

EXPLORING HOW TO REGULATE SHORT-TERM HOME SHARE RENTALS IN WATERTOWN, MA



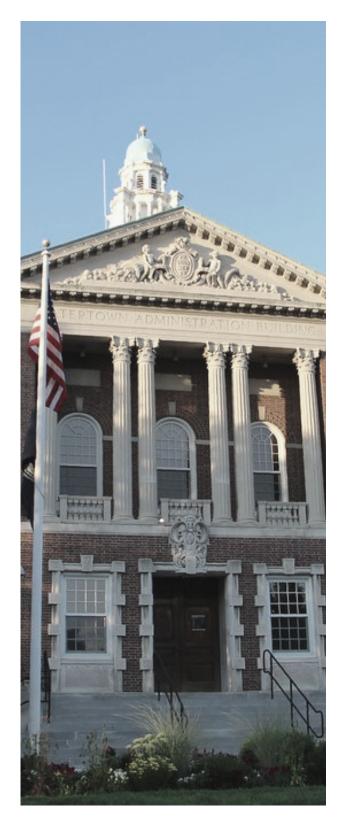


ABOUT THIS REPORT

Two student teams of undergraduate Political Science students addressed this regulatory challenge in the Public Policy Lab course instructed by Associate Professor David Glick during the Spring 2019 semester.

The following report is a compilation of this work and includes literature reviews, policy analysis, and suggested strategies for the Town of Watertown to consider. During the semester, students met with staff from Watertown to understand the key challenges, learn more about the needs of the community, and to present their findings.

The final version of this report was compiled and edited by Emily Robbins, MetroBridge Program Manager and Associate Professor David Glick, MetroBridge Faculty Director with assistance from Helen Houghton, a student in the Public Policy Lab course. The report was designed by Fatima Blanca Munoz, Program Manager at the Initiative on Cities.



ACKNOWLEDGMENTS

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ABOUT BU METROBRIDGE

MetroBridge empowers students across Boston University to tackle urban issues, and at the same time, helps city leaders confront key challenges. MetroBridge connects with local governments to understand their priorities, and then collaborates with Boston University faculty to translate each city's unique needs into course projects. Students in undergraduate and graduate classes engage in city projects as class assignments while working directly with local government leaders during the semester. The goal of MetroBridge is to mutually benefit both the Boston University community and local governments by expanding access to experiential learning and by providing tailored support to under-resourced cities. MetroBridge is funded by the College of Arts and Sciences and housed at Boston University's Initiative on Cities.

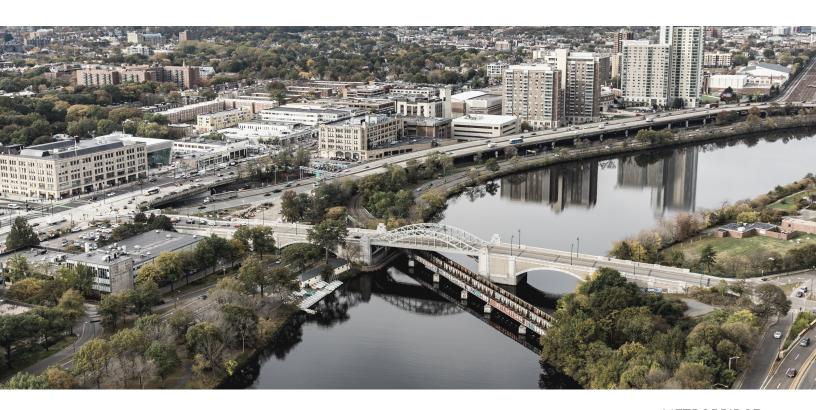
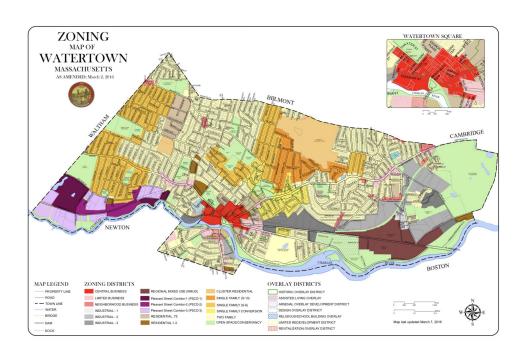


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EXECUTIVE SUMMARY

CHALLENGE FROM WATERTOWN: HOW TO REGULATE SHORT-TERM RENTALS

The problem Watertown approached MetroBridge with centers around the lack of regulations for the short-term home rental industry. Watertown made a previous attempt to fit the use into existing regulations, but it was rejected by the Planning Board, so short-term rentals are effectively an illegal use today. This also means that the property owners who are respectful of the rules and regulations cannot operate short-term rentals, while many individuals continue to operate illegally (The research conducted for this report estimates anywhere from 110-160 rentals are currently in operation.)

At the state level, Massachusetts recently passed House Bill 4841, which attempts to regulate short-term rentals and gives cities and towns more regulatory and taxation power. This legislation was signed into law by Governor Charlie Baker in December 2018 and is effective starting July 1, 2019. Watertown has yet to propose any new regulations on short-term rentals under this new state legislation.

Watertown is seeking recommendations for consideration around regulatory strategies, and enforcement of any new regulations. Watertown officials asked MetroBridge to research regulatory options that exist, as well as the potential impacts – both intended and unintended – of each approach. For example, some of the obvious implications to consider are the revenue stream for short-term renters, neighborhood disruption and parking issues, whether or not to welcome "investor" operators, and the impact on availability of affordable housing in Watertown.

The town also has concerns about the enforcement of any new regulations, as inspectional staff and other enforcement resources are limited. Given these constraints, Watertown is looking to consider solutions that would not create too much of a financial or administrative burden for the town.

The rise of short-term rentals (especially Airbnb) raises a number of policy questions and issues:

• Options for regulation: Should the town greatly restrict the use, or be more open to it?

- Should the restrictions on owner-occupants be treated differently than investor renters? Should Watertown add local option taxes to generate revenue?
- Enforcement: How should the town approach enforcement, and who will be responsible? Should the town create a registry and how will it be maintained? Who will perform inspections and what will be required?
- Policy approach: What procedures should be used for potential regulations? For example, an amendment to Code of Ordinances, a regulation of the Licensing Board, an amendment to the Zoning Ordinance, or a combination of these?

RESIDENT'S ATTITUDES TOWARD HOME SHARING

According to a survey of residents at a Watertown community meeting, roughly half of residents expressed concern about short-term home sharing. Many of these residents are in support of some type of regulation, but not an outright ban. A smaller number of residents, roughly one in ten, had no concerns about short-term rentals operating in Watertown.

One team of students evaluated the results of the community survey, and found the top concerns among residents are: new transient culture; impact on housing market and prices; parking/traffic; safety and crime; and noise from parties. Residents were least concerned about issues such as pets, overcrowding of homes, neighbor disputes, and impact on the hotel industry.

RESEARCH APPROACH

Two student teams approached these policy questions, conducted research on potential solutions, and offer a distinct set of recommendations for Watertown to consider.

The teams took various approaches to researching and analyzing options for regulating short-term rentals in Watertown. These research methods include:

- Summarizing the new guidelines for cities and towns put forth in the recent state legislation regulating short-term home share rentals
- Reviewing literature on home sharing's local-level impacts on the housing market, the hotel industry, and implementation challenges

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- Analyzing case studies of regulatory approaches in other municipalities such as Boston, Cambridge, Colorado Spring, and Truckee, CA (and also a phone interview with a Truckee representative)
- Coding and analyzing responses to Watertown's survey on residents' attitudes towards short-term rentals operating in the town
- Assessing estimates of the extent of current home sharing activity in Watertown, using short-term rental sites and the data service tool AirDNA
- Performing a comparative analysis of rental prices for short-term units versus traditional apartments of similar size and location

RECOMMENDATIONS

Each team presented a set of recommendations for Watertown to consider. (The full reports from Team 1 and Team 2 follow below.) Many of the teams' recommendations were similar, however there were a few distinctions among their suggested policy and implementation approaches.

Allowable Types of Short-Term Rentals

Both teams recommend that Watertown limit the operation of short-term rentals to only owner-occupied or owner-adjacent properties. As one team explained, one of the largest issues that comes from the short-term rental industry is investor style properties; these properties drive large decreases in available housing stock and do not compete fairly with long-term rentals. By allowing only owner-occupied or owner-adjacent rentals, the attractiveness of Watertown to investors looking to profit off of Airbnb is significantly decreased and made nearly impossible. Further, one team suggests that Watertown should avoid a formal cap on the total number of days per year an operator can list their property. This suggestion is primarily to allow residents to freely rent out their own properties, however it also eliminates a layer of enforcement the town would be responsible for managing with limited resources.

Taxation

Regarding taxation, one team suggests that Watertown **institute up to the full** additional 6% tax, but not rely on additional community impact fees. This team argues that requiring this tax will likely generate significant revenue for the town, and also serve as a deterrent effect to limit oversaturation of home sharing activity. Additionally, this team did not recommend relying on the community impact fees because, according to the state legislation, these can only be enforced on investor-owned properties, which

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are not recommended for Watertown.

Enforcement

Each team recommends a different approach for enforcing new short-term home sharing regulations in Watertown. The team recommending a 6% tax on short-term rentals recommends the town should **use the new tax revenue to invest in Host Compliance software for enforcement.** Host Compliance is a third-party company that contracts with cities and towns to enforce short-term rental regulations and assist with tax collection. (See Appendix B for more information on Host Compliance.) This team also suggests Watertown should **institute a violation process** that will culminate in notifying the state short-term rental registry that an operator is no longer eligible to list their properties on hosting websites.

The other team suggests that Watertown use existing staff resources to enforce the new guidelines, and fund new inspectional services staff by implementing a fine on non-compliant operators. Using the potential tax revenue of an average-priced listing as a guide, the team recommends a fine of \$176.10 per day.

Communication of New Guidelines to Hosts, and Neighborhood Rules for Renters Both teams encourage the town to proactively, and widely, distribute **information about** the new regulations to hosts, as well as neighborhood guidelines for short-term renters. Specifically, Watertown can help fund the creation and distribution of an infographic about parking, trash collection, and noise ordinances for renters. At the same time, the town should clearly inform residents of the obligations that come with the new bill, as well as the town's chosen course of action. Insurance requirements and penalties for misrepresenting tax liability is especially important.

CONCLUSIONS

This report recommends that Watertown consider a ban on only investor-owned short-term rentals, explore levying a 3-5% tax on short term rentals, examine using existing staff or contracting with Host Compliance for enforcement, and use various strategies to communicate new rules to residents, and also help inform renters about neighborhood information. These approaches aim to strike a balance between allowing residents (and the town) to earn revenue from short-term rentals and addressing residents' concerns that home sharing activity in their town will lead to a transient culture, impact housing affordability, and create issues with safety, noise, and parking.

TEAM 1 REPORT

INTRODUCTION

In the past decade, there has been extensive research on the home sharing economy, namely the externalities that come from it, possible methods to regulate it, and the challenges that come with enforcement. In terms of Watertown, MA, specifically, we were provided with survey results from over 100 Watertown residents indicating their feelings and concerns towards Airbnb operating in their town. Based on these survey responses, we know that a majority of respondents are concerned about how short-term rentals will disrupt the neighborhood. These concerns are not unique to Watertown, as proven through our research. Therefore, it is imperative to analyze how other cities address this concern, in pursuit of clarity on which regulatory approaches may be implemented in Watertown.

