

**UNPACKING THE GROWTH IN SAN FRANCISCO'S VACANT HOUSING STOCK**

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## INTRODUCTION

High vacancy rates in a housing market typically signal a weak market, where supply outruns demand, and rents are stagnant. However, in San Francisco – as well as many other high-cost cities such as Vancouver, London, and New York – we see a different phenomenon: an extremely tight housing market with sky-rocketing rents, that puzzlingly also has a high vacancy rate. This trend is counter-intuitive. With so much demand and high-housing costs, one would expect to see extremely low vacancy rates in high-cost cities such as San Francisco; high demand would result in quick turnover between tenancies, and hefty mortgages due to high property costs would incentivize property owners to rent out their units. Why, then, are there high vacancy rates in such a high cost city and metropolitan area as San Francisco?

These vacant units are more than just a peculiar trend; they are also removing valuable housing stock from the already extremely tight housing market. In 2000, the U.S. Census Bureau estimated that San Francisco had approximately 16,000 vacant housing units. In the American Community Survey estimate from 2015, the estimated number of vacant units had doubled to approximately 33,000 vacant units. To put this figure in perspective, San Francisco has a total of approximately 390,000 housing units. These vacant units could help to satiate some of the unmet demand for housing in the region if they were returned to the housing market. Considering the fact that former SF Mayor Ed Lee’s housing goals included the production of 30,000 units in five years by 2020, placing even just a portion of the City’s 33,000 vacant housing units back on the market could significantly contribute to San Francisco’s housing goals, and provide much-needed housing stock for San Francisco and the Bay Area. Additionally, while more housing supply is needed, returning vacant units to the market may be a faster, more efficient strategy to produce more units in tandem with construction of new housing units. However, it is important to note that there is always some vacancy in a housing market, and no matter how tight the market is, it would be infeasible to return all of the vacant units to the market.

Recently, the issue of vacant units in San Francisco has gained political traction and public attention. Supervisor Aaron Peskin announced in July 2017 his intention to introduce vacancy tax legislation in San Francisco, with the goal of encouraging property owners to return vacant units to the market. Local news outlets have published numerous articles on the topic, further stirring up the conversation in the public about whether or not vacancy is an issue in San Francisco, and whether it should be taxed.<sup>1</sup>

Despite the recent buzz in the policy and public spheres, we know relatively little about what has been driving this increase in vacant units in the City, and where these vacant units are concentrated. Understanding the driving forces behind the vacancy is useful in identifying ways

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<sup>1</sup> Kathleen Pender, “Should SF Tax Empty Homes and Buildings?,” San Francisco Chronicle, July 22, 2017.

to return units to the rental market. Part of answering this question also requires a better understanding of what type of housing stock is being left vacant, as causes for vacancy may vary by the type of housing stock. For example, people anecdotally report seeing “almost no lights on” in the new construction condominium and apartment buildings in the City, suggesting that this additional housing stock is not serving market demand as well as it could be. In contrast, the U.S. Census Bureau shows a less than a 1% vacancy rate in new construction buildings, suggesting a mismatch between the existing data and people’s perceptions of vacancy in the City. This mismatch demonstrates one of many ways in which studying vacancy can enhance our understanding of how San Francisco’s housing stock is being used, and what may be causing some units to be unused to the dismay of struggling renters looking for affordable units. We also know relatively little from existing census data about why these units are being held vacant, and therefore, how policymakers might best be able to incentivize property owners to occupy or rent out their units.

In an effort to better understand the context around this increase in vacant units as well as some potential driving forces to inform future policy, this study aims to answer the following questions: Where is vacancy concentrated in the City, and what is driving the increase in vacancy? Do the reasons for vacancy differ by the type of housing stock (i.e. small buildings vs. large buildings, older buildings vs. newer buildings)?

Strategies to advance housing affordability in the City must be multi-pronged: protect renters, increase the supply of housing (both affordable and market-rate), and address issues in the existing housing stock. By looking at vacant units in San Francisco, we can target an issue in the existing housing stock to provide much-needed housing for the City and the region.

## **METHODOLOGY**

To answer the research questions, this study utilizes a mix of primary and secondary data sources. Census, American Community Survey (ACS), and Public Use Microdata (PUMs) data provided a foundational understanding of vacancy in San Francisco. ACS data and Census data were used to conduct initial analysis on geographic concentration on vacancy, characteristics of vacant units, and trends in vacancy over time. Census and ACS data also provided initial insight on reasons for increases in vacancy through the vacancy categories, such as vacant units “for seasonal, recreational, and occasional use.”

In addition to Census and ACS data, this report uses three other secondary data sources: data on for-profit Single Room Occupancies (SROs), Airbnb listing data, and permit data from the Department of Building Inspections. The data on for-profit SROs includes the addresses of for-profit SROs that are geocoded and mapped in relation to vacant units; SRO data also includes the number of vacant residential units in all of the for-profit SROs in 2015. Web scrapes of Airbnb data provided by the Office of Short Term Rentals provide insight into how many units are full-

time, entire-unit Airbnb rentals, and where those units are concentrated in the City. Permit data from the Department of Building Inspections provides a method to look at increases in major renovations to the housing stock that may be causing entire units to be vacant in the City by using permit cost as a proxy for whether or not a renovation is a “major” renovation.

To explore some of the questions about the driving forces for vacancy and why property owners might be holding their units vacant and obtain a more nuanced view of some of the causes of San Francisco’s increase in vacant units, phone interviews were conducted with eight property managers, property owners, and brokers. In the interviews, property owners and managers were asked about the age of the housing stock they manage/own to ensure that interviewees were representative of San Francisco’s housing stock. Interviewees were also asked about their perceptions of vacancy, the types of housing stock vacancy is concentrated in, some potential causes of vacancy, and whether or not they feel causes for vacancy may differ by the type of housing stock, neighborhood, or other factors. Results from the interviews were coded to identify key themes among the interviews.

## BACKGROUND

### *Definitions of Vacancy Rate*

The definition of vacancy for the purposes of this report differs from the way the term is most commonly used to analyze housing markets. Often times, vacancy is used to measure the tightness of a housing market. In these scenarios, the **rental vacancy rate** is used, or the total number of vacant units for rent divided by the total number of rental units. Using this metric, San Francisco’s vacancy is extremely low at 2.6% according to ACS 2015 1-Year estimates, suggesting a high demand for rental housing and a tight housing market.<sup>2</sup> Vacancy rates can also be used as a measure of disinvestment; often, these studies of vacancy examine the number of abandoned structures in a given area as means of understanding disinvestment in an area.

However, this report examines the **gross vacancy rate**. The gross vacancy rate is calculated as:

$$\frac{\textit{Number of Vacant Units}}{\textit{Total Number of Housing Units}}$$

The gross vacancy rate differs from the rental vacancy rate in that it captures all vacant units, including those that are owned or rented, but are not occupied for a variety of reasons. A high gross vacancy rate when the rental vacancy rate is low indicates that this vacancy is not the result of a loose housing market where supply outruns demand, but rather that some other factor, or combination of factors, is contributing to this increase in vacancy. For example, in San Francisco, the number of vacant units attributable to units for rent or for sale is low, while the majority of vacant units are in the “Vacant for Seasonal, Recreational, or Occasional Use”

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<sup>2</sup> ACS 2015 1 Year Estimates, Tables B25003 and B25004.

category, or in the “Other Vacant” category. This paper later discusses how units that are vacant for seasonal and recreational use as well as other vacant units have changed over time.

### *ACS and Census Methodology and Definitions for Vacancy*

An understanding of ACS and Census methodology for determining vacancy is important, as these sources provide some of the most reliable data available for determining the gross number of vacant units and potential causes for vacancy. While the methodologies between the two sources are similar for the most part, there are slight differences that actually cause differences in the numbers provided for the same year (i.e. 2010 Census and 2010 1-Year ACS provide different vacancy estimates).<sup>3,4</sup>

The ACS begins its determination of whether or not a unit is vacant through a site visit. If the household living in the sampled housing unit does not respond to the ACS form, then ACS staff conduct a visit to the site to confirm that the housing unit exists. At this same site visit, ACS staff determine whether or not the unit is occupied.<sup>5</sup> For a unit to be classified as vacant by the ACS staff, it must meet certain conditions. For example, the unit must be considered habitable. If the unit is newly constructed but not yet occupied, there must be floors and windows for it to be considered a vacant unit.<sup>6</sup> Lastly, the unit must be intended for residential use; a vacant commercial unit would not be counted as a vacant housing unit. If a housing unit meets these conditions, and its occupancy is determined to be vacant, then ACS staff conduct a “vacant interview” with an informed respondent such as a neighbor, property manager, real estate agent, or other informants to gather information about the unit and why it might not be occupied.<sup>7</sup> Through this method, the unit is placed into one of the six vacancy categories: For Rent; For Sale; Rented or Sold, Not Yet Occupied; For Seasonal, Recreational, or Occasional Use; For Migratory Workers; and Other Vacant.<sup>8</sup>

This process is primarily the same for determining occupancy status in the Decennial Census.<sup>9</sup> The primary difference between the Census and the ACS in determining vacancy is that the Census counts a unit as occupied if it is the occupant’s primary residence, whereas the ACS

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<sup>3</sup> McCue, George Masnick, and Chris Herbert, “Assessing Households and Household Growth Estimates with Census Bureau Surveys” (Working Paper W15-5. Cambridge, MA: Joint Center for Housing Studies of Harvard University, 2015).

<sup>4</sup> Deborah Griffin, “Comparing American Community Survey 2010 1-Year Estimates of Occupancy Status, Vacancy Status, and Household Size with the 2010 Census – Preliminary Results,” U.S. Census Bureau, 2011.

<sup>5</sup> “American Community Survey Design and Methodology (January 2014). Chapter 7: Data Collection and Capture for Housing Units.”

<sup>6</sup> Steven Ruggles et al., *Integrated Public Use Microdata Series: Version 7.0* [dataset], Minneapolis: University of Minnesota, 2017.

<sup>7</sup> U.S. Census Bureau, “American Community Survey Design and Methodology,” 2014.

<sup>8</sup> Census data from 2000 indicates that San Francisco had only 79 vacant units for migrant workers in 2000, and none in the remaining years. Therefore, the “For Migrant Workers” category is excluded from the analysis in this paper.

<sup>9</sup> Deborah Griffin, “Comparing American Community Survey 2010 1-Year Estimates of Occupancy Status, Vacancy Status, and Household Size with the 2010 Census – Preliminary Results.”

counts the unit as occupied if the occupant has plans to stay in the unit for two or more months. Therefore, someone who is using their unit for seasonal use for two or more months could potentially be counted as a vacant unit in the Census, but an occupied unit in the ACS. This has important implications for what is counted as vacant in the ACS data analyzed throughout this paper; any unit that is occupied for less than two months, such as corporate housing, short-term rentals, vacation homes or pieds-a-terre, would be placed into the “vacant unit” category.

