ends and another begins. In addition, a number of precarious housing outcomes result from these applications of sex offender policies, including the unintended development of sex offender clusters in unincorporated areas or along the margins of SRZs in urban areas. These types of outcomes can be avoided, but a significant amount of spatial analytical work is required to help evaluate the contingencies associated with these public policies before their implementation.

A third important point is that the one-size-fits-all management approach employed by many states is likely problematic and may not be consistent with local needs and objectives. It has already been established that communities and regions that deviate from this approach, including Florida, create a chaotic landscape of housing availability for convicted offenders. Almost no effort is made, however, to coordinate variations in local residence restrictions between jurisdictions. Further, because the morphology of each community is different, empirically based decisionmaking should be more widely used when modifying state-mandated SRZs to better fit local community standards.

Where does this leave sex offender policies? Certainly, the interaction between urban morphology and housing is very complicated and highly variable. Also, the collateral consequences associated with these policies clearly call for a more balanced approach to ensuring community safety while also ensuring a socially supportive environment for offenders, where housing and rehabilitation needs are met. Although the historical approach of proposing laws and regulations without fully understanding and exploring their implications is problematic, the evaluation of their implications is also no easy task. Given these challenges, there exists a clear need to explore new analytical methods including GIS, statistical tests, and mathematical models in the evaluation stages of these policies. More detailed spatial information for use in these analyses is also needed, so that more effective policies can be formulated in the future.

Appendix

In the model used for Reading, Ohio, geographic requirements stipulated areas where convicted sex offenders were not permitted to reside (that is, residence restrictions) and minimal separation between offenders (that is, dispersion). The model produced ensured that no violations of the separation requirements occur, providing important information to corrections officials and policy-makers for benchmarking the number of offenders that could potentially reside in a region, under the proposed restrictions. This model is structured as follows:

k = index of potential residences for convicted sex offenders.

Γ = minimum geographic separation between offender residences.

Φ_k = potential residences within stipulated separation Γ of residence k .

$$Z_k = \begin{cases} 1 & \text{if a convicted sex offender resides at } k \\ 0 & \text{otherwise} \end{cases}$$

$$\text{Maximize} \quad \sum_k Z_k \tag{2}$$

$$\text{Subject to} \quad Z_k + Z_l \leq 1 \quad \forall k, l \in \Phi_k \tag{3}$$

$$Z_k = \{0,1\} \quad \forall k \tag{4}$$

Again, this model can be used to benchmark the number of convicted offenders that could potentially reside in a region, as well as where they could reside, while simultaneously ensuring that separation restrictions are maintained. The objective (2) maximizes the number of offenders residing in a region. Constraints (3) ensure that no two selected residences are within the separation requirement. This is based on Γ that defines the set Φ_k , and is established by a community or local law enforcement agency. Integer restrictions are imposed in constraints (4).

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