Our research consists of the following:

- A literature review of studies exploring the implementation of short-term rental regulations as well as impacts on the housing market and hotel industry
- Research on the City of Cambridge's Airbnb regulation (Cambridge is in close proximity to Watertown and shares some similarities in regards to demographics)
- Resident survey data (as provided by the Watertown Town Council) used to discern the most prevalent concerns among residents
- Data derived directly from Airbnb on the number of active listings available as well as the types of rentals and property owners
- Data from AirDNA, which tracks and compiles the number of active short-term rental listings in a given city, about all short-term rental listings (on Airbnb and other sites) in Watertown
- Qualitative data pulled from Host Compliance, a company that collects data on Airbnb rentals and produces white papers to inform local governments about solutions to potential challenges related to short-term rentals

This report also recommends using a third-party service to help regulate Airbnb issues in Watertown. In conjunction with our other prescribed policy options, we will show why we believe that a third-party compliance service will help ensure the effective regulation and taxation of short-term rentals in Watertown.

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LITERATURE REVIEW

The challenges with the short-term rental market indicated by cities of different sizes throughout our research were mainly in the areas of neighbor or neighborhood disruption, housing value impact or displacement, and struggles in finding a way to effectively regulate the short-term rental presence.

Neighbor/Neighborhood Disruption

A major concern with Airbnb in general, and the most pressing concern in Watertown, is the disruption of neighborhoods and neighborliness. In apartment tyle homes, people are living in close quarters and walls are thin. This is already a strenuous issue for residents, and short-term rental users may not care if they have a good relationship with neighbors at all. In places like New Orleans, San Francisco, and Barcelona, poor neighbor relations have destabilized neighborhoods (Spangler, 2018). Watertown residents share this concern, and many others, including noise, uncertainty surrounding who's in their neighborhood, safety, and having "businesses" in residential spaces.

Impact on Housing Market

In terms of the pressure on the housing market, research has shown that housing ordinances focused on short-term rentals such as Airbnb are effective in lowering the number of listings and stabilizing housing prices (Koster, et al, 2010). This research is important for two reasons. Firstly, it helps to show that regulations do work, even with the enforcement problems that may exist. Secondly, it shows that, unless a city is trying to solely decrease the number of listings, housing policy needs to be carefully used because getting rid of listings that are not detrimental to the community is not ideal.

As for the impact that short-term rentals have on housing prices, the existing quantitative literature that we reviewed is unanimous in saying that there appears to a strong correlation between the presence of Airbnb rentals and increasing house prices. However, the papers disagree on the extent of the effect. The largest study, using data from across the entire nation, estimates that "a 1% increase in Airbnb listings leads to a 0.018% increase in rents and a 0.026% increase in house prices" (Barron, et al., 2017), though this is more useful for establishing a relationship than estimating the localized effects. Such a large sample may lower the average effect with areas that are not as sensitive.

The most dramatic effect observed was a 14% increase in housing prices per 1%

increase in the amount of Airbnb listings in the popular tourist destination, Venice Beach, though the same paper observed an average of a 3% increase per 1% increase in listings in the greater Los Angeles area (Koster, et al.). Another paper estimated a 6% to 9% increase in housing prices when nearby listings doubled (Shepard & Udell, 2016). Additionally, largely populated cities, like New York, have experienced multiple negative externalities from the rising Airbnb/home sharing market.

According to a research study done by David Wachsmuth at McGill University, Airbnb has increased housing prices and decreased the amount of available housing.

Additionally, most revenue generated via Airbnb is through commercial operators. The authors include the following statistics about Airbnb's effects on the housing market:

- Airbnb has removed between 7,000 and 13,500 units of housing from New York City's long-term rental market
- By reducing housing supply, Airbnb has increased the median long-term rent in New York City by 1.4% over the last three years, resulting in a \$380/year rent increase for the median New York tenant looking for an apartment this year
- Commercial operators that control multiple entire home/apartment listings or large portfolios of private rooms are only 12% of hosts but they earn more than 28% of revenue in New York City

In terms of housing price effects, although there is not yet any data available on the impact of Airbnb on housing prices in Watertown specifically, we were able to find data on a wide range of other neighborhoods that may serve useful in exploring a potential cap on the number of days that short-term rentals are allowed to be active per year. Given that the increase in housing prices is caused when people rent out whole homes on Airbnb for extended periods of time, and thus lower the overall housing supply, caps on the days per year people can rent out their property would potentially circumvent this problem.

Analysis from data shared by Inside Airbnb (an independent database about Airbnb rentals) sheds light on the Los Angeles area housing market in in terms of the threshold for how many days of short-term rentals it would take for Airbnb profits to surpass the earnings from renting the space out on a traditional, year-long basis. On average across 16 zip codes, it took 83 days for the profit from Airbnb rental to surpass those of renting the unit out for a full year. From a homeowner or landlord perspective, the prospect of making more money in 83 days than one could in 365 days could be attractive, and is perhaps one of the reasons why the Airbnb presence in these neighborhoods continues to grow. (Cox, 2019).

Competition with Traditional Hotel Industry

New York City attempted to implement regulations on Airbnb due to the competitive nature they impose on the traditional hotel industry. In 2010, Airbnb was served a subpoena from the Attorney General of New York requesting all information from the hosts of the room share service. Airbnb fought the request, arguing it was extreme, and offered their own argument that previous regulations that were enacted prior limit the service offered. Finally, an agreement was reached: "the agreement permits Airbnb to produce anonymized data and to subsequently provide more specific information identified by the Attorney General as subject to further investigation." The agreement also requires Airbnb to display disclaimers to its users regarding hotel taxes and other rules. As the article further discusses, Airbnb much like any other technology or service is perceived both positively and negatively. These tensions may not necessarily be about the service itself, but rather finding an appropriate compromise that is satisfactory and mutually beneficial for all parties. (New York Law Journal).

Implementation/Regulation Challenges

Enforcement is the final issue that we explored. A lack of staff or resources to check compliance is a frequent theme, even in large cities like Los Angeles (Nguyen, et al., 2015) and Denver (Nieuwland & Melik, 2018), who have zoning staffs with more employees than Watertown has available. While there are multiple methods to try to make enforcement easier, it is nearly impossible to comprehensively enforce restrictive policies such as bans.

Watertown currently has a complete ban on short-term rentals. We argue that a ban is not a viable solution. To prove such, we compared Watertown's ban to New York City's ban. New York City is one of the most densely populated cities in the US and was not able to abolish the prevalence of Airbnb by simply banning it (Cox, 2019). About 70% of currently existing listings remained on the Airbnb site post the law banning them in New York City (Sheppard & Udell, 2016). Due to this trouble with enforcement, no research papers recommend outright banning of Airbnb and some even caution against losing the positive benefits that the sharing economy brings to consumers (Sheppard & Udell, 2016).

Further complicating efforts to fully ban Airbnb is the fact that the platform does not list addresses of listings (that information is only given once a deposit on the listing is made), and the map-feature is just vague enough that one cannot identify the location of a listing just by viewing the site. The site also includes its own disclaimer urging users to comply with their local and state short-term rental regulations, even including links

to the regulations for some cities and towns. However, that does not take away the ability for an individual to list their property, despite potentially being aware that doing so is a violation of their local government's rules.

Perhaps a more logical approach would be to seek more hands-on cooperation from Airbnb, such as incorporating registry databases into their systems and only allowing a listing to be posted to the cite if it possesses a verified registration code. However, with the several hundred cities listed on the site, many smaller towns, including Watertown, have not had luck getting responses from the company. Additionally, in Ulrik Binzer's journal article "What to do About Airbnb," Bizner argues that a ban is not a proper solution and modern technology can make regulation and enforcement feasible. Bizner writes, "There is a better way. Instead of bans, cities can enact innovative, enforceable policies that address the negative consequences of short-term rentals while maximizing economic and community benefits... With the advancements in bigdata technology, it is now possible to enforce such policies, and identify addresses of short-term rentals to bring them into compliance with local rules," (Binzer 2017).

ANALYSIS OF WATERTOWN RESIDENTS' OPINIONS ON SHORTTERM RENTALS

Early on in the research process, our group took steps to compile and analyze the data we received from a resident survey that the Town of Watertown provided us.

The survey responses were open ended, therefore, responses varied in length. In the survey, the city received 144 total responses which we then divided into 295 specific reactions or concerns. Approximately 20 concerns had to be removed from the data set because they either did not answer the posed question or did not fit well in terms of categorization.

In order to quantify this qualitative data, our group then worked to code this information to further understand and analyze the concerns of the residents in Watertown. This process played a crucial part in understanding and addressing the needs and concerns of the residents. Due to the fact that multiple residents listed multiple concerns, we decided to divide up each survey response by concern and code these concerns.

Once the coding process was complete, we were then able to properly calculate frequencies to get representative figures for the primary concerns of the residents in Watertown. Though we were generally aware of the typical resident concerns with short-term rentals in Watertown, we used the data to confirm or disprove our beliefs. We found that the largest concern was about transient culture. All responses coded as transient culture either explicitly mentioned the impact of transients or a change in community culture due to not knowing neighbors.

Additionally, we found that almost 11% (or one in ten) of respondents were not at all concerned or had positive feelings toward short-term rentals. This is a significant percentage considering the large distribution of concerns.

Out of 295 coded concerns, we ranked the prominence of each concern below based on the total number of responses. (See **Figure 1**).

Figure 1: Responses to Watertown's resident survey on about the operation of short-term rentals in the town.

Concern	# of Responses	Percentage
New transient culture	51	17%
Impact on housing market and prices	39	13%
No concern	32	11%
Parking/traffic	29	9%
Safety/crime/security	26	8%
Noise/parties	21	7%
Investor properties, absent owners	21	7%
Taxes	19	6%
Trash	9	3%
Maintenance of neighborhood	9	3%
Lack of regulation/oversight	9	3%
Impact on available resources	7	2%
Over occupancy	4	1%
Concern over max number of days	4	1%
Impact on hotel industry	3	1%

General neighbor disputes	3	1%
Notifying neighbords of STR guests	2	0.6%
Quality of life	2	0.6%
Overcrowding of homes	2	0.6%
Pets	2	0.6%

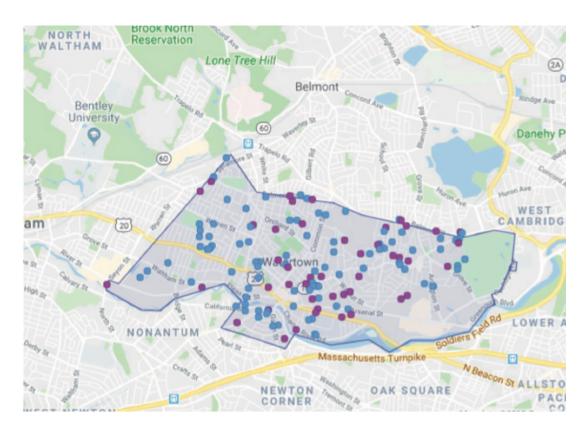
We decided to focus on the top eight responses because they are the most strongly reflected in the data: concerns about transient culture; concerns about impact on housing market and pricing; no concern or positive feelings about short-term rentals; concerns about parking and traffic; concerns about safety, security, and crime; concerns about noise or parties; and concerns about investor properties, or properties that are not owner-occupied.