## LITERATURE REVIEW

Literature on gross vacancy is limited, likely due to a lack of reliable data on both the number of vacant units as well as the causes of vacancy. This literature review discusses a few reports that have mentioned and attempted to quantify vacant units in San Francisco in particular. This literature review also examines previous studies identifying speculative vacancies, such as those that utilize utility data. Lastly, this literature review provides an overview of the literature related to two potential causes of chronic vacancy: short-term rentals and foreign investment in real estate.

### *Existing Reports Discussing Vacancy in San Francisco*

Two other recent studies have tried to address the issue of non-primary residences in San Francisco as a potential catalyst for worsening the affordability crisis by removing potential primary units from the market. While these studies do not try to answer the question of causes and patterns associated with San Francisco’s increase in vacant units, they do examine one particular type of vacant unit: non-primary residences.

In SPUR’s 2014 report entitled “Non-Primary Residences and San Francisco’s Housing Market,” the authors aimed to quantify how many units in San Francisco are non-primary residences. Due to limitations with other data, SPUR focused the majority of their analysis on units that are defined by the Census and ACS as used for “seasonal, recreational, or occasional use.”<sup>10</sup> According to the U.S. Census Bureau, these are units that are “not for-rent or for-sale-only but [are] held for weekends or occasional use throughout the year...Time shared units are classified in this category.”<sup>11</sup> In addition to utilizing ACS data, SPUR interviewed property managers for eight large condo buildings in San Francisco to inquire about vacancy and non-primary residences. The SPUR report concluded that non-primary residences do not appear to be a large portion of San Francisco’s housing stock, especially when compared with other cities that have hot housing markets. Additionally, the report concluded that wealthier neighborhoods are more likely to have a higher percentage of non-primary residences.<sup>12</sup>

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<sup>10</sup> Sarah Karlinsky and Kristy Wang, “Non-Primary Residences and San Francisco’s Housing Market,” SPUR White Paper, 2014.

<sup>11</sup> U.S. Census Bureau, “Definitions and Explanations.”

<sup>12</sup> Sarah Karlinsky and Kristy Wang, “Non-Primary Residences and San Francisco’s Housing Market.”

The Bay Area Council’s 2016 report entitled, “Solving the Housing Affordability Crisis” examines the top ten policies that would increase affordability and worsen affordability for San Francisco.<sup>13</sup> The Bay Area Council identifies restricting non-primary residences in San Francisco as a top ten policy to increase affordability, and estimates that there are approximately 7,474 non-primary residences in San Francisco. The Bay Area Council also uses the vacancy status “for seasonal, recreational, or occasional use” to define non-primary residences.

It is interesting that both of these reports focused only on non-primary residences as units that are removing housing stock from the rental stock, and not on any of the other vacancy categories. Considering the fact that these vacant units for “seasonal, recreational, or occasional” use are only a portion of the vacant units in San Francisco, it seems that these reports do not provide a complete picture of San Francisco’s vacant housing stock. However, these studies represent the increasing interest in vacancy in San Francisco, and the need to go a step further to understand the driving forces behind this vacancy increase. Additionally, they demonstrate the limitations in existing data regarding vacancy.

#### *Other Gross Vacancy Studies – Utilities Data*

While the previous reports looked at vacancy using Census and ACS data, other studies have examined vacancy trends by looking at utilities data, and using utility consumption thresholds as a means of determining occupancy. This approach has some advantages due to the fact that utilities data is theoretically capturing all housing units, not just the ones that are sampled. Additionally, utility data has an advantage in the sense that you can see trends more consistently throughout a year or other time periods, rather than just the point in time that the Census/ACS data were collected. However, this methodology also has weaknesses. For example, several units may be on the same utility meter, making it difficult to determine consumption for the individual units, and therefore obtain a true picture of vacancy.

One study of vacancy using utilities data was commissioned by the City of Vancouver to better understand the vacancy trends in their city. The study was completed by a consulting firm, Ecotagious, examining vacancy from 2002-2014 using electricity data in Vancouver.<sup>14</sup> Ecotagious examined variability in electricity to determine vacancy; homes were categorized as “non-occupied” when there was little to no variability for 25 days out of a month, and were categorized as vacant year round when the non-occupied category applied to the home for all four months in which heat would not be used (June-September). The study concluded that residential vacancy has remained stable in Vancouver from 2002-2014, and that the vacancy rate has remained stable while housing prices have continued to increase.<sup>15</sup>

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<sup>13</sup> Bay Area Council, “Solving the Housing Affordability Crisis,” 2016.

<sup>14</sup> Ecotagious, “Stability in Vancouver’s Housing Unit Occupancy,” 2016.

<sup>15</sup> Ibid.

With regards to the characteristics of vacant housing stock, Ecotagious concluded that the vacancy rate in purpose built rentals, or buildings constructed for the purpose of long-term rental, is nearly 0%, and the vacancy rate among single-family homes and duplexes to only be slightly over 1%. However, the vacancy rate of condominiums was estimated to be approximately 12.5%, demonstrating that vacancy is disproportionately in multifamily ownership buildings. The study also found variability in vacancy by geographic area of the metropolitan region.<sup>16</sup>

Another study utilizing utility data to estimate residential vacancy is Philip Soos' and Paul Egan's research on speculative vacancies in Melbourne. In their report, "Speculative Vacancies in Melbourne," the authors aim to estimate properties that are kept off the rental market through water consumption data provided by water retailers in the Melbourne metropolitan area.<sup>17</sup> Using a threshold of 50 Liters per Day, the authors found that approximately 4.4% of residential properties were potentially unused, with 0.9% consuming no water at all. The authors also concluded that should the properties consuming no water be placed on the market for rent, it would double the number of homes currently on the market for rent.<sup>18</sup>

### *Foreign Investment in Real Estate*

Little research has been done on the impact of foreign buyers on local real estate markets, partially due to the difficulty of estimating the number of properties that are owned by a foreign-national or foreign-entity, and not being rented out or occupied by the owner. One of few studies that examine these impacts is a study of out-of-town buyers in New York City.<sup>19</sup> While this study does not directly link the presence of out-of-town buyers to vacancy, they do estimate the impact of an influx of out-of-town buyers on rent and home values, as well as other aspects of city welfare. In order for there to be an impact on rent and home values, it can be reasonably assumed that the out of town buyers in this model are removing housing stock that otherwise would have been on the rental or ownership market. The authors concluded that out-of-town buyers have a negative impact on city welfare, particularly for renters who may experience a rent increase. However, the authors conclude that this negative impact can be offset by a tax on these transactions, such as the one imposed in Vancouver, so that the revenue from the tax can be reinvested in the City.<sup>20</sup>

The real estate industry does monitor "absentee" involvement in real estate, but the effect of this involvement on vacancy cannot be determined from the data provided because it is difficult to know whether an "absentee" or foreign buyer has an intent to occupy the unit or rent the unit, or whether the unit is intended solely to be an investment property. Corelogic publishes monthly

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<sup>16</sup> Ecotagious, "Stability in Vancouver's Housing Unit Occupancy" 2016.

<sup>17</sup> Philip Soos and Paul Egan, "Speculative Vacancies in Melbourne: 2013 Report," Prosper Australia, 2013.

<sup>18</sup> Ibid.

<sup>19</sup> Stijn Van Nieuwerburgh and Jack Favilukis, "Out-of-Town Home Buyers and City Welfare," 2017 Meeting Papers (Society for Economic Dynamics, 2017).

<sup>20</sup> Stijn Van Nieuwerburgh and Jack Favilukis, "Out-of-Town Home Buyers and City Welfare."

reports on local housing markets, including an estimate of absentee buyers.<sup>21</sup> While this cannot be used as a proxy of vacancy, it may provide some context for foreign and absentee involvement in the housing market. In August 2017, CoreLogic estimates that absentee buyers purchased 15.8% of homes in the San Francisco Bay area.<sup>22</sup> In September, this number increased to 17.1%.<sup>23</sup> Thus, while we do not know how many of these units purchased by absentee buyers in the Bay Area may be held vacant, it seems to be a significant amount of ongoing sales in the region.

### *Airbnb and Short-Term Rentals*

Research is being increasingly conducted on the impact of Airbnb and other Short-Term Rental (STR) platforms on the local housing stock. However, it is worth noting that in October of 2017, a new law regulating Airbnb and other STR platforms went into effect, and the number of Airbnb listings in the City has dropped in half since the law took effect.<sup>24</sup> However, the studies discussed in this section are examining data prior to this law, and therefore may not accurately depict the current and future impact of Short-Term Rentals on the City's housing stock. This new law and Airbnb rentals in the City are discussed in more detail later on in this paper.

Airbnb and other STR platforms have the potential to reduce the number of housing units available in the local market by removing entire units that would otherwise be for rent or for sale, but instead are able to generate more profit through platforms like Airbnb. These Airbnb units are essentially removed from the housing stock and added to the City's hotel stock.<sup>25</sup> Therefore, when examining the impact of Airbnb on the local housing stock, scholars have primarily focused on entire-unit Airbnb listings. Wegmann and Jiao note that in order for these units to have an impact on the housing market, they would need to be rented for long periods of time, thereby essentially removing units from the rental market.<sup>26</sup>

In a study of Airbnb's impacts on 5 major cities (Austin, Boston, Chicago, San Francisco, and Washington D.C.) Wegmann and Jiao concluded that whole unit listings account for between 60-70% of Airbnb listings in the five cities combined, and account for approximately 60% of Airbnb listings in San Francisco in particular.<sup>27</sup> However, when compared to the other four cities in the study, San Francisco has a much higher number of high-occupancy whole-unit listings at

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<sup>21</sup> CoreLogic categorizes absentee buyers as mostly investors, but also second-home owners.

<sup>22</sup> CoreLogic, "Data Brief: San Francisco Bay Area Home Sales Slowest for a September in Three Years, Median Sale Price Up Year Over Year, But Remains Below This Summer's Peak," September 2017.

<sup>23</sup> Ibid.

<sup>24</sup> San Francisco Office of Short Term Rentals.

<sup>25</sup> Dayne Lee, "How Airbnb Short-Term Rentals Exacerbate Los Angeles's Affordable Housing Crisis: Analysis and Policy Recommendations," *Harvard Law and Policy Review* (2017).