The overall tone of the survey respondents was discomfort surrounding changing dynamics in neighborhoods and neighbor disputes. We will use these concerns as the criteria in our decision making as well as our method of evaluation. The chosen solutions should be based on their ability in reducing the negative externalities of short-term rentals that residents are concerned about.

ANALYSIS OF THE AIRBNB MARKET IN WATERTOWN

We also aimed to determine the "true" number of rentals and active rentals in Watertown on home sharing platforms, namely Airbnb. We were able to purchase access to this data via AirDNA, a site that aggregates data on short-term rental activity within towns and cities. AirDNA defines an active listing as one that has had at least one rental during the reporting period, generally broken up into "quarters", meaning it may be assumed that any active rental has been rented at least once within the last three months or so. Per this criteria, AirDNA currently lists Watertown as having 111 "active rentals". There are nearly twice as many "private room" listings as "entire home" listings. The geographic distribution of private rooms/entire homes appears fairly even, with the part on the western portion of the city showing a somewhat larger concentration in private rooms over entire homes. (See **Figure 2** below for a map of current Airbnb listings.)

Figure 2: Distribution of entire-home (in purple) and private room (in blue) listings in Watertown on Airbnb.



The distinction may be of interest from a policy standpoint because it may be inferred that a "private room" listing is within an owner-occupied rental, hence why they are only listing a single room and not the entire home, versus an entire home rental being more likely to be a home that is not the lister's primary residence. The purpose suggesting a cap on the number of days per year an operator can rent out their property is to mitigate the potential impacts of the short-term, rental market on the housing market for those seeking long-term or permanent residence in Watertown, or those who have been or may become displaced from their current residences by landlords who choose to take back the property to put up for short-term rental. However, based on the main concerns that Watertown has expressed about short-term rentals, these are not a large issue for the city. There is a possibility that parking is an issue with private room style rentals, but complaints about trash, noise, and parties should not occur as frequently with private rooms, as the owner of the house is often living with the renter(s).

The median monthly revenue for entire home listings with at least one booked day in the last month in Watertown was \$1,766, but it is important to note that that is one of the lower median monthly revenues within the range, indicating that last month just

happened to be an unpopular month for STR rentals, as it does not fall during a vacation period. The median monthly revenues on these listings, since Q1 2016, has ranged from \$1229-3117, as seen in the chart below. Of the 36 "entire home" active listings, only 6 were "houses." The remainder were apartments. The average rent per month for apartments in Watertown is estimated to be around \$3250 (Trulia Real Estate Overview, Watertown).

It is important to note that although this cost is an "average," the monthly rental costs for leases on apartments in Watertown vary greatly by type of building and number of bedrooms. To further explore these differences, we have listed pricing for a variety of apartment buildings in Watertown below (**Figure 3**).

Figure 3: An example of monthly rent prices on buildings in Watertown with 50 units or more (found via RentCafe).

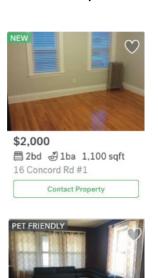
Building Name and Address	Monthly Rental Price	
Bell Watertown Apartments	1-bedroom: \$2300-\$2750	
100 Woodview Way, Watertown	2-bedroom: \$2900-4315	
	3-bedroom: Pricing not available online	
Riverbend on the Charles	1-bedroom: \$2281	
270 Pleasant Street, Watertown	2-bedroom: \$3050	
Gables Arsenal Street	1-bedroom: \$2420-3881	
204 Arsenal Street, Watertown	2-bedroom: \$3340-4420	
	3-bedroom: Pricing not available online	
Watertown Square Apartments	Studio: \$2015+	
20 Watertown Street, Watertown	1-bedroom: \$2200+	
	2-bedroom: \$3015+	
Elan Union Market	Studio: \$1800-2625	
30 Arsenal Street, Watertown	1-bedroom: \$2475-3500	
	2-bedroom: \$3245-4225	
	3-bedroom: \$4390-4690	

All of the above buildings and similar ones include vast luxury amenities such as gyms, pools, and parking lots. We then went on the Airbnb site and filtered entire home listings by amenities and selected "gym and pool" and property type as "apartment" to see if any of the Airbnb listings in Watertown available as "entire home" rentals are located in such

buildings. There were no listings available once these filters were put in place, meaning that owners of units in these luxury buildings are not renting out their entire home on Airbnb. Additionally, only one listing was found with searching with the filter of "private" room" which provided a rate of \$70 per night. When searching on HomeAway with similar filters, no results were found for Watertown. This is logical, considering that these kinds of units have such a high monthly rental costs per long-term leases that exceed the revenues that would be made via renting out the space on Airbnb instead.

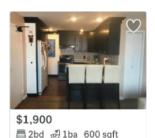
There are also individual units around Watertown that cost far less than units in these large buildings, with some currently available listings from the website apartments.com and their prices shown below in Figure 4.

Figure 4: A screenshot from one page of listings for non-large complex units in Watertown (Source: Apartments.com).





≅ 2bd € 1ba 1,000 sqft 221 Arsenal St #1



Contact Property

133 Warren St #10



64 Riverside St Unit 2 Watertown, MA 02472 \$1,500 | 1 Bed Available 07/01/19 **№** 781-429-7872 **Email**



24 Clyde Rd Unit 2 Watertown, MA 02472 \$1,500 | Condo for Rent Available Now



294 Arlington St Unit 1 Watertown, MA 02472 \$1,150 | Condo for Rent Available Now







\$2,000 ₿3bd ₺1ba Address Not Disclosed



\$1,550 □ 1bd Jba 600 sqft 550 Mount Auburn St #3

As displayed above, the rental prices for these non-luxury apartment building units in Watertown, which we have deduced via Airbnb filters are the only types of "entire home" units available, are less expensive. If we take the luxury buildings out of the equation to calculate an average rental price, it would be less than the previously stated average. Although we were not able to get data on every single non-luxury building in Watertown to calculate an exact number, we can roughly estimate that monthly rent on non-luxury units in Watertown ranges from around \$1,500-\$3000, increasing with number of bedrooms, and with most being within the \$1500-\$2000 range overall based on listings we viewed on both Apartments.com and Trulia.com.

We then went back to Airbnb to find a direct example we could use to calculate a real-life difference in revenue between renting long-term or Airbnb. We were able to find a monthly rental cost prediction for a given 2-bedroom 1 bath unit on Arsenal Street (non-luxury building) via Apartments.com (pictured in the bottom left of the screenshot above) at \$1,900 a month. We then found a very similar entire-home listing on Airbnb, for a 2-bedroom, 1-bath non-luxury complex unit on Arsenal Street in Watertown, priced at \$159 per night. Although we cannot confirm due to address privacy on Airbnb, it is reasonable to assume that the monthly rental revenue from leasing both these units would be nearly the same due to their shared size and location. At \$159 a night, this listing would only have to be rented out for greater than 12 days out of a month to earn the lister greater than the \$1900 monthly rent that would be earned every 30 days in a long-term lease.

We were also able to roughly predict the likelihood that a given unit will be rented for at least 12 days out of the month via AirDNA's data on historical average occupancy rates. AirDNA calculates the "occupancy rate" by dividing the number of days that a unit is rented in a given month by the total number of days that it is available for rent that month on home-sharing platforms. These rates are then averaged to calculate the "average occupancy rate." It is important to consider that not all listings are necessarily available for the entire 30 days out of each month, so the occupancy rate is not an exact equivalent to X/30 days.

Figure 5: The historical occupancy rates for "entire home" listings are displayed below.



As shown in **Figure 5** above, the median occupancy rates (50th percentile) for entire home listings in Watertown range from 40% at worst to roughly 92% at best. If we were to translate that into our monthly rent example, then the Arsenal Street unit, if made available on short-term rental platforms for a full 3-day period, could expect to be rented for $.40 \times 30 = 12$ days at the very least. Note that 12 days was calculated as our breakeven point between long- and short-term rental revenue. However, 12 days is the lowest average historical occupancy rate for entire home listings in Watertown, so a property owner can expect to be in at least the 60% range a majority of the time, as is portrayed in the chart above. Being that the worst-case scenario under these calculations is that the lister breaks even, they have far more potential gain if they choose to list their property on short-term rental platforms rather than in the long-term rental market.

This example illustrates that there are likely financial incentives for property/apartment owners in Watertown to take a chance on placing their unit on Airbnb rather than entering into a long-term lease, especially during "peak" months where demand for listings is high. If more property owners take notice of this potential and choose to capitalize on it, then residents' concerns about housing displacement and affordability

may grow even worse. These risks must be taken into consideration when determining how to regulate the short-term rental market in Watertown, and what types of listings to allow.

POLICY ANALYSIS AND SUGGESTED APPROACHES

In addition to the powers the town previously had, the new laws governing the regulation of short-term rentals in Massachusetts gives cities and towns additional options to regulate the short-term rental market. These range from taxation to fines to even determining where short-term rentals are allowed in the town. A full summary of the relevant parts of the new bill is included in **Appendix A** and in this section, we discuss what we believe to be the options that are most applicable to Watertown's specific situation.

In deciding upon which policy choices to ultimately suggest, we had to consider several available options that we came across during our research.

Full Ban or Partial Ban on Types of Short-Term Rentals

A full ban would not allow any short-term rentals at all, which is technically the situation under Watertown's current zoning ordinance. A partial ban could be carried out in many ways. The ban could be implemented based on type of listing, by number of days listed, or by banning rentals in specific neighborhoods, areas, or home types. Bans on specific types of listings include banning (or allowing) listings that are owner-occupied, owner-adjacent, or "investment"/"vacation" rentals. This is less of a ban and more akin to restricting the types of short-term rentals that are likely to cause the main issues of concern in Watertown: loss of community, disrupting longtime residents, and the possibility of investors buying up large amounts of property to rent out at a higher profit through short-term rentals.

An **owner-occupied** listing is generally defined as one in which the owner of the home is present at the time of the listing. These listings are generally advertised as "private rooms" and not "entire homes" on home-sharing platforms such as Airbnb. Allowing for only this type of listing would mean that renters may be under the supervision of the actual home owner, or at least be sharing the physical space with them to an extent.





Owner-adjacent rentals generally refer to listings in which the lister's primary residence is within the same residential building. The Cambridge zoning ordinance specifies that the residence must be one with four or fewer dwelling units, in which all are owned by the operator, and one of which is the primary residence of the operator. Allowing for this type of listing would mean that the rental is within close proximity to the owner's primary home, and the owner may be within the vicinity during the rental period. The third category of rental, often referred to as investor-operated generally refers to rentals that exist as an investment or vacation property to either an individual landlord or a property managing corporation. In these rentals, the owner of the property is not expected to be in or around the property, and the general use of the property is to produce income. These types of properties are attractive to investors because they yield higher returns than do traditional, longer-term rentals. Depending on the daily price that can be charged for multiple rooms in a single building or for a whole unit, profits could be as much as or higher than in normal rentals. Each type of listing and its being allowed (or not) presents its own set of potential outcomes, costs, and benefits.

In deciding which type of short-term rental listings to allow, we hypothesized that owner-occupied rentals would be the least likely to lead to the negative externalities emphasized by neighbors, such as loud noise, disruptive parking, and incorrect garbage disposal. We came to this assumption because one may reasonably assume that in a town with as strong a neighborhood culture as Watertown, it is unlikely that any homeowner would allow for those conditions to occur within their own permanent place of residence.

Per that same logic, we reasoned that owner-adjacent listings would be similarly low-risk, albeit less so than owner-occupied ones. An important trade off to consider in allowing owner-adjacent rentals with no cap on the number of rental days is the potential to remove those properties from the long-term housing market, because it is not the lister's actual residence. However, through our research, we found that the average monthly revenue for an entire-home listing, which an owner-adjacent property would likely be, fluctuates between roughly \$1700-\$4000, with the 4000 being only for a few "top" properties during the peak month of the year for the short-term rental market, according to AirDNA. In contrast, the average monthly rent for an apartment in Watertown (in the long-term rental market) is about \$3,500 (Trulia). Therefore, we reasoned that listers of owner-adjacent properties do not have much of an incentive to gamble their revenue stream with the volatile short-term rental market when they will likely make a higher and far more steady profit off the long-term market.

Allowing investor-operated listings would pose potential benefits of even greater tax revenue for the town, especially if they elect to impose the additional 3% tax as well as the optional fee. However, investor-operated listings would have the least amount of oversight or personal connection to the lister, because it is not their primary residence nor is it within close proximity to it. These properties pose the highest risk of being listed full-time on rental platforms, viewed by the lister only as a means of profit, and belonging to a lister who is not connected enough to the town or neighborhood to bother posting parking or trash disposal rules for renters. Being that neighborhood concerns and housing market impacts were the highest concerns among residents, we took these trade-offs within investor-operated listings very seriously in our decision-making process.

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Recommendation: Limit short term rentals to owner occupied or owner-adjacent properties. One of the largest issues that comes from the short-term rental industry is investor style properties; these properties drive large decreases in available housing stock and do not compete fairly with long-term rentals. By allowing only owner-occupied or owner-adjacent rentals, the attractiveness of Watertown to investors looking to profit off of Airbnb is significantly decreased and made nearly impossible. Requirements for establishing and proving residency will prevent these investors from entering the market, while leaving a lot of freedom for longtime resident operators who still seek to rent out their property, whether that be a single room, a whole house, or attached condos/duplexes. Requiring baseline residency could deter even the most determined investors, especially in the Watertown market, which AirDNA rates as attractive to commercial investors. While there are serious concerns about investor properties becoming prevalent in Watertown, we believe that this issue could be effectively handled by only allowing owner-occupied and owner-adjacent short-term rentals.

Taxation of Short-Term Rentals

Additionally, cities must decide how to tax the short-term rental revenues. Massachusetts will soon be enacting a bill (H. 4841, summarized in (**Appendix A**) that imposes a 5% tax on revenues on listings rented for 15 days or greater. The bill also gives individual municipalities the choice to impose up to another 6% on short-term rentals, and another additional 3% on investor-operated rentals called a "community impact fee."

These options provide several different options Watertown may choose to tax its rentals. They may choose to stick to only 5%, in order to avoid pushback from renters, or they may choose to implement the full 11% (14% in the case of investor owned units (5% state + 6% municipal + 3% community impact fee) in hopes of deterring some people from listing at all, and to collect the most possible tax revenue from those who do.

In terms of the additional 3% on investor operated rentals, Watertown must first decide on whether or not to allow investor-operated rentals at all, in consideration of the impacts of such rentals on neighbor satisfaction, parking availability, cleanliness, and overall housing availability/prices. They may then decide whether they find the additional 3% tax is necessary, in consideration of what the total percentage would be when added to the 5% + 1-6% additional amount.

While tax revenue is a definite benefit, what must be considered when implementing a tax is how it will affect the likelihood that a person actually places their rental on the market, and in turn how any hypothetical decrease in short-term rental activity due to a tax will actually hurt tax revenue. Therefore, the maximum amount of tax to be collected likely is not at the maximum taxable amount possible; instead, it is at the amount just before it will start discouraging people from posting rentals.

Analysis: This is how we recommend viewing taxation if the goal of the town is to gain revenue from the short rentals. A very attractive use for this potential new revenue stream is to fund methods for enforcing regulations that require manpower and hours worked by town employees. Alternatively, if the goal is to discourage certain rentals in general, or certain kinds, then higher taxes may not maximize revenue but may prove the best barrier to investor-owned properties popping up, especially as there This is how we recommend viewing taxation if the goal of the town is to gain revenue from the short rentals. A very attractive use for this potential new revenue stream is to fund methods for enforcing regulations that require manpower and hours worked by town employees. Alternatively, if the goal is to discourage certain rentals in general, or certain kinds, then higher taxes may not maximize revenue but may prove the best barrier to investorowned properties popping up, especially as there is an upward trend in the prevalence of short-term rental on websites such as Airbnb in recent years. This is of course an option that can be implemented later on should the need arise, though it must be noted that the new laws governing short-term rentals in Massachusetts are not flexible in how often taxes can be changed. Taxes can only be changed once per year under the new law.

There are also trade-offs to consider when deciding how much the town should tax these rentals. If they tax at the maximum amount, then they will make more in tax rental, but imposing too high of a tax may also deter people from listing in the first place, which would take away tax revenue opportunity. It is important to attempt to find a balance in which the tax is high enough to be beneficial for the town, but not so high that listers become frustrated or discouraged and forego listing at all, particularly the owner-occupied listers.

Recommendation: Institute up to the full additional 6% tax, but do not rely on additional fees. By requiring an additional 6% tax on short-term rentals, there is both a deterrent effect and a serious potential revenue gain for the town. We do not recommend the additional community service fee because investor rentals should not occur in Watertown given the other major steps we propose, in part, to prevent them from entering the market.

The new tax revenue would likely be best spent, at least in part, on enforcement of short-term rental regulations. While this decision is ultimately best left to the discretion of the town as we do not have the full picture of or context for Watertown's budget and finances, we believe the most cost-effective implementation method is investing in Host Compliance.

Rough estimates of potential new tax revenue based on information from AirDNA about the average revenue per room type and average number of listings during certain periods indicate that around \$70,000 dollars per year can be raised by taxing at the full 6% level allowed by the state legislation.

Guidelines for Short-Term Rental Hosts

Watertown must also consider whether or not to implement concrete policies that require listers to carry out specific tasks such as listing parking, trash, emergency, and fire rules pertaining specifically to their home/neighborhood on the platform. Requiring specific actions on part of listers may be received as too "controlling," and may also be very difficult to actually enforce. However, not stating such requirements may pose risks as such types of information are critical to ensuring that the rental does not disrupt town trash collection, parking, or safety.

An additional alternative we had to consider was how to regulate the actual use of the rental properties. Many cities have chosen to go the route of imposing caps on the number of days that listings are allowed to be rented, in hopes of ensuring that the housing market is not damaged by the short-term rental industry. Other safety considerations include the decision of whether or not to impose a limit on the number of people allowed to occupy each rental, and how to go about enforcing such a limit. They may choose to select a universal limit, such as "no more than 10 people per listing" to avoid "parties," or they may assign limits based proportionally on the number of bedrooms within each listing, such as "no more than 3 people per number of bedrooms." They may include this requirement within the permit itself, or attempt to require that the lister put the mandated limit on the platform, or both. At the very least, requiring that

such things be listed would allow officials to enforce the codes when they do happen to find violations. Realistically there is no downside to putting them into law, even if the manpower is not there to enforce them 100% of the time. The appearance of selective enforcement is unlikely, as it is no secret that the enforcement of such laws is difficult even with a large enforcement team.

Analysis: When it comes to the notion of imposing regulations that require listers to engage in certain behaviors, such as listing specific information or rules on the homesharing platform, enforcement may prove to be difficult. Including such requirements within the regulations is not actually costly or risky in any way, but actually enforcing them may not be feasible. If such behaviors do end up being required by law or code, then there would come the question of how to punish those who do not comply. It may not be feasible for the town to individually check each listing to make sure it includes all the required components, and then also somehow fine or take other forms of action against them if not. Regardless of the actual ability to enforce, it cannot hurt in any way to give users the idea that they are required to include this information.

Recommendation: Avoid a formal cap on the total number of days per year an operator can list their property, but be aware of how the cap can be used if needed in the future. We believe that instating no formal cap on the number of days per year a host can rent a unit will complement the other goals we have and allow residents a good deal of freedom in using their own properties, whether that be an extra room intermittently throughout the year or a whole unit for parts of the summer. In addition, having no maximum allowable rental days per year means the town is not limiting the opportunity to collect tax revenue from short-term rentals. Watertown should of course keep in mind the potential usefulness of such a cap in future situations where it may be needed to further regulate short-term rentals.

Monitoring & Compliance

With all of these potential regulatory choices, Watertown must also determine a feasible system for monitoring and enforcing compliance. Town administrators have indicated that Watertown has two personnel in charge of enforcing the zoning code. Therefore, either the selected policies will need to be within the scope of what two people can reasonably enforce, or they must be self-providing in funding to stretch the towns ability to enforce.

Watertown could consider the pros and cons of enforcing the chosen regulations through the physical zoning enforcement personnel or through a third-party platform, such as Host Compliance. The benefits of keeping the job in the hands of zoning enforcement are that they are well-versed and experienced specifically in Watertown's zoning regulations and how to spot a violation. However, being that there are only two people responsible for such enforcement, and Watertown's zoning code covers far more than just the short-term rental market, it may be impossible for these two people to effectively enforce the suggested regulations. If Watertown does implement concrete regulations on the short-term rental market and also elects to enforce them solely through existing employees, they may need to hire more people, which will add to the overall implementation costs.

With a third-party platform, the town will not need to hire more people, and the current zoning enforcement staff would have more time to spend enforcing all other areas of the zoning code. However, with implementing a new platform, there are the start-up costs of actually purchasing the platform, as well as making sure that members of the zoning board and enforcement team are well-versed in how the platform works and are at least periodically checking in on its effectiveness and accuracy. There would be an expected learning curve with getting people acclimated to Host Compliance, as well as a learning curve for Host Compliance to get acclimated to Watertown's code and town borders.

Analysis: Central to all discussions of the issue of regulating the short-term rental market is the need for enforceability of regulations. In the context of Watertown, the limited number of staff members that can be allocated to monitoring short-term rentals, and the fact that any regulations have to be retroactively enforced (and as a consequence, often selectively enforced) shows that traditional methods of enforcement may not be effective enough to monitor a market with hundreds of listings. Under the current setup, the main options available to Watertown are either expanding the number of town staff, which is likely to be a net loss due to the relative

inefficiency of enforcing regulations in person, or relying on a more sophisticated complaint system.

We believe that using the Host Compliance service would be the most cost-effective way to solve this problem. Host Compliance is likely to cost less than hiring one or more full-time employees dedicated to enforcement, and will also provide the town with comprehensive ability to monitor rentals, determine compliance with regulations, and collect taxes on short-term rentals properly.

In addition, the amount of tax revenue that can be captured via this program that would otherwise likely be missed will further add to the return on investment. Digital tracking of rentals could be an effective deterrent to would-be-violators if the town makes clear they are using Host Compliance.

There are a slew of other regulations that the new law permits cities to use in constraining short-term rentals. The most important in our eyes (based mostly on being the most enforceable or being the best incentives for compliance) are the ability to require confirmation of registration with the larger state registry (through a city or town's own registry they create) and the ability to create penalties for the violation of local ordinances, which, in the case of the violation occurring, the city or town is obligated to report to the state that the operator violated ordinances and should have their registration to operate short-term rentals revoked.

Recommendation: Use the new revenue from taxes to invest in Host Compliance software for consistent, reliable enforcement and the ability to efficiently collect taxes. (See Appendix B for more info).