<sup>26</sup> Jake Wegmann and Junfeng Jiao, "Taming Airbnb: Toward Guiding Principles for Local Regulation of Urban Vacation Rentals Based on Empirical Results from Five US Cities." *Land Use Policy* 69 (December):494-501, 2017.

<sup>27</sup> Please note that this study was conducted before new regulations on Airbnb took effect, which have likely reduced the number and proportion of entire-unit listings.

760; this number is more than double the number of high-occupancy whole-unit listings in the next highest city, Washington D.C., at 285. This suggests that Airbnb units in San Francisco have been converted to commercial use more so than the other cities examined in the study. In addition, Wegmann and Jiao concluded that Airbnb units counted for approximately 13% of San Francisco's for-rent vacancies, which is almost five times as much as any other city in the study.

Barron et al. also examine Airbnb's impact on vacant units as part of their research on the impacts of Airbnb on local housing markets.<sup>28</sup> The authors conclude that while Airbnb appears to have no correlation to vacancy at the Core-Based Statistical Area (CBSA) level, a positive correlation can be seen when examining the relationship by the type of vacancy. In particular, the authors found a positive correlation between Airbnb and the number of units that are vacant for seasonal, recreational, or occasional use, noting that this trend "is consistent with absentee landlords substituting away from the rental and for-sale markets for long-term residents, and towards the short-term market, which are likely then categorized as vacant-seasonal homes."<sup>29</sup> The authors conclude that in the median zip-code for Airbnb, one out of thirteen available units for rent is held off the market for Airbnb and other Short Term Rentals; "Framed in this way, concerns about the effect of Airbnb on the housing market do not appear unfounded."<sup>30</sup>

#### *Summary of Existing Literature on Vacancy*

Literature on gross vacancy removing housing stock from the market is only recently starting to emerge. Existing literature has focused primarily on units that are used as Short Term Rentals or second homes, as well as estimating vacancy through utility data. However, literature related to the increase in use of Airbnb and other Short Term Rental platforms can also be helpful in understanding why units may be taken off of the rental market, as short-term/part-time rentals may be a more lucrative investment than long term rental, but these short-term rental platforms essentially remove rental units from the market. In relation to the affordability crisis, vacancy is an important issue to address in the existing housing stock in order to ensure that we are maximizing the use of San Francisco's housing stock as homes, especially when the City and the region are in such a large deficit of necessary housing units.

#### **CASE STUDY: VANCOUVER, CANADA**

Vancouver, Canada can serve as a case study for San Francisco as an example of another city where vacancy, non-primary residences, and foreign investment in the real estate market have been speculated to drive up housing costs. Vancouver has taken action against both foreign investment and vacant units, citing that these actions lower affordability for residents living in Vancouver by removing housing stock for Vancouver residents. San Francisco can learn from

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<sup>28</sup> Kyle Barron, Edward Kung, and Davide Proserpio, "The Sharing Economy and Housing Affordability: Evidence from Airbnb," SSRN Scholarly Paper, Rochester, NY: Social Science Research Network, March 29, 2018, 7.

<sup>29</sup> Ibid, 6.

<sup>30</sup> Ibid, 16.

Vancouver's process in identifying these issues, as well as their course of action for addressing these issues.

### *Foreign Investment and the Additional Property Transfer Tax*

The issue of foreign speculation in Vancouver has gained momentum in recent years, as Vancouver has struggled with affordability issues and ensuring that their units are being occupied by its residents. One scholar traces the increase in foreign buying to efforts in the 1980s to attract “financial and human capital to Canada,” and especially to the Vancouver metro area.<sup>31</sup> However, it became clear that home values were exceeding incomes in Vancouver, and that this was not only a result of the local economy, but also an infusion of global capital. An urban planner at a Vancouver-based architecture firm, Andy Yan, noted that “If you look at per-capita incomes, we look like Reno or Nashville. But our housing prices easily compete with San Francisco's.”<sup>32</sup> Yan describes Vancouver as a “hedge city” for foreign investment, or a city with “social and political stability and protection against climate change” which makes it a place of relatively safe real estate investment, thus attracting global capital.

As a result of the recent momentum to act around foreign investment in real estate, the British Columbia government imposed a 15% increase in land transfer taxes, increased to 20% in February 2018, for foreign buyers in the real estate market in the Vancouver Metro area in August 2016 as an attempt to stymie foreign speculation in the housing market.<sup>33</sup>

The British Columbia Ministry of Finance now collects data on property tax transfers with foreign buyers as a result of implementation of the new tax, and began to collect data starting approximately 1.5 months before the tax was implemented.<sup>34</sup> The data showed a significant drop in foreign buyers immediately after the enactment of the tax, but the rate of foreign involvement in residential transactions has climbed back up since the initial drop, albeit not as high as the initial peak (See Figure 1). However, because this data was collected less than two months before the tax was enacted, it is possible that the large percentage of foreign involvement was a rush of purchases before the tax was enacted; the data of foreign property transfers prior to tax enactment is not available for a long enough time series to determine whether or not it has had an impact on reducing foreign purchases.

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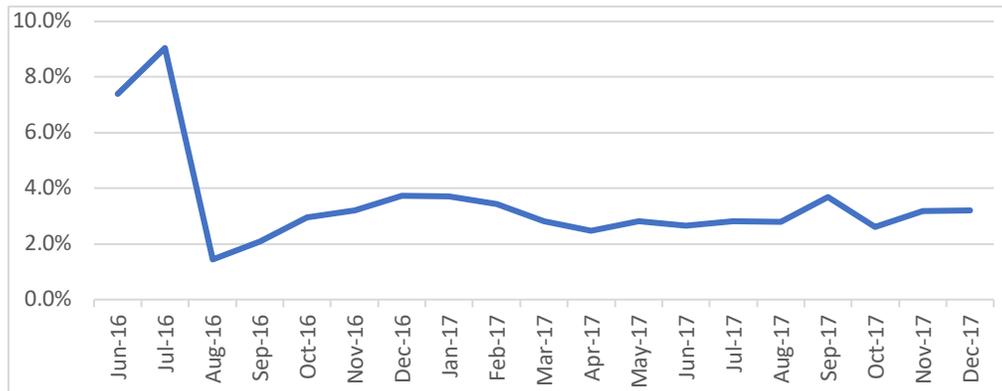
<sup>31</sup> David Ley, “Global China and the Making of Vancouver's Residential Property Market.” *International Journal of Housing Policy* 17, no. 1 (January 2, 2017): 16.

<sup>32</sup> James Surowiecki, “Real Estate Goes Global,” *The New Yorker*, May 19, 2014.

<sup>33</sup> Natalie Pearson, “Vancouver B.C.'s hot housing market getting more expensive for foreign buyers,” *Bloomberg*, February 20, 2018.

<sup>34</sup> British Columbia Ministry of Finance, “Property Transfer Tax Data, 2017.”

Figure 1: Percent of Residential Transactions with Foreign Involvement



Source: British Columbia Ministry of Finance

### *Vacant Units and the Empty Homes Tax*

In addition to taxing foreign-buyers, Vancouver also implemented a vacancy tax, called the “Empty Homes Tax,” to further address the issue of units sitting vacant in the Vancouver housing market. Vancouver began to examine the issue of its vacant housing stock in response to public concerns about vacant homes contributing to the City’s housing crisis.<sup>35</sup> After commissioning the study by Ecotagious discussed earlier, and concluding that revenue from a vacancy tax could help to provide funding for affordable housing as well as incentivize unit occupancy, Vancouver passed the Empty Homes Tax. The tax requires property owners to provide proof that either their property is leased for six months out of the year, or that the property is the owner’s primary residence for six months of the year.<sup>36</sup> If the property owner cannot provide evidence of either of these things, then the property owner is subject to a tax equal to one-percent of the property’s assessed value. The Chief Financial Officer for Vancouver has noted the City has seen slight improvements in its vacancy rate since the tax was implemented.<sup>37</sup> However, since the filings of vacancy status for the tax were due, Vancouver found that only about 10,000 units were vacant, compared to the 25,000 number reported from the Canadian census.<sup>38</sup> This may suggest the importance of having a baseline understanding of vacancy prior to tax implementation in order to understand the effects of the tax on vacancy.

<sup>35</sup> Mukhtar Latif, Chief Housing Officer, “Vancouver Housing Initiative Update,” 2016.

<sup>36</sup> City of Vancouver, “Empty Homes Tax.”

<sup>37</sup> Estefania Duran and Jeremy Lye, “11% of Vancouver Homeowners Haven’t Filed Empty Home Tax Declaration as Deadline Looms,” *Global News*, January 29, 2018.

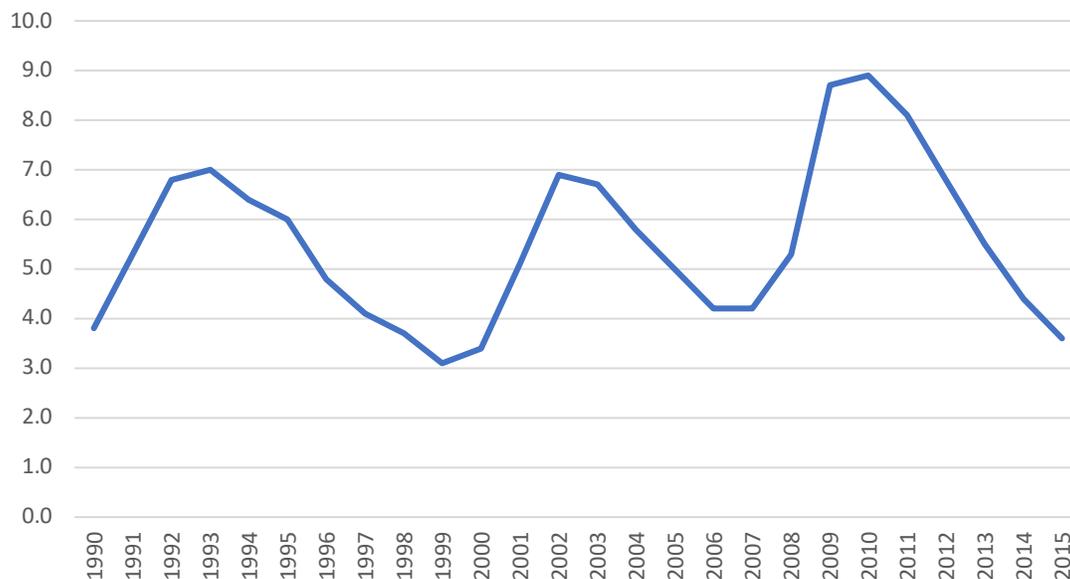
<sup>38</sup> Simon Little, “The census found 25K empty homes in Vancouver. Empty homes tax filings show 1/3 that,” *Global News*, March 7, 2018.