Institute a violation process that will culminate in notifying the state short-term rental registry that an operator is no longer eligible to list their properties on hosting websites. The state law allows cities and towns to enforce regulations that, when violated, will result in an operator being removed from the state registry, and therefore be ineligible to rent their property out on home-sharing websites. Though the exact terms are best left to each municipality based on patterns of violation that emerge, the ability to remove an operator from the state registry is very important to keep in mind.

Communication of New Guidelines

Finally, one of the best things that can be done, and perhaps the simplest, is a public information campaign through as many channels as possible, to communicate not only the regulations and taxes, but also the base safety and insurance requirements for short-term rentals required by the state. This would help decrease the risk of liability to operators who otherwise do not know insurance requirements, increase the safety of those who stay in short-term rentals, and deter those who seek only to make quick money and do not want to go through the effort of meeting regulations.

Clearly condensing and communicating the new law is important to making sure that operators are compliant with local and state regulations. Importantly, insurance requirements and penalties for violations are the most crucial. In the event that an operator does not have sufficient insurance and someone they rent to is hurt or their property is damaged, there could be significant negative effects for all parties involved. Few are likely to willingly disobey the part of a law that could protect them from paying out tens of thousands of dollars in damages, but people must first be made aware of such regulations before they can be expected to behave rationally.

Recommendation: Clearly inform residents of the obligations that come with the new bill, as well as the town's chosen course of action. Insurance requirements and penalties for misrepresenting tax liability is especially important.

CONCLUSION

In order to come to a final decision and formalize suggestions, we selected major criteria based on the needs of the town. Watertown's leadership has mostly been concerned with neighbor disputes and complaints, so in order for our research to be deemed successful, addressing resident concerns must be a priority.

To evaluate the potential impact of any regulation, it is important to create a survey that is conducive to data analysis. After coding and analyzing the major concerns for Watertown residents, we created a survey that reflects those responses. However, none of the responses will be open ended. Instead the survey only allows multiple choice responses represented on a likert scale. The likert scale allows us to quantify the data to better monitor the concerns of the residents.

Additionally, since the previous survey only measured concerns, we also provided questions on personal encounters. We wanted to determine whether there is a correlation between concern and whether or not residents personally experience the negative externalities of Airbnb. This will help the town determine if short-term rentals are creating actual problems for the town or if residents have concerns that aren't grounded in experience.

We have a provided a sample questionnaire for the town to use in order to evaluate its chosen regulations. A version of this survey we created can be accessed at the link below:

https://bostonu.qualtrics.com/jfe/form/SV_cUw7hb-ZGPWxwnZj

The survey should be sent out before and after the regulations are implemented to establish baselines and display any changes in attitude as well as measure the impact of negative externalities. Policy could then adapt to fit resident needs even further.

TEAM 2 REPORT

INTRODUCTION

The industry of short-term housing rentals finds a steadily growing international market due to increasing demand and the proven positive economic impact. Among the benefits are job creation and higher individual income, tax revenue, tourism, and connectivity among communities and individuals. However, the rapid expansion of unregulated short-term rentals entails undesirable adverse impacts that affect localities, including the City of Watertown, MA.

Following numerous complaints and lack of consistent regulation, short-term rentals were made illegal in Watertown in November 2017. In January 2019, the town of Watertown, acknowledging the inevitable growth of short-term rentals and inability to alleviate community concerns without regulation, requested regulatory policy proposals. This report analyzes the number of active short-term rentals within the Watertown jurisdiction, current community concerns, the related Massachusetts legislation, and city ordinances of short-term rental regulation in other municipalities.

Data drawn from Tripping.com, AirDNA, a Watertown-distributed survey, Massachusetts legislation, and nationwide court cases and ordinances in the past three years contribute to cost-benefit analysis and policy recommendations. Calculations and cross-referencing provide quantitative information to determine the number of active short-term rentals in Watertown. The survey provides qualitative data on public sentiment and criteria to assess short-term rentals' potential benefits. Massachusetts state legislation, court cases, and ordinances serve as the base infrastructure of the policy recommendations.

BACKGROUND

Rapidly increasing interest in operating short-term rentals in Watertown has raised concerns regarding the impact renters could have within the community. Among the key issues raised by community members are sustaining the character of the neighborhood and maintaining safety standards.

Definitions

"Short-term rentals" (or STRs) are defined as "an occupied property that is not a hotel,

motel, lodging house or bed and breakfast establishment, where at least 1 room or unit is rented out by an operator through the use of advance reservations", according to Massachusetts Legislation H4841.² Short-term rentals are non-business properties that are rented out for no more than 31 consecutive calendar days. Short-term rentals include, but are not limited to, apartments, houses, cottages, condominiums, or furnished accommodations. Short-term rentals encompass listings on hosting platforms, which include online services that allow operators to list properties (MA House, No. 4841).

An "occupant" is defined as a person who uses the short-term rental "for rent under a lease, concession, permit, right of access, license, or agreement." As a hosting platform actor, the occupant is the person who requests accommodation. An operator is a person operating at least one short-term rental accommodation, "not limited to the owner or proprietor of such premises, the lessee, sublessee, mortgagee in possession, licensee or any other person otherwise operating such bed and breakfast establishment, hotel, lodging house, short-term rental or motel" (MA House, No. 4841).

Community Concerns

According to a 2018 resident survey conducted by the Watertown Town Council, opinions in favor of regulating short-term rentals concern general safety, affordability and availability of housing and long-term rentals, depletion of town resources, and parking availability. Particularly, a recurring concern was that of neighborhood degradation and disturbance due to excessive noise, misuse of property, and waste mismanagement.

An analysis of the survey responses reveal that the majority of residents acknowledge both benefits and costs of short-term rental operation, hence demanding a sensible and fair regulation of short-term rentals in Watertown. Refer to **Figure 1** for resident preferences of short-term rental.

The Planning Board of Watertown also reports receiving countless requests to alleviate the aforementioned concerns. Thus, the town hesitated to permit short-term rental operation in Watertown.

The survey reveals that a negative perspective derives not only from disapproval of the existence of short-term rentals but more so from the lack of regulation. Many residents of Watertown express interest in obtaining permits to host. Discourse in an October 20, 2017 zoning board meeting corroborates these survey findings.

Figure 1. Preferences of Watertown residents on short-term rentals. Data from Watertown Community Meeting Survey.



Property Values

Watertown, MA has a population of 35,756 with about 8,000 people distributed per square mile. 21% of the population is 60 years or older. Of the 15,160 households in Watertown about 51% own their property. Housing prices in Watertown have trended upward in the recent years; the median value of housing in the year 2018 is \$480,500. Refer to **Figures 2a** and **2b** for property value growth from 2013-2016 in Watertown compared to the U.S average.

Figure 2a. A graph of the property value growth in Watertown MA versus U.S. average. Data from US Bureau of Labor Statistics and US Census Bureau.

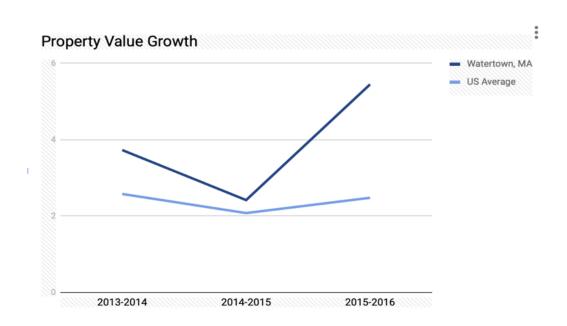


Figure 2b: A chart comparing property value growth in Watertown MA versus U.S. average. Data from US Bureau of Labor Statistics and US Census Bureau.

Year	Watertown, MA	US Average
2013-2014	+3.8%	+2.4%
2014-2015	+2.3%	+2.1%
2015-2016	+5.7%	+2.4%

METHODOLOGY

Short-Term Rental Companies in Watertown

Though Airbnb makes up the vast majority of listings, residents of Watertown also host on other platforms such as HomeAway and VRBO, a company partnered with HomeAway.

According to AirDNA, a site that collects and analyzes data of short-term rentals for prospective investors, there are 110 active rentals within Watertown as of April 29, 2019. Of those short-term rentals, 94% of the hosts use only Airbnb, 4% of the hosts only HomeAway, and only 2% list their unit(s) on both hosting platforms. AirDNA boasts of best estimation resulting from an algorithm constantly discounting listings that have not hosted or updated availability information for a certain period of time. However, the results are subject to variation because AirDNA utilizes data collected from hundreds of largely unknown sources, which may also offer only best estimates.

VRBO currently lists a total of 7 short-term rentals within Watertown. Similarly, the website Booking.com has a total of 2 short-term listings. The majority of listings pertain to Airbnb, but with the introduction of regulations of short-term rentals, Airbnb will likely face competition from alternative short-term rental sites in the long term.

Due to AirDNA's potentially inaccurate methodology, we collected our own data on the number of short-term rentals in Watertown. In order to collect this data, we utilized Tripping.com, a site that searches available short-term rentals in a given area listed on several different online platforms. As a meta-search, Tripping.com provides an unbiased source for data on rentals, as it simply displays every available rental in an area. It also charts each rental onto a street map, allowing us to discern an approximate location for rentals. Other relevant data available through the rental websites themselves includes

available rental dates, unit size, capacity, number of ratings, parking availability and safety features. We collected this data from a representative sample of about 20% of Watertown's area. In order to assure our sample was representative, we randomly selected rental listings on Tripping.com using the most approximate indicator of location available (the street on which the rental was listed).

Because of concerns about investment rentals impacting the culture and economy of the cities in which they are situated, we sought to use our data to discern casual rentals from investment rentals. Firstly, we determined that full availability of a rental unit throughout the year is the primary indicator of investment, as a rental unit available for guests to stay in for the majority of the year is evidently not being occupied by a renter. We considered checking if a rental was an entire unit or a single room in a larger unit, but realized that some renters may rent out their entire home or apartment when away, so availability would be a much better indicator. We also considered popularity, measured in the number of reviews, and rental price as potential indicators of investment short-term rental operation. Investors are more likely to seek greater volumes of guests and incentivize guests with lower price, so we expected investment rentals to have a lower average price, and a higher number of reviews. From this data, we can compare the proportion of casual renters to investment renters, and analyze if Watertown has a large number of investor-buyers participating in the short-term rental market. Additionally, by comparing these groups, we can begin to formulate proposed ways to regulate investment renting that will not adversely affect casual renters.

Next, since many complaints from Watertown citizens focused on parking availability, we decided to look at the parking offered by STRs in Watertown. Most STR sites list if the renter offers free street parking. We can break down this parking data by availability to see if investment rentals put a disproportionate strain on parking in Watertown. Then, if necessary, we can see if available parking on rentals is geographically concentrated (i.e., if any area of Watertown needs to take additional care in regards to regulating STR parking). However, due to the vast availability of off-street parking at rentals, we did not find this to be pertinent.

Finally, the data on safety features of short-term rentals can be used to determine the degree to which safety concerns are considered by short-term rental operators. On most STR sites, the renter is asked to list all the safety amenities that their rental has, so we can use our data to see how equipped STRs in Watertown are in terms of safety. This data will not be entirely conclusive, as there could be many structural issues hidden in short-term rentals that have all the necessary safety features which could only be found

through an inspection, but the data will be a good indicator of whether or not renters are prioritizing safety concerns. This will give us an approximate benefit to weigh against the costs of inspections themselves.

There were a total of 28 rentals in the sample of Watertown. This suggests that there are on average 139 short-term rentals operating in Watertown at any given time, and that the number of short-term rentals operating will likely lie between 120 and 160.

Figure 6 below shows information about the availability of short-term rentals, and the association between availability and parking access, number of reviews and price. A slight majority of short-term rentals operate for the majority of the year, while somewhat fewer have limited availability. Both have similar levels of parking availability. Note that almost all short-term rentals, regardless of availability, offer free street parking.

Despite our assumptions about price and popularity, neither showed significant variance across low and high availability. In fact, the variance went in the opposite direction as we hypothesized for popularity, which was on average higher for low-availability rentals. This indicates that the only accurate predictor of casual renters versus business-oriented renters is availability itself.

Next, while four short-term rentals were listed on sites that did not provide safety information, all but one short-term rental was equipped with smoke and carbon monoxide detectors, and more than half also had fire extinguishers on site. This is not meant to make any sweeping conclusions about the safety of short-term rentals in Watertown, as we could not conclude this with the data at hand, but it shows at least that safety concerns are considered or prioritized by almost all short-term rental operators in Watertown.

Finally, the vast majority of short-term rentals in Watertown are small, in that they mostly only have one bedroom and therefore are limited in their guest capacity. Of the 28 rentals found in the sample, only three had more than one bedroom. Additionally, two of these rentals were low availability, so short-term rental size likely does not associate with availability.

Figure 6: Availability of short-term rentals in Watertown based on the sample. Ranges are estimated with 70% confidence.

	Type Low availability High Availability		Total	
All Chart Town Doutolo	35-79	60-112	120-160	
All Short-Term Rentals	30%-49%	51%-70%	100%	
# of large STRs (>1 bedroom)	0%-7%	0%-7%	0%-15%	
Parking availability	75%-89%	75%-90%	75%-89%	
Avg. Reviews	42.30	31.88	35.88	
Avg. Price	\$96	\$83	\$150°	

There are two main points of interest from this data. First, strains on parking may be a problem across the entirety of Watertown, as almost every short-term rental in our sample offered street parking (vs. off-street, private parking). Offering available street parking is not inherently problematic, though this promise of street parking could be misinterpreted by renters who park in places they should not. Solutions to parking strain, then, need not be focused on restricting available parking, but rather making sure that renters do not park where parking is unavailable.

Second, the only accurate predictor of whether a rental is investor-oriented is the availability itself, rather than price or popularity. Since investors will want to maximize profits, they will keep their short-term rentals operating for longer. This is not to say availability ought to be restricted in order to restrict the operation of investors; rather, that restrictions on price and maximum number of renters will not deter investment in short-term-rentals within Watertown.

COMPARATIVE ASSESSMENTS

We examine the short-term regulations implemented in three cities, Boston, MA, Cambridge, MA, and Colorado Springs, CO, in order to gain knowledge of which regulations may be effective and feasible in the context of Watertown. Boston is the closest city to Watertown, but we also consider Cambridge due to its proximity and demographic resemblance to Watertown in both neighborhood character and

population size. Both locations are also local to Watertown, and assessing their approaches in implementing regulations based on new Massachusetts legislation can offer guidance on how Watertown can approach permit regulations and enforcement concerns.

Colorado Springs is a good example of a low-regulation environment despite being a popular tourist destination and its large population size. Its short-term rental regulations are not rigidly and intricately designed and lack the level of detail compared to regulations in Boston and Cambridge. Perhaps this indicate the city's limited resources to enforce large-scale regulations upon its large population. The loose structure of regulations in Colorado Springs may closely replicate the initial regulation phase of limited capital and human resources in Watertown. Furthermore, Colorado Springs highlights which resources will be needed despite minimal regulation.

Case Study: Boston, MA

Overview: The short-term rental Ordinance of the City of Boston passed on June 13, 2018, defines short-term rentals as a rental of 28 consecutive days or less. Although the Massachusetts legislation had been publicly debated and worked on for a while now, the City of Boston regulations took effect in January 2019, which is earlier than July 2019 effective date for the Massachusetts regulations.

The Boston regulation defines three types of short-term rentals: Limited shares, home shares, and owner-adjacent. *Limited* shares are defined as having "a private bedroom or shared space in an owner-operator's primary residence." The host would be present during the rental. The annual registration fee of a short-term rental in a private room/shared space unit amounts to \$25 per year. Occupancy is limited to three guest bedrooms or six guests, whichever is fewer. *Home shares* "have a whole unit available for a short-term rental at the primary residence of an owner-operator. The annual registration fee is \$200 per year. Occupancy is limited to five bedrooms or 10 guests, whichever is fewer." *Owner-adjacents* "are within owner-occupied two- or three-family buildings. In this situation, the owner lists a single secondary unit as a short-term rental. The annual registration fee is \$200 per year." Fees of each unit shall be annually recorded in the registry.

A unit eligible for short-term rentals based upon the following criteria:

• The operator must be a property owner or a tenant whose landlord permits short-

term rental operation

- The unit cannot be restricted by affordability covenants, such as below market rate or subject to rental assistance
- The unit cannot be in violation of more than three housing codes within the previous six months e.g., excessive noise, improper disposal of trash, disorderly conduct
- The operator must dwell in the unit for 9 to 12 months in a 12-month period (i.e., "owner-occupied)
- Short-term renters must abide by all City codes.

Additionally, the following is regulations are in place for all hosts. A host must:

- Provide name, address, and relationship to the unit
- Submit two documents proving primary residence
- Register for a rental license that is renewed each year
- Include the Inspectional Service registration number on online listings
- Obtain a business certificate through the City Clerk's Office
- Provide renters with fire extinguisher, exit, alarm locations, and emergency contact information
- Notify neighbors within 300 feet of the unit within 20 days of being issued the registration license (see Figure 3).

Figure 3. The online abutter tool the City of Boston provides to find all neighboring addresses within a certain distance. The City of Boston provides an online tool that searches and provides every address that is within a given number of feet away from the input address. The short-term rental operators of Boston are required to use this online tool in order to send mail to each neighbor informing them that the property would be occupied by short-term rental occupants.



Analysis: Boston is an internationally commercial city whose magnitude of short-term rental transactions, resources available for implementation of regulations, population characteristics, and community sentiment differ greatly from Watertown's. Therefore, despite its proximity to Watertown, direct application of regulatory policy of Boston to Watertown is not feasible and the complexity of Watertown regulation need not entirely match that of Boston.

Nevertheless, Boston gives clear definitions and eligibility requirements that Watertown could adopt. Some of its basic regulations may be feasible and effective, such as the requirement to provide emergency contact information or submitting the proof of primary residence at the time of registration in order to prevent investment rentals.

However, the mailing list generated by the Abutter Mailing List Generator does not adequately assist operators in notifying their neighbors. The downloadable list provides the PID, property owner's name, the property owner's primary address, and the local property's address. (Refer to Figure 4 below.) The mailing list does provide street addresses of all properties within a given feet from the operator's short-term rental, however, does not provide their apartment numbers. Therefore, an operator is unable to mail and notify neighbors in each specific unit. Rather, the list provides complete addresses of the property owners, who are often realty companies. Mailing property owners, in turn, does not guarantee that an operator's neighbors, who are likely tenants, will be notified by their landlords. Moreover, although the City of Boston requires operators to notify neighbors, it is not an inspectable requirement. Therefore, we must conclude that Boston's Abutter Mailing List Generator is essentially ineffective.

Perhaps Boston's neighbor notification requirement is a mere psychological tool that encourages short-term rental operators to become aware of neighborhood concerns and to gain responsibility to prevent potential problems caused by their guests.

Figure 4. A sample mailing list generated by the online Abutter Mailing List Generator.

The generated mailing list contains the PID number, the property owner's name, street addresses, zip code, of all properties within a given feet of the input address.

Α	В	С	D	E	F	G	Н	1
PID	OWNER	ADDRESSEE	MLG_ADDRESS	MLG_CITYSTATE	MLG_ZIPCODE	LOC_ADDRESS	LOC_CITY	LOC_ZIPCODE
#########	John Doe	John Doe	2 Doe Street #2	BOSTON MA	2201	A Doe Street	ALLSTON	2134
#########	Merryland REALTY LLC	Merryland REALTY LLC	123 Merryland Street	BOSTON MA	2201	88 Berry Street	ALLSTON	2134

Case Study: Cambridge, Massachusetts

Overview: The Cambridge Ordinance of short-term rental was unanimously passed on August 7, 2017. Allowing only operator-occupied and owner-adjacent short-term rentals, the ordinance definitions are as follows: Operator-occupied short-term rental is defined as the rental of no more than three individual bedrooms within a dwelling unit that is the primary residence of the operator. Owner-adjacent short-term rental is defined to be the rental of a unit is located within a building with no more than four dwelling units, which are owned by the operator and one of which is the operator's primary residence.

Eligibility for short-term rental in the City of Cambridge includes the following:

- The operator must be a property owner or a tenant whose landlord permits shortterm rental operation
- The property must be the primary residence of the operator, meaning that a shortterm rental operator occupies the property 180 days in the past one-year period, or an owner-adjacent unit
- The property must not be below market rate or subject to income restrictions
- The property must not belong to any level of government or sub agencies
- The short-term renters must abide by all City codes, including that of parking

Once determined eligible, the potential operator must register as a short-term rental host through the Inspectional Services of Cambridge. The registry is valid for five years and terminates when the unit ownership or operator changes. Part of the process requires inspection, which repeats for each renewal of the registry.

The City of Cambridge regulation also puts forth stipulations for hosts. A host must:

- Provide proof of liability insurance
- Provide proof of operator's primary residence
- Register for a rental license that is renewed each year
- Complete a floor plan of the dwelling unit
- Provide renters with fire extinguisher, exit, alarm locations, and emergency contact information

In addition to the eligibility requirements, quantitative limitations exist for short-term rental. First, an owner-occupied operator must rent no more than three individual bedrooms in the unit. An owner-adjacent operator must rent out the whole dwelling unit to one party. However, an operator may be both operator-occupied and owner-adjacent

operator. Such operator may rent no more than one unit of owner-adjacent rental and one dwelling unit of operator-occupied rental, which includes three separate rentals of three or less individual bedrooms. Any violation of the Cambridge Ordinance results in fines up to \$300 per day.

Complaints and violations are investigated by the Inspectional Services Department.

Analysis: Cambridge, similarly to Boston, neighbors Watertown and is subject to Massachusetts legislation. Exceeding Watertown's population but not meeting Boston's, Cambridge provides potentially more applicable set of regulations. The increased eligibility criteria, specifically limiting short-term rentals to owner-occupied and owner-adjacent units, and noncompliance penalization prove useful in structuring the policy recommendations. Considering Watertown's community concerns regarding trash, parking, noise, and safety, an informational poster, in addition to Boston's required emergency contact information, may serve as a small but valuable means to alleviate neighborhood concerns. It must be noted that Cambridge has more resources for implementation and enforcement. Any recommendations requiring substantial financial resources or personnel are currently infeasible in Watertown.

Case Study: Colorado Springs, Colorado

Overview: Colorado Springs is a city in Colorado with a population of about 460,000 that has seen increasing popularity of short-term rentals and has heated contentions among stakeholders. At a council meeting on October 23, 2018, homeowners gathered with signs reading "Protect the Right to Rent," demanding freedom to operate short-term rentals and generate profit from them.¹⁰ The city council has previously rejected regulations that would have limited the number of short-term rentals and prevented the non-owner-occupied operators to rent through the short-term rental platforms.