## SECONDARY DATA ANALYSIS FOR SAN FRANCISCO

Before diving into some of the potential causes of vacancy in San Francisco, this section provides context and background information on how vacancy has changed over time in San Francisco, as well as in relation to the region as a whole (the nine-county San Francisco Bay Area).<sup>39</sup>

When discussing changes in vacancy over time, this report uses 2000 as a base year, often comparing 2000 with 2015. 2000 is used as a base year due to the fact that it represents a time of similar economic prosperity as 2015. For example, looking at the unemployment rate provided by the Bureau of Labor Statistics, the unemployment rate was at its lowest point below 4% in 1999/2000 and 2015, suggesting that these are both times of economic growth and job growth (See Figure 2).

Figure 2: Unemployment Rate in San Francisco Over Time

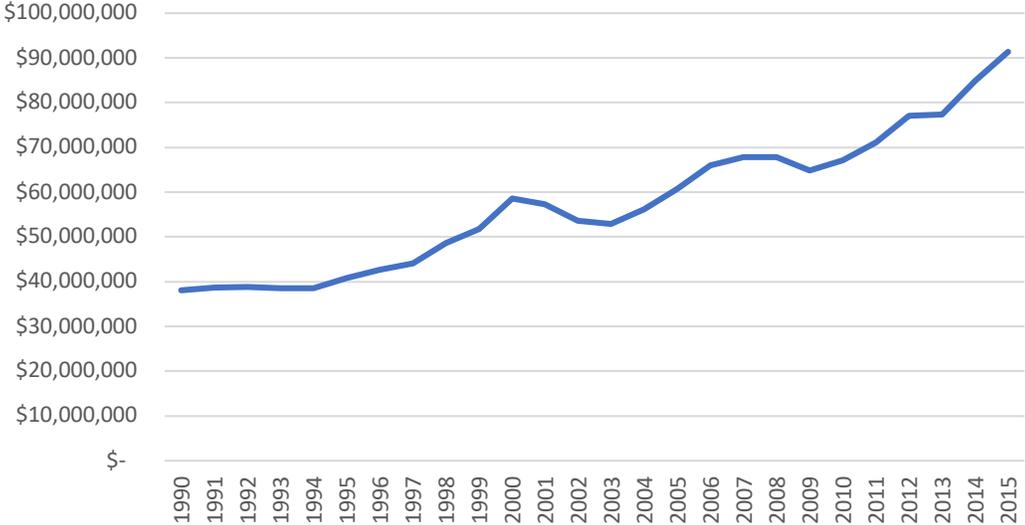


Source: Bureau of Labor Statistics

<sup>39</sup> The San Francisco Bay Area includes the following counties: Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma.

As another measure of economic growth and performance, the Bureau of Economic Analysis provides annual Personal Income, or the “income received by, or on behalf of, all persons from all sources.” Figure 3 demonstrates that while San Francisco has surpassed its 2000 real personal income numbers, 2000 was also a peak period for income in relation to economic cycles.

Figure 3: Personal Income in San Francisco (In 2015 Inflation adjusted dollars)



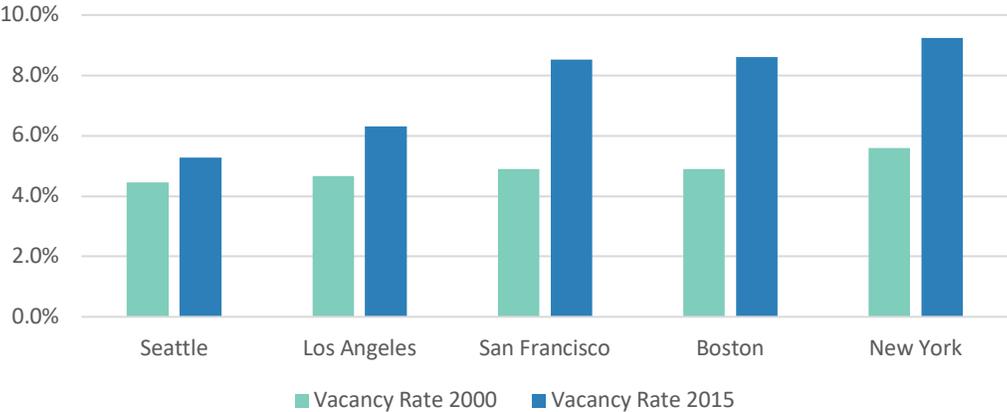
Source: Bureau of Economic Analysis

Looking at unemployment and personal income, 2000 can be viewed as a base year due to the fact that it represents a peak economic period, with low unemployment and peak incomes for the economic cycles. One might expect that vacancy and housing markets would be similar in times of economic booms, such as 2000 and 2015, if vacancy is a reflection of housing demand that is related to economic growth.

*Overview of San Francisco’s Vacancy Trends*

This section discusses how San Francisco’s vacancy rate has changed over time. Prior to diving into San Francisco’s trends, however, it is important to examine San Francisco’s vacancy rate in the context of its high-cost comparison cities.

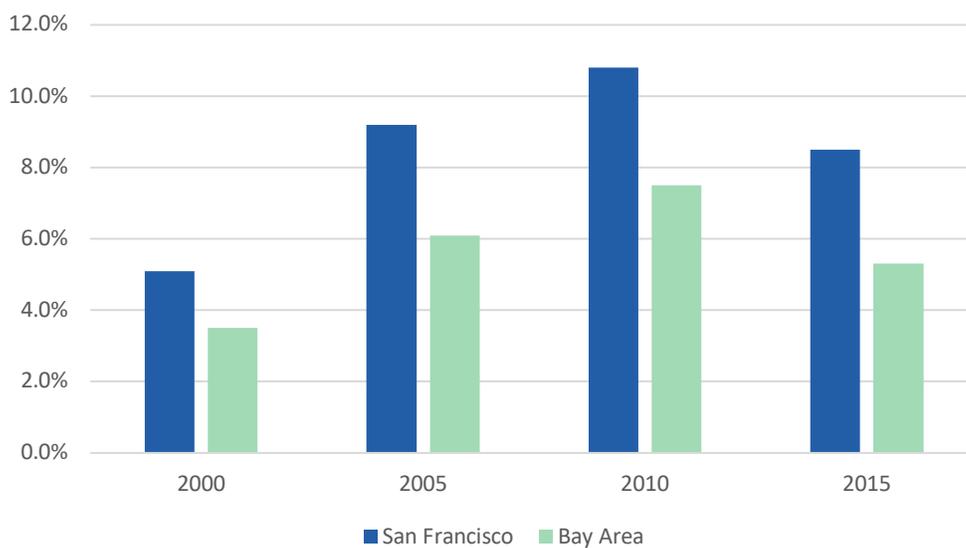
*Figure 4: Vacancy Rates of Comparison Cities, 2000 and 2015*



Source: 2015 ACS 1-Year Estimates, Table B25002 and 2010 Decennial Census Table H003

To situate vacancy in San Francisco in the context of comparison cities throughout the U.S., Figure 4 shows the vacancy rate in 2015 of four other high cost cities: Seattle, Los Angeles, Boston, and New York. Looking at Figure 4, San Francisco has significantly higher vacancy than its West Coast comparison cities of Seattle and Los Angeles. However, its vacancy is more similar to its high-cost East Coast comparison cities of Boston and New York. An interesting connection between San Francisco and these East Coast cities could be the fact that San Francisco has much older housing stock; in Seattle and Los Angeles, however, the housing stock is much newer. The older housing stock in these cities may require more maintenance, and thus naturally lead to increased vacancies as a result.

Figure 5: Vacancy Rate over Time



Source: 2015 ACS 1-Year Estimates, Table B25002 and 2010 Decennial Census Table H003

Looking at San Francisco's vacancy over time, the gross vacancy rate in 2000 was approximately 5%. While San Francisco's vacancy rate was slightly higher than the Bay Area's vacancy rate in 2000, this difference might be partially explained by San Francisco's larger renter population in comparison to the Bay Area as a whole; geographies with higher rental populations will naturally experience more turnover, and therefore increased occurrences of short periods of vacancy.<sup>40</sup> Over time, however, San Francisco and the Bay Area have further diverged in their vacant housing stock, with San Francisco's vacancy rate rising consistently about three percentage points above the Bay Area's, which is double what the spread between the two geographies was in 2000. Not only have San Francisco and the Bay Area diverged in their vacant housing stock, but San Francisco's vacancy rate has grown at large rates. The City's vacancy rate in 2015 was estimated by the ACS to be approximately 1.5 times the vacancy rate in 2000 (See Figure 5). Considering the fact that 2000 was also a large economic boom for San Francisco, we would expect that vacancy following recovery from the Great Recession would contract back to the 2000 numbers, or to at least similar numbers. While the vacancy rate has declined since 2005 and 2010, the vacancy rate remains higher than the vacancy rate in 2000.

The Census Bureau and the American Community Survey provide several estimated categories for vacant units, which may provide initial insight into what is causing the increase in vacant units in San Francisco. The categories provided by the Census and the ACS and their definitions are included in Table 1.

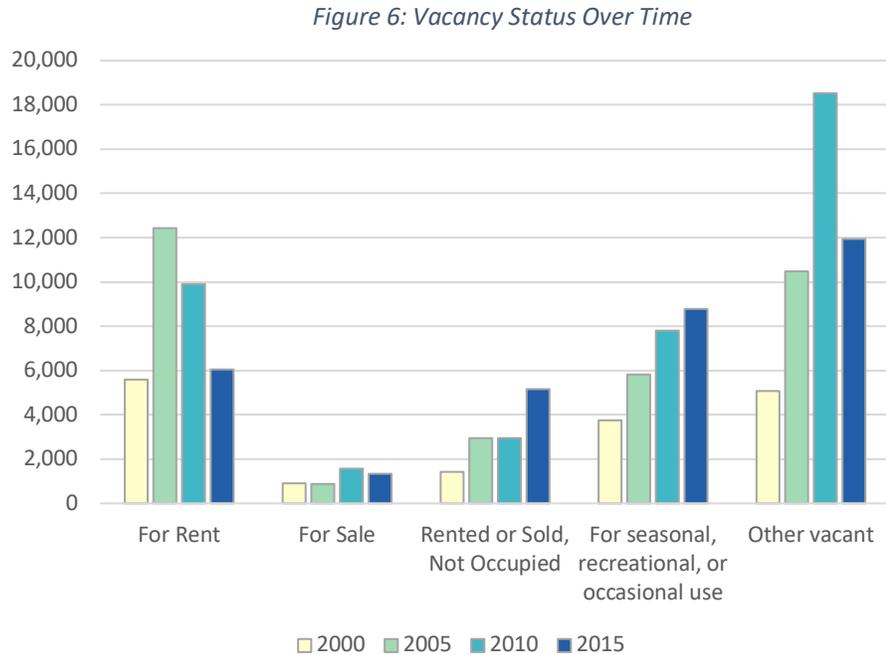
<sup>40</sup> The Bay Area is approximately 55% renters, while San Francisco is about 65% renters. Source: ACS 2015 1-Year Estimates, Table B25003