The city's amended ordinance, which was unanimously passed on October 23, 2018, does not distinguish separations in operator-occupied and owner-adjacent short-term rentals. Short-term rentals are limited to thirty days. This necessitates a license which may obtained through city registration. Colorado Springs does not require in-person inspection visits, and the permit expires upon sale or transfer of the property.

Eligibility for acquiring the permit, which is valid for only one year, includes, but is not limited to, the following:

- The property must be of primary residence of the operator
- The operator must have a \$500,000 liability insurance
- Operators must display their short-term rental permit application, local emergency contact, self-inspection checklist and the Good Neighbor Guideline within the rental unit (see **Figures 5a** and **5b** for examples below)
- The property must not belong to any level of government or sub agencies
- The operator must apply for a city sales tax license unless the operator hosts only on Airbnb

Figures 5a: Infographic for short-term rental guests (Good Neighbor Guidelines) in Colorado Springs.



Figure 5b: A sample neighbor notification letter template created by the City of Colorado Springs.



Colorado Springs regulates short-term rentals based on zoning regulations; while there is no cap on the number of short-term rentals each operator can operate, the restriction on the number of listings differs for each zone. For example, up to four listings are permitted in the multi-family zone whereas owners of condominiums and buildings may

rent no more than two units per property. This restriction is enforced during the registration process, as each listing requires a separate license registration.

In order to enforce permit regulations and address neighborhood concerns, Colorado Springs uses the Geocortex Essentials technology from the Esri ArcGIS platform to maintain the SpringView Map program. The map amasses and displays zoning, parking, and other planning and development information for public view. The map also allows concerned residents to access information regarding short-term rental units as well as the local emergency contact information operators have provided the city.

Colorado Springs provides a short-term rental-specific complaint phone line, to which residents may report loud parties or other non-life-threatening concerns.

Colorado Springs does not limit parking for the short-term rental guests quantitatively and even permits overflow parking in public, lawful parking areas, specifically if private parking is already utilized. Parking in non-driveways (e.g., front yard) is prohibited. Offsite parking is also available, along Colorado Avenue and specific business zones.¹¹

Analysis: Colorado Springs is an example of a city that has embraced investment short-term rental properties in specific zones, and in doing so they hope to limit investors from significantly altering the affordability of housing in other zones. Colorado Springs has considered issues of overcrowded parking; and like Watertown, the town of Colorado Springs has designated lots open to the public in the event of overflow parking or for parking throughout the winter season. Although Colorado Springs lacks several logistical attributes present in Boston and Cambridge, it hopes to successfully control neighborhood disruption with simple yet effective measures aimed toward behavioral amendments.

A regulation of our particular interest was the Springsview map and its efficacy in reinforcing informational distribution to neighbors, especially since we could compare it to Boston's neighbor notification mechanism. In order to test the map program, we have searched the street address of a popular short-term rental listing on Airbnb, with more than 20 reviews, on Springview. The search on the map did confirm the listing's active short-term rental operation, however, did not provide the local emergency contact. Residents of Colorado Springs, must know the exact street address of a short-term rental already in order to gain information about short-term rentals. Yet the exact address of a short-term rental unit is unknown until an operator alerts the neighbors with

the notification. Without an enforcement of this notification, the Springview registry of short-term rentals may not be as effective as intended.

In addition, according to a 2011 archived quotation of the Geocortex Essentials technology of the City of Rapid City in South Dakota, the technology costs about \$25,000. ¹² Short-term rental search is a newly added feature to the program, and it would be highly impractical for Watertown to purchase it (or other technologies) for the sole use of short-term rental information distribution.

Summary: Many towns and cities are considering new home sharing regulations as a result of new state law in Massachusetts regulating short-term rentals. For example, towns on Cape Cod implemented a local excise tax of 6% for short-term rentals and intend to allocate 2.5% of that tax to fund a trust supporting wastewater cleanup within the area.

Like Colorado Springs, the Massachusetts Association of Realtors distributes Short-Term Rental Community Impact forms that aspiring hosts need to sign, ensuring that they only rent out one unit. By using infographics and form distribution, these towns have found a way to decrease the negative impacts of parking and disruption within the town just by informing homeowners while keeping guests and hosts responsible for their behavior.

Colorado Springs is relatively lenient with regulations, and puts their focus on differentiating by zones to reduce the overall amount of short-term rentals. Cambridge, on the other hand puts strict regulations on homeowners and short-term rentals but does not regulate based on geography.

See **Figure 6** below for a summary of the comparative analysis.

Figure 6: A summary of the comparative analysis on regulations in Boston, Cambridge, and Colorado Springs.

STR Regulation	n Boston, MA	Cambridge, MA	Colorado Springs, CO
Population	685,000	113,000	460,000
Ordinance passed on	Jun 13, 2018	Aug 7, 2018	Oct 23, 2018
STR definition	Less than 28 days	Less than 30 days	Less than 30 days
Types of STR	Home share, limited share, owner-adjacent	owner-occupied and owner -adjacent	Does not discernowner -occupied and -adjacent
Annually renewed registration required?	\bigcirc	\bigcirc	\bigcirc
In-person inspection visit required?	(X)	Q	×
Operator owns or landlord permits?	\bigcirc	\bigcirc	\bigcirc
Operator must display within the unit?	emergency safety tools, contact, exit locations	waste disposal, emergency exit, contact	noise, parking, burn ban, emergency contact
Operator must display certificate?	(X)	\bigcirc	(X)
Liability insurance required?	\bigcirc	Q	\bigcirc
Numerical limitation on parking?	(X)	(S)	(X)
Numerical limitation on STR?	\bigcirc	\bigcirc	Ş
Notifying neighbors required?	\bigcirc	(X)	×

CRITERIA FOR POLICY EVALUATION

In determining the most effective policy recommendations, the following conditions must be met or considered:

- 1. **Compliance** All policies must be in compliance with Massachusetts Legislation (House No. 4841) enacted December 2018)
- 2. Limited Resources The Town of Watertown expressed unwillingness to allocate additional funds to policy recommendations. Furthermore, the town has limited personnel as there are currently only two inspectors. Thus, should the policy recommendations require financial resources or labor, there must be an added means of acquiring funding

- 3. **Public Opinion** An overwhelming portion of the population oppose short-term rentals in Watertown, MA. The dissent derives from concerns about affordable housing, neighborhood degradation, and safety. Concerns also include noise disruptions, parking, and waste collection. Behavioral policies may be considered.
- 4. **Eradicating Investment Properties** To Watertown Town Council's knowledge, there are currently two investors seeking stakes in the town as of November 2018; however, the town administration and constituents alike oppose the presence of investors as this would decrease the supply of housing and increase property prices. Watertown has requested that the policy recommendation eradicate the potential for investment properties.

POLICY RECOMMENDATIONS

Information Distribution

The interruption of neighborhood norms and dynamics stands as Watertown residents' predominant concern, according to the distributed survey. Neighborhood norms include but are not limited to parking, waste collection, and noise. Often, renters are not knowledgeable of neighborhood rules and unintentionally disturb residents. Thus, providing basic information in an easy-to-read format will minimize the concerns of the renters, neighbors, and operators. This informational sheet must be present on the online listing and visible in the rental property. Although the rules cannot be enforced, the infographic in **Figure 7** below appeals to public support as it will make short-term rentals run smoother. If the hosts still receive complaints, the town may verify that the informational poster is posted for their renters. The Town of Watertown will incur costs by printing and distributing the infographic. Along with this informational poster, we suggest that Watertown tells its residents to notify their immediate neighbors when they are renting out their unit as a short-term rental. The host should notify their neighbors about a) the receipt a short-term rental license b) their emergency contact information. This way, the citizens of Watertown can feel better about short-term rentals in their neighborhood. Both of these information distribution suggestions are behavioral recommendations, and thus do not lend themselves to enforcement.

Figure 7: Example of informational poster to distribute. The sample poster includes information about parking, trash collection, and noise regulations.

WELCOME TO WATERTOWN!

Here is some basic information about Watertown's parking, trash, and noise regulations. We want both you and your neighbors to enjoy your stay!



- → 2-hour on-street parking limit during 7am-7pm
- → November April overnight on-street parking ban 1am-6am - you will be towed!
- → Cars are able to park in one of the twelve parking lots
- → Two cars are allowed per unit
- → This is a residential area, children may be outside, so please be careful on the roads
- street! Please do not just leave trash out all week -Learn when your pick-up day is with this link: http://local.republicservices.com/site/watertown-

- → Trash and recycling are collected on the same day (Monday-Friday) every other week
- → No overflow or extra bags outside the toter.
- → These items cannot be collected at the curb: hard plastic, metal, textiles, and electronics
- → We like to keep our neighborhoods quiet, people wake up to go to work early in the mornings
 - -- Monday Friday 7pm-7am
 - -- Friday Saturday 7pm-8am
 - -- Saturday Monday 7pm-7am

Penalization for Non-Compliance

This recommendation sets basic penalization infrastructure for combatting illegal or unwanted short-term rental behavior. Violations of any kind will result in a starting penalty of \$176.10. This number was derived by taking the potential tax revenue of an average-priced listing and adding it to the average price per day.

Rather than choosing an arbitrary round number, we chose to utilize the revenue from tax and Watertown-specific average listing prices in order to create fairness, increase compliance, and generate positive public opinion and/or understanding. We believe that consistent penalization and enforcement will garner public awareness and increase compliance. Furthermore, the Watertown-specific calculation will prevent constituents from petitioning or bargaining. See **Figure 8** for a breakdown of this penalty. Utilizing the same ratio of Cambridge, MA's noncompliance penalizations (starting at \$500 and increasing \$300 per day), **\$176.10** was calculated to be the additional fine per day of violation.

Figure 8. Calculation of the penalty fee for non-compliance.

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Total\ tax = hotel\ room + 6\%\ tax + statewide\ excise\ +\ optional\ excise
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In sum, a hotel room tax of 5.7%, a state-wide excise tax of 5.7%, and the optional city/town-specific tax of 6% equals a total tax of **17.4%**.

Starting penalty

- = total tax(average short term rental price/night) + average price
- = 17.4% (\$150) + \$150
- = \$176.10

Eligibility Limited to Owner-Occupied and Owner-Adjacent Short-Term Rentals

Administrator in Watertown explicitly expressed concerns about short-term rentals used as business or investment properties, whose operators are indifferent to the distortion of neighborhood character. In light of Watertown's gross property appreciation, constituents are justifiably concerned over the potential decreased housing supply and overall affordability.

Owner-occupied and owner-adjacent short-term rentals require the rental properties to be the operators' primary residence. In order to deter people from buying properties for only short-term rental operation, hosts must proof of residency for at least 12 months before renting their unit. Then, hosts will have to submit proof of residency during the registration process and before they list their unit for rent. Confining eligible short-term rental classifications to owner-occupied and owner-adjacent rentals helps guarantee operators will be residents of Watertown and eliminates the short-term rentals of non-residential properties.

CONCLUSION AND SUMMARY

In light of short-term rentals' inevitable presence, this report assesses the potential of short-term rental regulations, complying with Massachusetts Legislation House No.4841 and Watertown's limited resources, while addressing overwhelming public dissent and administration-made requests to eradicate investment properties. Comparative analysis of adjacent locales and similarly-sized cities, in addition to database analysis through Tripping.com and AirDNA, provide both quantitative and qualitative information pertinent to cost-benefit analysis.