Table 1: Vacancy Status Definitions<sup>41</sup>

Vacancy Status	Definition	Notes
Vacant for Rent	“These are vacant units offered ‘for rent,’ and vacant units offered either ‘for rent’ or ‘for sale.’”	
Vacant for Sale Only	“These are vacant units being offered ‘for sale only,’ including units in cooperatives and condominium projects if the individual units are offered ‘for sale only.’ If units are offered either ‘for rent’ or ‘for sale’ they are included in the ‘for rent’ classification.”	
Rented or Sold, not Yet Occupied	For rented, not yet occupied: “These are vacant units rented but not yet occupied, including units where money has been paid or agreed upon, but the renter has not yet moved in.”  For sold, not yet occupied: “These are vacant units sold but not yet occupied, including units that have been sold recently, but the new owner has not yet moved in.”	Units that are rented and not yet occupied and sold and not yet occupied are separated in 2005 and later. We may expect to see higher numbers for units in this category during periods with increased new construction.
For Migrant Workers	“These include vacant units intended for occupancy by migratory workers employed in farm work during the crop season. (Work in a cannery, a freezer plant, or a food-processing plant is not farm work.)”	San Francisco had 79 of these units in 2000, and none the following years.
For Seasonal, Recreational, or Occasional Use	“These are vacant units used or intended for use only in certain seasons or for weekends or other occasional use throughout the year. Seasonal units include those used for summer or winter sports or recreation, such as beach cottages and hunting cabins. Seasonal units also may include quarters for such workers as herders and loggers. Interval ownership units, sometimes called shared-ownership or timesharing condominiums, also are included here.”	We may expect to see an increase in these units as Airbnb and other short-term rental platforms gained popularity, and a downturn as regulations have taken effect regarding these platforms.
“Other” Vacant	“If a vacant unit does not fall into any of the categories specified above, it is classified as “Other vacant.” For example, this category includes units held for occupancy by a caretaker or janitor, and units held for personal reasons of the owner.”	Common reasons for “other vacant” units nationally include: major repair and renovations, probate, foreclosure, etc.

<sup>41</sup> Social Explorer; U.S. Census Bureau; American Community Survey 2010 Summary File: Technical Documentation.

While vacancy in the City has declined overall since 2010, the prominent reasons for vacancy appear to have shifted. Looking at San Francisco’s change in vacant housing stock by vacancy status, the categories that have experienced the largest increases include units that are vacant “for seasonal, recreational, or occasional use,” and units in the “other vacant” category – both of which have doubled since 2000



Source: 2015, 2010, and 2005 ACS 1-Year Estimates, Table B25004.  
2000 Decennial Census Table H005

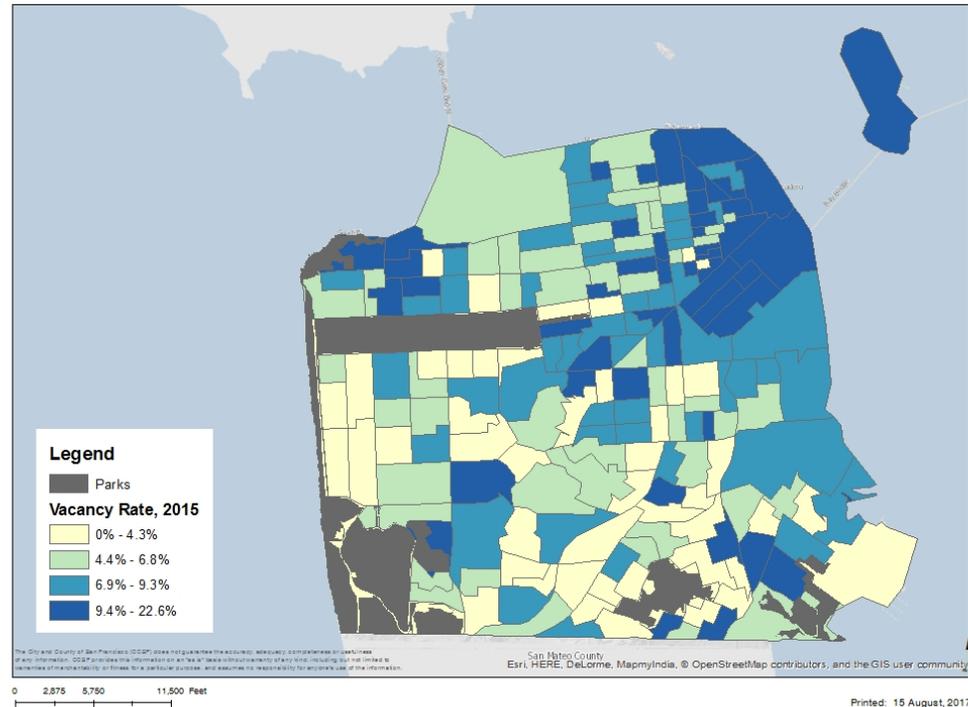
(See Figure 6). The number of vacant units that are rented or sold, but not yet occupied has also tripled since 2000. However, these vacant units make up one of the smallest shares of vacant units overall, second only to units that are vacant and for sale.

The largest vacancy status category differs depending on the year, suggesting that causes of vacancy may be determined by the larger economic and social context. For example, in 2010 when the economy was still in recovery from the Great Recession, the “other vacant” category sky-rocketed. In 2005, after there were large amounts of new construction of housing in San Francisco, the vacant “for rent” category was the highest among all of the categories. The fact that now “other vacant” and vacant units “for seasonal, recreational, or occasional use” are the largest categories may be a reflection of the increase in use of Short Term Rental platforms, or major upgrades to the housing stock resulting in periods of vacancy.

### Location of Vacant Housing Stock

The geographic location of San Francisco's housing stock was also examined as a potential starting place for thinking about the driving forces behind increases in vacancy. Looking at vacancy geographically, it appears that vacancy is concentrated in the Northeast quadrant of the City – an area that has a diverse age of

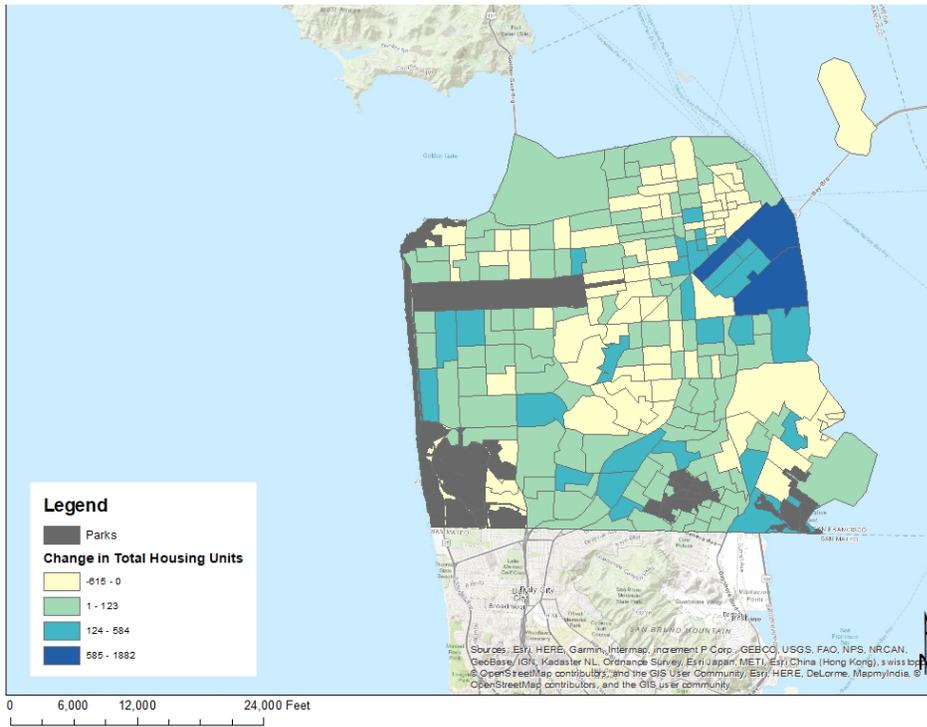
Figure 7: Vacancy Rate by Census Tract, 2015



Source: 2015 ACS 5-Year Estimates, Table B25002

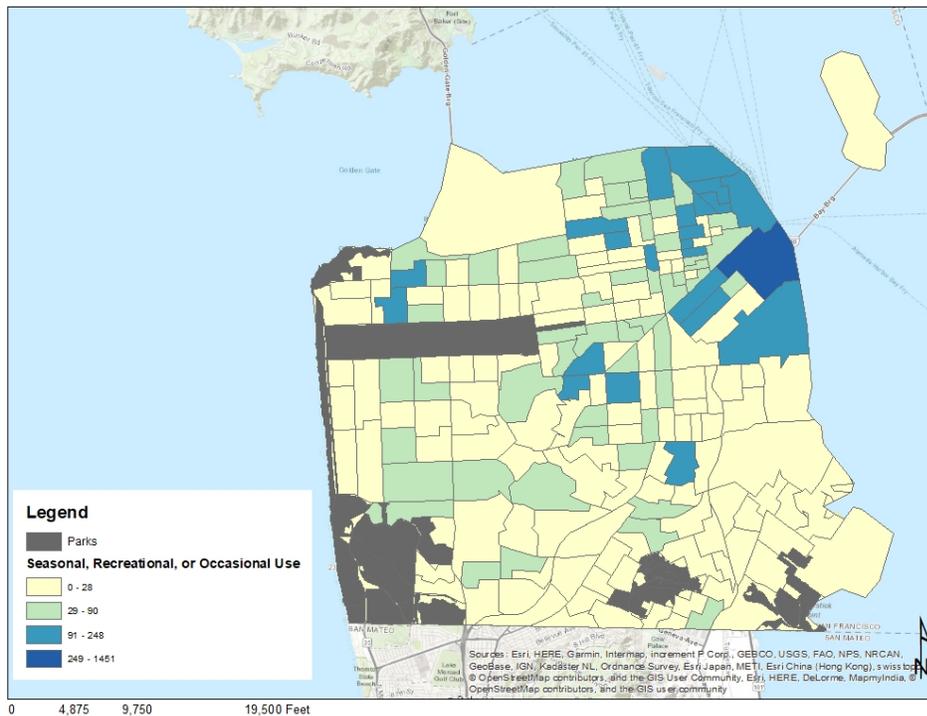
housing stock, with neighborhoods like SOMA, Rincon Hill and Mission Bay that have experienced large amounts of development, as well as neighborhoods like the Tenderloin and Chinatown, which have not experienced as much development (See Figure 7). Therefore, this might warrant further examination into whether an influx of new units to the San Francisco's market might be contributing to increased vacancy due to a lease-up period. Figure 8 shows the change in the number of units by census tract from the 2010 Decennial Census and the 2015 ACS 5-year estimates, demonstrating that several, but not all, of the tracts that are experiencing high vacancy have also experienced a large growth in units.

Figure 8: Change in Total Housing Units



Source: 2015 ACS 5-Year Estimates, Table B25002

Figure 9: Vacant Units for Seasonal, Recreational, or Occasional Use

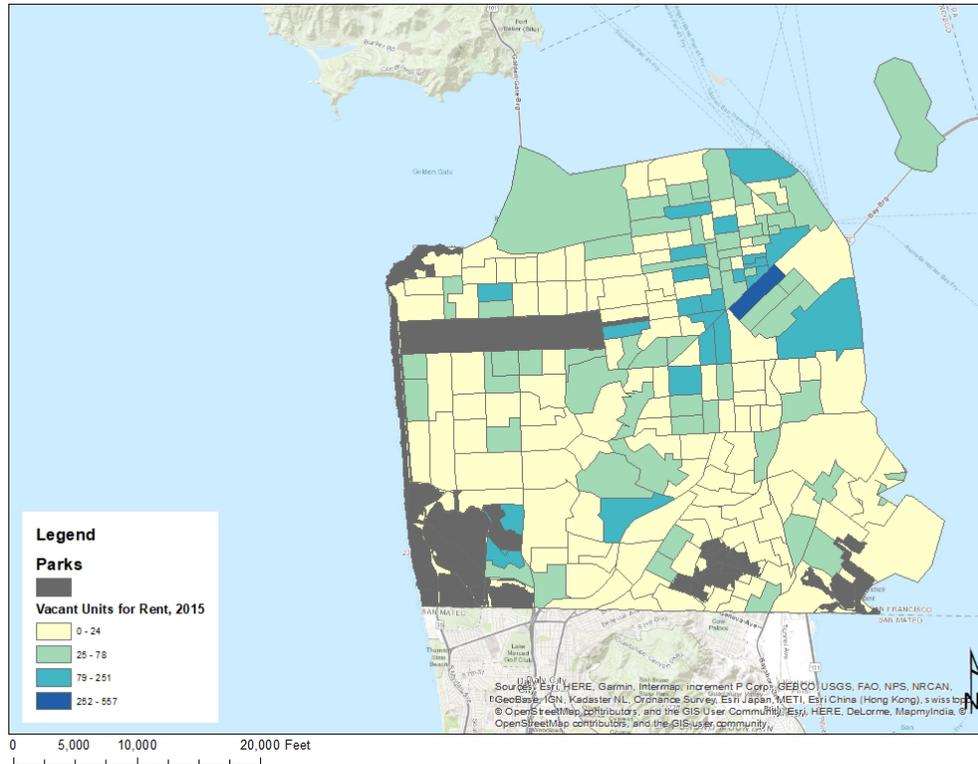


Source: 2015 ACS 5-Year Estimates, Table B25004

However, when looking at the location of the vacant housing stock by vacancy status, it is evident that the type of vacancy in high vacancy census tracts may differ significantly by neighborhood. For example, while the census tracts that have high concentrations of units that are vacant for seasonal, recreational, or occasional use are clustered in the Northeast quadrant, similar to all vacant units, there seems to be a particularly large concentration of seasonal, recreational, or occasional use in the Transbay terminal census tract (Figure 9). Anecdotally, it seems that there may be a large concentration of corporate housing in this area. However, when looking at units that are vacant

for rent, it is clear that vacancy is concentrated in the census tracts that have experienced the highest amount of new construction, for example, in SOMA (Figure 10).

Figure 10: Vacant Units for Rent, 2015



Source: 2015 ACS 5-Year Estimates, Table B25004

### *Characteristics of Vacant Housing Stock*

The characteristics of the vacant housing stock in terms of building age, unit size, and building size may also provide some initial insight as to whether vacancy appears to be concentrated in certain types of housing stock. To examine characteristics of the vacant housing stock, this study used Public-Use Microdata (PUMs) ACS 2015 1-Year Estimates to estimate the characteristics of San Francisco's vacant Housing stock.<sup>42</sup> These characteristics, as well as the Bay Area's vacant housing stock for comparison, are summarized in Tables 2-4 below.

<sup>42</sup> Steven Ruggles et al., *Integrated Public Use Microdata Series: Version 7.0* [dataset], Minneapolis: University of Minnesota, 2017.

Table 2: Building Age and Vacancy

<b>Building Age</b>	<b>SF</b>	<b>Bay Area</b>
<i>1939 or Earlier</i>	<i>10%</i>	<i>8%</i>
<i>1940-1979</i>	<i>7%</i>	<i>4%</i>
<i>1980-2004</i>	<i>9%</i>	<i>6%</i>
<i>2005-2015</i>	<i>1%</i>	<i>2%</i>

Table 3: Unit Size and Vacancy

<b>Unit Size</b>	<b>SF</b>	<b>Bay Area</b>
<i>0 Studio</i>	<i>13%</i>	<i>12%</i>
<i>1 Bedroom</i>	<i>12%</i>	<i>9%</i>
<i>2 Bedroom</i>	<i>6%</i>	<i>5%</i>
<i>3 or More Bedrooms</i>	<i>5%</i>	<i>4%</i>

Table 4: Building Size and Vacancy

<b>Building Size</b>	<b>SF</b>	<b>Bay Area</b>
<i>SFH</i>	<i>5%</i>	<i>4%</i>
<i>2 Units</i>	<i>13%</i>	<i>11%</i>
<i>3-4 Units</i>	<i>8%</i>	<i>6%</i>
<i>5-9 Units</i>	<i>11%</i>	<i>7%</i>
<i>10-19 Units</i>	<i>5%</i>	<i>6%</i>
<i>20-49 Units</i>	<i>7%</i>	<i>6%</i>
<i>50+ Units</i>	<i>14%</i>	<i>8%</i>

Source: IPUMS USA 2015 1-Year Estimates

San Francisco’s vacant housing stock is concentrated primarily in its oldest housing stock, constructed prior to 1939; this is also consistent with the estimated characteristics of the vacant housing stock in the Bay Area. While San Francisco’s vacancy rate is consistently higher than the region’s for each age category, San Francisco appears to have less vacancy in the newer construction housing stock, built since 2005.

With regards to unit size, both San Francisco and the region appear to have the highest vacancy rates in studio and one bedroom units; this intuitively makes sense, as populations that may occupy these smaller units may be more likely to be transient (i.e. singles and couples). Larger, presumably less transient families may be more likely to occupy multi-bedroom units. Relatedly, smaller unit sizes may be more likely to be renter-occupied than larger unit sizes, which also may have more transiency and therefore greater periods of vacancy than owner-occupied units.

The final characteristic of vacant housing stock examined using PUMS data is building size. San Francisco's vacant housing stock is least concentrated in single-family homes and 20-49 units, meanwhile it is most highly concentrated in two-unit buildings and 50+ unit buildings. While the highest vacancy in two-unit buildings is consistent with the trends in the region, the high vacancy rate in 50+ unit buildings is double that of the region's, suggesting that this is another place where San Francisco has diverged from the Bay Area.

The following sections unpack trends and divergences identified through this analysis of PUMs, ACS, and Census data, and add additional data sources to look at potential correlations with vacancy.

### *Airbnb and Vacancy*

Before discussing analysis of Airbnb data, it is important to note that stricter San Francisco laws restrict Short Term Rentals in San Francisco. This law requires all Short-Term Rentals to be licensed with the City, and limits the number of nights that a unit can be rented out "unhosted," or without the owner occupying the unit, to 90 days.<sup>43</sup> The new law also requires the platforms to verify that their hosts are licensed by requiring that hosts enter their City license number into the platform. Since the law was enacted and listings have begun to be removed from the platform, the number of Airbnb listings in the City has dropped by nearly 50% from approximately 9,000 to 5,000.<sup>44</sup> Therefore, the implementation of this new law may have effects in decreasing San Francisco's vacant housing stock, but it is too early to see these effects realized in the census data and ACS data. Additionally, the Airbnb data used in this report predates the implementation of these new regulations.

As previously shown in Figure 6, San Francisco has experienced large growth rates in the vacant housing stock attributed to seasonal, recreational, or occasional use. Considering the fact that Airbnb and other Short Term Rental platforms, such as VRBO or HomeAway, have become popular in recent years, it is possible that these short-term rental platforms have contributed to vacant housing stock by removing units that would otherwise have been full time rentals, and instead reserving them for the short-term rental market. When the Census or the ACS categorizes vacant units, they are likely capturing these short-term rental units as vacant, as they are not someone's primary residence. In places like San Francisco, placing units only on the short-term rental market reduces the number of units available for rent in what is already an extremely tight rental market. To estimate these units, one would isolate the number of units that are entire-unit Airbnb rentals, vacant year-round for the purpose of Short Term Rentals.