Although initial policy recommendations included zoning-specific limitations to limit investments and create more restrictive and manageable policy, possibilities of perpetuating socioeconomic inequities outweighed any potential benefits of recommendations tethered in zoning regulation. A rent cap on short-term rental rates was considered in order to curb rising property costs; however, upon research, it was found that Massachusetts banned rent control in 1994. Additionally, Boston's abutter mailing list generator was proposed; however, due to probable inconsistent enforcement, the recommendation was omitted.

The proposed three-prong approach (see **Figure 9**): an informational poster, noncompliance penalizations, and owner-occupied and owner-adjacent rental restrictions. These approaches will likely diminish constituent dissent and generate significant funding toward implementation and long-term regulation. As a whole, the three-prong recommendations focus on both behavioral amendments and logistical policy proposals. Though the impact is not currently quantifiable due to a reliance on long-term regulation, the emphasis on both behavioral and logistical aspects contributes to the overall potential of this program.

Figure 9: The benefits and costs of each policy recommendation for short-term rentals.

Policy Recommendations	Benefits	Costs
Information Distribution	Easy to make and implement Improves public opinion	Enforcement
Penalization for Non- Compliance	Keeps short-term rentals safe and regulated Public opinion Have a fine system already in place, just needs to be better enforced	Enforcement
Eligibility Limited	Public opinion Stops housing price increase Prevents business short-term rentals	Enforcement

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APPENDICES

APPENDIX A: EXECUTIVE SUMMARY OF NEW MASS. LAW ON SHORT-TERM RENTALS:

Although the town is surely aware of the content of the new regulations regarding short-term rentals in Massachusetts, below is a summary of the new regulatory powers granted to cities, and other major requirements that residents need to be informed of. The language has been revised for clarity, and is intended to be fit for distributing to residents to inform them of the new requirements placed upon short-term rental operators and the possible regulations the town of Watertown could pursue in the future.

Taking Provisions (Effective July 1, 2019):

- The State of Massachusetts will impose a 5% percent tax on every short-term rental operator who rents their property out for more than 14 days per calendar year.
 Owners who rent out for less than 14 days per year must annually file with the state commissioner on a yearly basis to avoid the tax.
 - a. In addition to the 5% tax that the Commonwealth of Massachusetts levies on short-term rental operators, a city or town that accepts section 3A can decide to levy an additional 6% tax on operators. Revenues due to cities as a result of this section will be distributed to them by the state treasurer on at least a quarterly basis.
 - b. Requires a majority vote of the town council in order to be ratified. The tax cannot be revoked or amended more than once every 12-month period.
 - c. "The commissioner shall make available to a city or town requesting such information the total amount of room occupancy tax collected in the preceding fiscal year in the city or town requesting the information."
- 2. An additional 3% tax can be levied upon professionally managed short-term rental units in a city, referred to as a "community impact fee".
 - a. This community impact fee can be extended to apply to an operator that rents out units in a two or three-family dwelling that is the operators own primary residence.
 - b. Community impact fees are to be paid monthly to those that are subject to them. No less than 35 percent of the revenue from a community impact fee must be

- allocated to funding affordable housing/infrastructure projects in a locality.
- 3. Military personnel on official orders are exempt from having to pay this tax when staying a short-term rental unit. The operator should keep record of their stay in order to request tax exemption on their rental income.

State Registry Requirements:

- 1. Operators are required to register the fact that they have a short-term rental pursuant to the operator registration requirements in Mass. General Law Section 67 of Chapter 62C.
 - a. If an operator misrepresents being tax exempt to rental intermediaries such as Airbnb, they are liable to pay all fees they should have been subject. Additionally, they will be deemed to have committed and unfair trade practice, meaning they can be subject to action by the Mass. Attorney General.

Additional Regulations Permitted by the Law:

- 1. A city or town can create these additional regulations on short-term rentals
 - a. Regulate where short-term rental operators can rent units within in a town. The "existence" of operators can also be regulated, which can possibly be interpreted as density or other such conditional regulations that are not explicitly listed below.
 - b. Require that operators register with the city or town separately, under the condition that the city will accept proof of state registration to satisfy this requirement or issue provisional licenses/ registration with temporary or seasonal conditions.
 - c. Require that operators demonstrate compliance with relevant building electrical, plumbing, mechanical, fire, health, housing, or zoning code and notify the city of notices of violation, or other previous correction notices.
 - d. Require operators undergo new inspections at a designated frequency at the owner's own expense in order to qualify to rent out their properties.
 - e. Create a new penalty for violation of city ordinances on the condition that the city will suspend the right to operate of those who are punished and notify the state of the suspension/termination of eligibility
 - f. Create a fee for operators that is used to fund enforcement of short-term rental regulations

Additional Important Information:

- 1. Regardless of additional regulations, an operator must post the location of any fire extinguishers, gas shut off valves, fire exits and fire alarms in the unit and building
- 2. An operator can only rent out their property in compliance with this law under the condition that they are not violating by a homeowner's association agreement or requirements, a rental agreement or any other restriction, covenant, requirement or enforceable agreement.
- 3. A town or city can establish their own public registry of short-term rentals within their own borders and determine the information that can be included. This does not exclude listing the location of rentals publicly.
- 4. Operators are required to maintain liability insurance for bodily injury or property damage. Of at least \$1,000,000 unless their hosting platform maintains equal or greater coverage. (Insurance provisions come into effect on July 1st).
- 5. Operators are required to inform the provider of their homeowner or renter insurance to the property they are renting out that they intend to operate short-term rentals.

APPENDIX B: SUMMARY OF HOST COMPLIANCE

One effective platform we have identified as a possible solution to the lack of town-employed enforcement staff is Host Compliance. Host Compliance is a short-term rental regulation service aimed specifically at enforcing individual short-term rental markets within cities/towns. During our meeting with city officials, it was mentioned that a similar company had approached Watertown and offered to monitor rental listing. We believe that Host Compliance is unique from smaller start-ups such as the one that previously reached out to Watertown. It is the market leader in short-term rental compliance, and has the largest client base out of all of the existing firms. Therefore, the large size and stability of Host Compliance is attractive. As the market leader, there may be less of a chance that the company will fail, meaning it can ideally be a long-term and potentially permanent solution to enforcement of regulations.

The San Francisco Chronicle reports that, after San Francisco turned to Host Compliance to help enforce its regulations, the city saw a fifty-five percent reduction in listings. The article notes that this drop was a direct result of the aid Host Compliance gave them in enforcing their owner-occupied residence restrictions, a policy recommendation we discuss later.

It must be noted that we could find few independent reviews of Host Compliance, and therefore all of the information about the company comes from their website. However, the range of cities the company lists as clients and the scale of the problems it is able to deal with seem to speak for the company's ability to handle short-term rental problems. News coverage of the company is solely positive, and we searched for any negative stories involving the company and found none. The fact that large cities, which should have the most complicated enforcement issues given the large amount of listings that have to be monitored, have consistently positive results is a good sign of the efficacy of Host Compliance. (A sampling of testimonials from suburban cities in various parts of the United States is included in **Appendix D**.)

Host Compliance offers six services, which do not all have to be used by a given city:

- 1. Mobile enabled permitting and registration (\$5 per listing): Host Compliance will create and facilitate an online registration process to the specification of the city and the information they require to issue permits. This can include proof of state registration, proof of insurance, proof of a landline that can call 911, etc.
- 2. Address identification (\$17.39 per listing): Using their algorithms and bots that search rental websites, Host Compliance actively monitors 50+ short-term rental websites for properties with addresses that fall under a city or town's jurisdiction.
- 3. Compliance monitoring (\$6.89 per listing): Host Compliance will follow a process of educating those with listings of the requirements set by state and city law, actively monitor compliance with these requirements based on the data they collect from rental websites, investigate properties that are suspected to be avoiding compliance, and respond to violators based on the city's specifications.
- 4. Rental activity monitoring and tax collection support (\$9.18 per listing): By monitoring 50+ short-term rental websites, Host Compliance will keep track of rental activity and occupancy during rentals. This can be used to find tax reporting, occupancy limit, and day cap violations.
- 5. Auditing of those suspected of under-reporting tax liability.
- 6. A dedicated hotline for reporting non-emergency rental-related problems (\$9 per listing): Host Compliance has a 24/7 hotline that neighbors can use to report noise, parking, and other non-emergency violations. This can ease the burden of the town having to track such complaints, and, by referencing rental information, hold operators responsible by tying violations to their property.

Host Compliance manages short-term rental enforcement in over 230 local city governments, and claim that their clients generally make 5-20 times the amount that they pay for the service in collected tax revenue and fees from listers. The service guarantees a positive return on revenue, meaning that if used, the financial benefits will outweigh the costs. When considering enforcement, Watertown may choose to consider enlisting a third-party support system such as Host Compliance in order to allow the zoning personnel to allocate their time to other zoning matters outside of the short-term rental market.

APPENDIX C: CASE STUDY ON HOST COMPLIANCE AND TRUCKEE, CA

Truckee, CA, has a population of 16,180 (nearly half the size of Watertown) and is a small vacation town near Lake Tahoe. While Truckee is not exactly like Watertown, there are still valuable lessons to be learned through Truckee's successes with regulating short-term rental housing.

Truckee uses technology to enforce regulations using a platform called Host Compliance, which is summarized in **Appendix B**. We called Truckee's government as part of our research, and they endorse the platform as a means of regulation.

Also, Truckee made arrangements with Airbnb to post their regulations on its corporate website. Under the traveling and hosting help sections, Airbnb advises travelers and hosts to adhere to the laws of Truckee. The website lists information about the development code, building and housing standards, transient occupancy tax and other home owners association (HOA) rules.

Watertown is primarily residential, but could use its proximity to Boston as an advantage in the home sharing economy. Host Compliance could assist in tax collection and distribution back into the town of Watertown.

Appendix D: Screen Captures of Reviews from Host Compliance Website



TOWN OF PARADISE VALLEY, AZ

"I appreciate that Host Compliance is willing to figure out how to make it work in your community. They look at what tools they have, what other unities have done that was successful, and what are the sensitivities of the community that need to be addressed. I am very pleased with the responsiveness of Host Compliance and how intuitive the software is to use."



CITY OF VENICE, FL

"Host Compliance is a dedicated organization that has customer satisfaction as its highest priority. I highly recommend their product."



CITY OF BERKELEY, CA

"Host Compliance takes the time to evaluate the needs and then provides sound recommendations for solutions. Host Compliance staff have been very responsive and helpful on all levels from training, to implementation, to periodic follow-up their customer service is top notch. was very good with Host Compliance assisting, and sometimes driving us through our internal challenges and helping us to refine our offering to the



CITY OF EUGENE, OR
"You delivered just what
you promised. I appreciate
your attention to detail. I
have enjoyed our
partnership. It is too time
consuming to do it without
your services. Your good
service matters!"



CITY OF CHATTANOOGA, TN

"Host Compliance has met or exceeded our expectations and the personnel I have dealt with were very professional. They have a very positive attitude, and are very timely in solving problems."



CITY OF ASBURY PARK, NJ

"Our Use of the Host Compliance product effectively assisted our City's enforcement department in streamlining the process of identifying property owners who were not compliant with our City's regulations regarding short term rentals."



DURHAM COUNTY, NC

"This product has allowed us information we have not been able to gather previously to ensure compliance. I highly recommend this company to assist you. We have been very satisfied with their services!!!"



CITY OF BUENA PARK, CA

"We have had very good results with Host Compliance and the software has met all our expectations"