To examine this relationship, this study used web scraped Airbnb data from the Office of Short Term Rentals, and a formula provided by the Office of Short Term Rentals and the San

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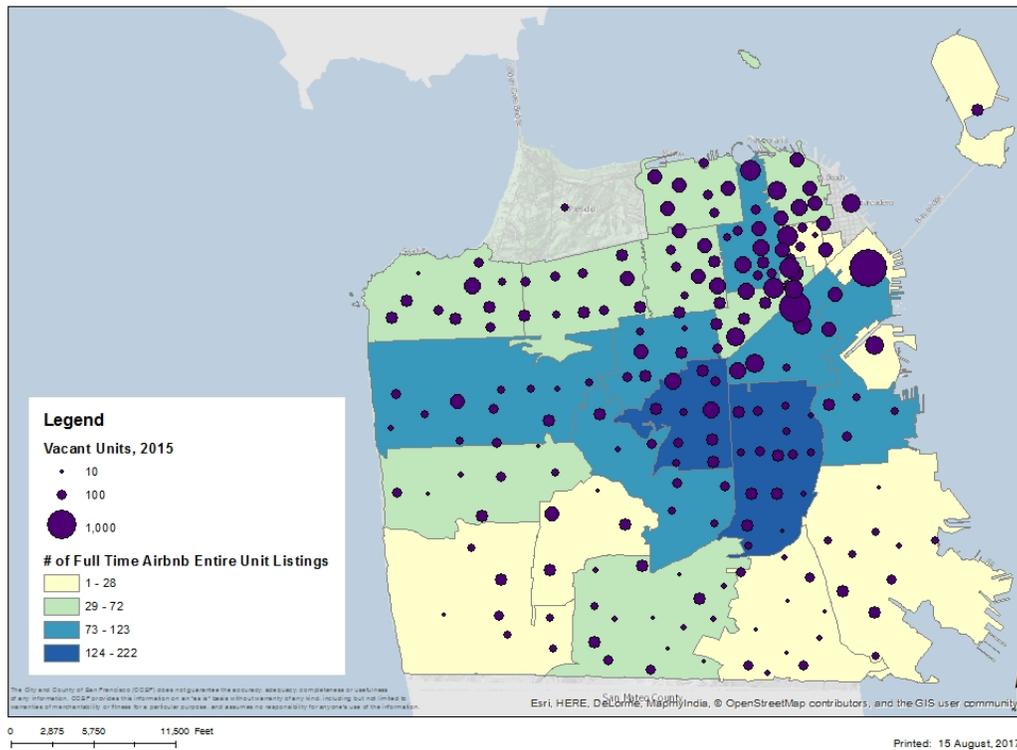
<sup>43</sup> San Francisco Office of Short Term Rentals, "About Short Term Rentals."

<sup>44</sup> Office of Short Term Rentals.

Francisco Legislative Analyst Office to estimate the number of units that might be year-round short-term rental units.<sup>45</sup> Listings that appeared to no longer be active were eliminated, as well as any listings that were not entire-unit listings. This analysis provides an estimated total number of approximately 1,300 entire-unit, year round vacant units in the City. Figure 11 shows these full-time entire unit Airbnb listings at the zip code level, as exact locational data for the listings is unavailable. The number of vacant units is mapped at the census tract level over the Airbnb data, with larger purple dots signifying a large concentration of vacant units.

Looking at the map, there does not appear to be an overwhelming concentration of vacant units with large concentrations of full-time entire unit Airbnb listings. While most vacancy is concentrated in the upper Northeast quadrant of the City, as previously mentioned, the Airbnb listings appear to be more concentrated in the Mission and the Western Addition/ Castro Valley neighborhoods.

Figure 11: Airbnb and Vacant Units



Source: Office of Short Term Rentals and 2015 ACS 5-Year Estimates, Table B25002

However, we cannot conclude from this map that Airbnb has not been a contributing factor to vacancy, but rather that it does not overwhelmingly appear to be the reason. This aligns with

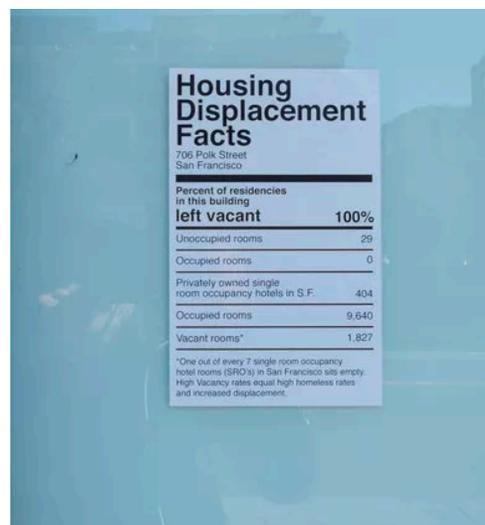
<sup>45</sup> City and County of San Francisco Board of Supervisors Budget and Legislative Analyst, “Short Term Rentals 2016 Update,” April 7, 2016.

other findings that causes of vacancy may greatly differ by neighborhood, and while Airbnb might not be a leading factor of vacancy in the City overall, it may still be one of the factors.

### *SROs and Vacancy*

For-profit SROs present another potential cause of vacancy, as activists and city groups in the past have found that for-profit SRO owners are holding portions of their residential units offline as tourist units.<sup>46</sup> While the San Francisco County Board of Supervisors voted last year to enact legislation barring the rental of SROs for fewer than 32 days, some SROs may still be held off the market.<sup>47</sup> Recently, the connection between SROs and vacancy has gained attention with the “Housing Displacement Facts” placed on for-profit SROs throughout the city by guerilla artist Erik Schmitt.<sup>48</sup> The art installation brought attention to six SROs in particular that have 100% of units vacant (See Figure 12).

Figure 12: Housing Displacement Facts

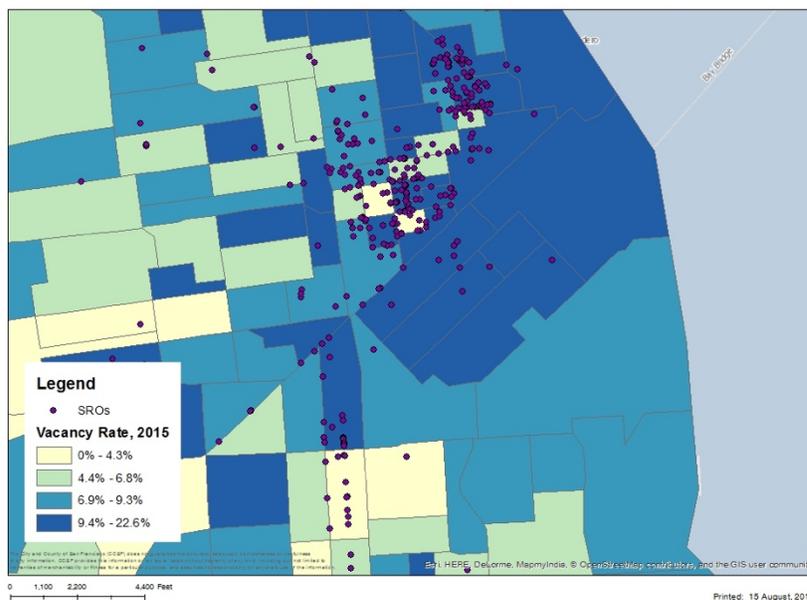


Source: CurbedSF

Additionally, while the recent legislation to restrict tourist rentals of SRO units may have placed additional units back onto the market, these changes would not be reflected in the 2015 ACS data. Similarly to the Airbnb legislation, it is too soon to know the true effect of this legislation on returning units back to the market.

To examine the potential relationship between for-profit SROs and vacancy in the City, a list of for-profit SROs was geocoded, and then displayed as the purple dots on the map

Figure 13: Vacancy and For-Profit SROs



Source: 2015 ACS 5-Year Estimates, Table B25002 and SRO Data from City of San Francisco

<sup>46</sup> Adam Brinklow, “San Francisco Lawmakers Pass SRO Rental Cap,” *CurbedSF*, February 1, 2017.

<sup>47</sup> *Ibid.*

<sup>48</sup> Adam Brinklow, “SF artist slaps notices on vacant SROs to spotlight homeless,” February 21, 2018.

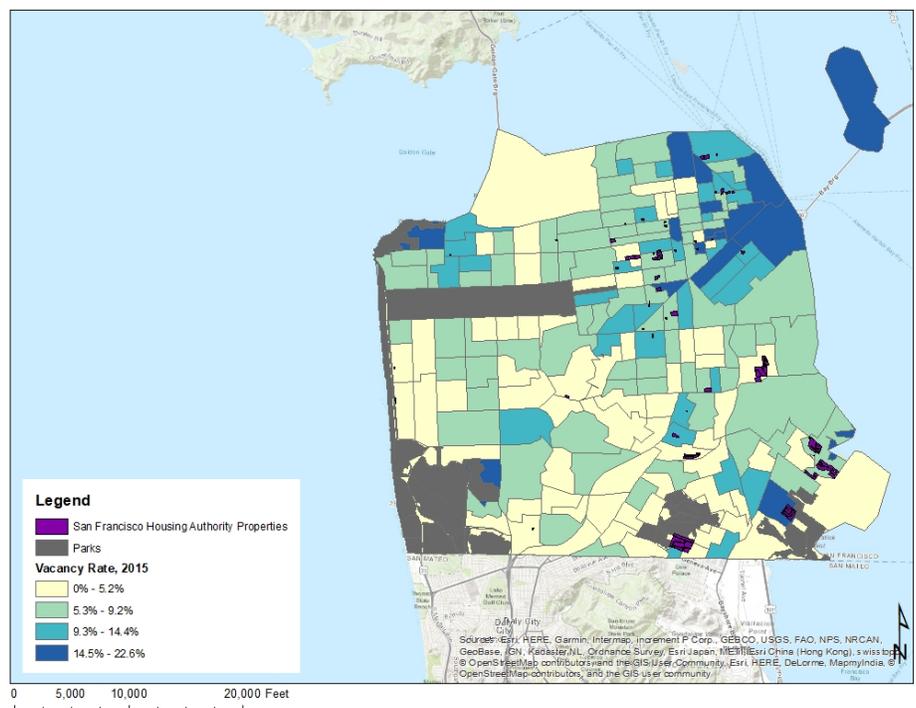
in Figure 13. These SROs are displayed on top of San Francisco’s vacancy rate, and the map is zoomed in to show the neighborhoods with the highest concentration of SROs. While for-profit SRO’s do not seem to be clustered in some of the Northeast quadrant tracts that have the highest vacancy, such as SOMA, Transbay Terminal, Rincon Hill, etc., they are clustered in other tracts that have high vacancy rates such as the Tenderloin and Chinatown. According to this spatial analysis, it would seem that there is a correlation between the location of for-profit SROs and vacancy rates.

The City of San Francisco collects data on the vacancy of the for-profit SROs and monitors how many units are being used as tourist units. According to data from San Francisco Housing Inspection services, about 1,445 for-profit SRO residential units in the City were vacant in 2015, which is approximately 10.6% of San Francisco’s for-profit SRO residential units. This high-vacancy in for-profit SROs may explain some of the characteristics of the vacant housing stock explored with the PUMS data in Tables 2-4 as SRO buildings are likely to be older housing stock constructed prior to 1939, as well as larger buildings of 50+ units. However, as mentioned, recent legislation may be returning some of these units back to the residential market.

### *San Francisco Public Housing and Vacancy*

Considering changes that are occurring with much of San Francisco’s public housing stock, including the redevelopment of public housing through HOPE SF, it is also worth considering how the public housing stock that is a part of HOPE SF may be categorized in this data. While the redevelopment of San Francisco’s public housing is not likely to contribute significantly to vacancy, it is an important piece of the larger San Francisco Housing context. The San Francisco Housing Authority has been holding its units vacant as tenants vacate units in preparation for the relocation and redevelopment of the public housing units. Based on the definitions

Figure 14: SF Housing Authority Properties and Vacancy



Source: 2015 ACS 5-Year Estimates, Table B25002 and SF Housing Authority Parcels from Data SF

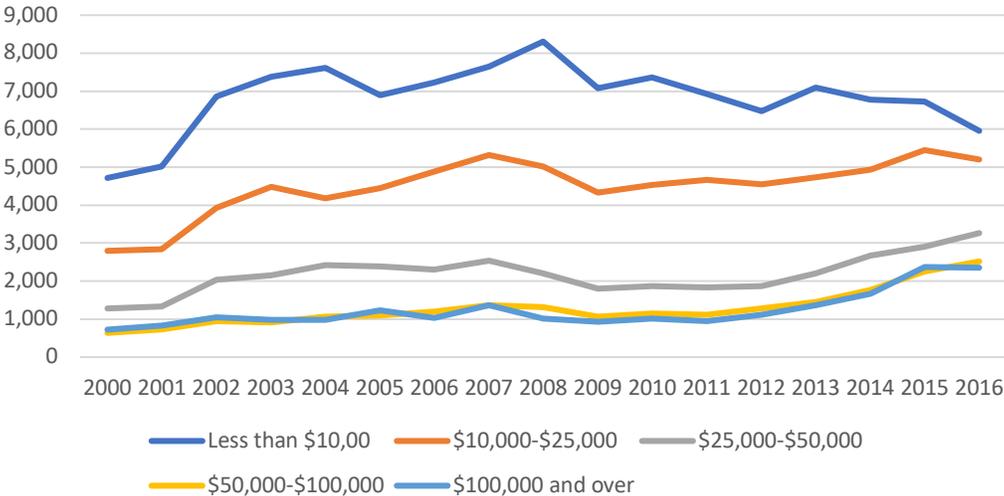
provided by the U.S. Census Bureau, these units would likely be grouped into the “Other Vacant” category, as they are not on the rental or for sale market, and are also not being used as seasonal units. Geographically the locations of public housing do not seem to align with locations of high vacancy, as shown in Figure 14.

*Permit Data*

Another potential cause for increased vacancy is major renovations or repairs to San Francisco’s housing stock that may be causing vacancy. These repairs and renovations could be a result of modernizing some of San Francisco’s oldest housing stock, as well as major renovations, repairs, and expansions to San Francisco’s single-family homes during this time of economic boom.

To examine potential relationships with San Francisco’s vacant housing stock and major repairs and renovations, permit data from the Department of Building Inspections from the years 2000-2016 was analyzed. To analyze the permit data, cost was used as a proxy for categorizing whether the renovation was “major,” and therefore might potentially lead to vacancy, or whether it might just be a minor repair. As a first step to creating these cost categories, permit costs were inflation-adjusted to 2016 dollars using Engineering News Records’ construction-cost index. Five cost categories were created: less than \$10,000, \$10,000-\$25,000, \$25,000-\$50,000, \$50,000-\$100,000, and \$100,000 and over. Permits that were not either forms 3 or forms 8, both of which signify alterations as opposed to new construction, demolition, signage, or grading, were eliminated. Lastly, any permits that were denied or inactive were eliminated, leaving only those permits which were still a part of the pipeline, or had already been completed.

*Figure 15: Renovations by Cost Category over Time*

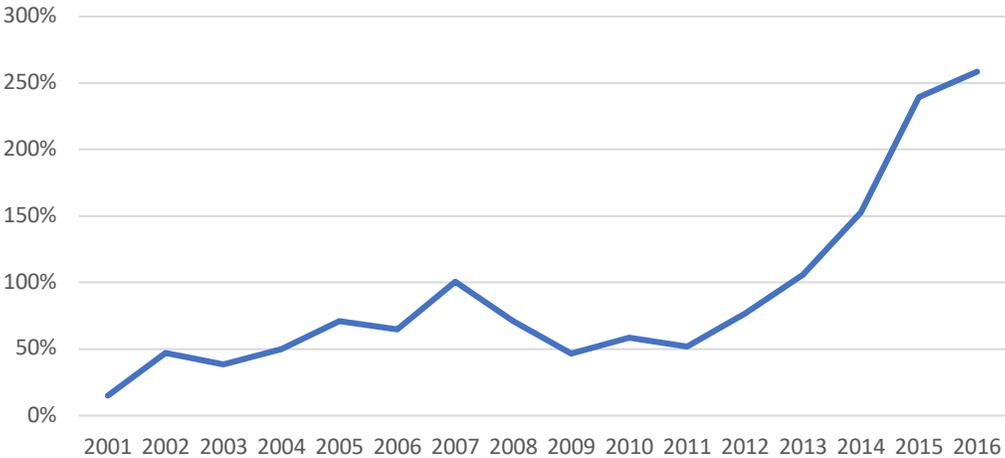


Source: Permit Data from San Francisco Department of Building Inspections

Figure 15 demonstrates the number of permits in each of the cost categories over time. While minor permits (those below \$25,000) have been relatively cyclical over time, permits above

\$25,000 have been increasing since 2011. Looking at the percentage increase in major permits (those over \$50,000), San Francisco has experienced a 259% increase since 2000, with the majority of the increase occurring between 2011 and 2016 (Figure 16).

Figure 16: Change in Permits over \$50,000 since 2000

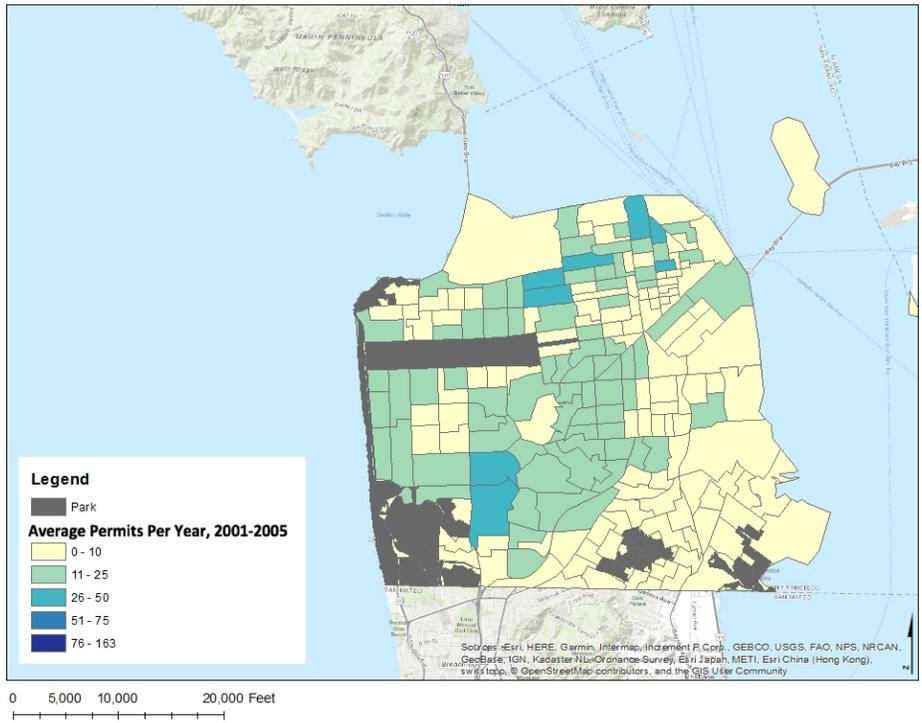


Source: Permit Data from San Francisco Department of Building Inspections

This major increase in large permits may be increasing vacant housing stock in the City by causing the units under renovation to be inhabitable during the renovation period. However, there are several limitations to this analysis that makes determining a correlation difficult. Firstly, the nature of the permit data makes it difficult to determine whether the permit costs are spread across multiple units in a building, or concentrated in one unit. For example, a permit may be for one or two units in a multi-unit building, but unless that unit is a condominium with its own assessor parcel number, it would be impossible to parse out the cost per unit in a method that is replicable across all permits.

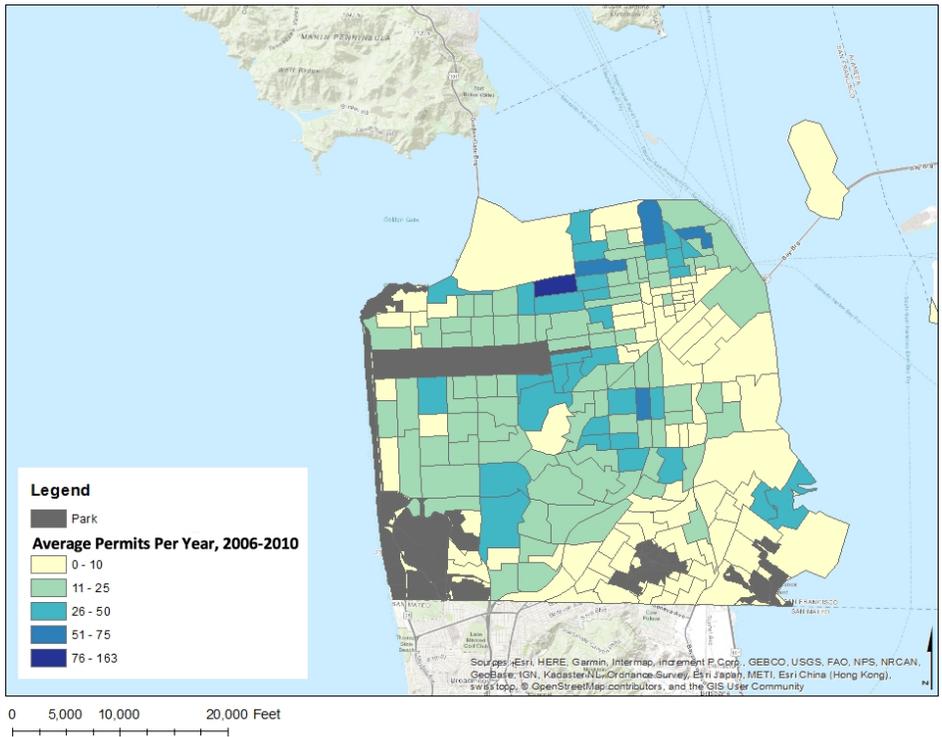
To further explore a potential correlation with vacancy and permits, the location of major renovations in the City was mapped, using \$50,000 as a threshold for whether or not the permit was a major renovation. To view the location of these permits in relation to vacancy in the City, 5-year averages were created by summing the number of permits in a parcel over a 5 year period and dividing it by 5, and then spatially joining and summing the permits to the Census tracts. This created 5-year averages at the census tract level, as shown in Figure 17 through 19.

Figure 17: Average Permits Per Year by Tract, 2001-2005



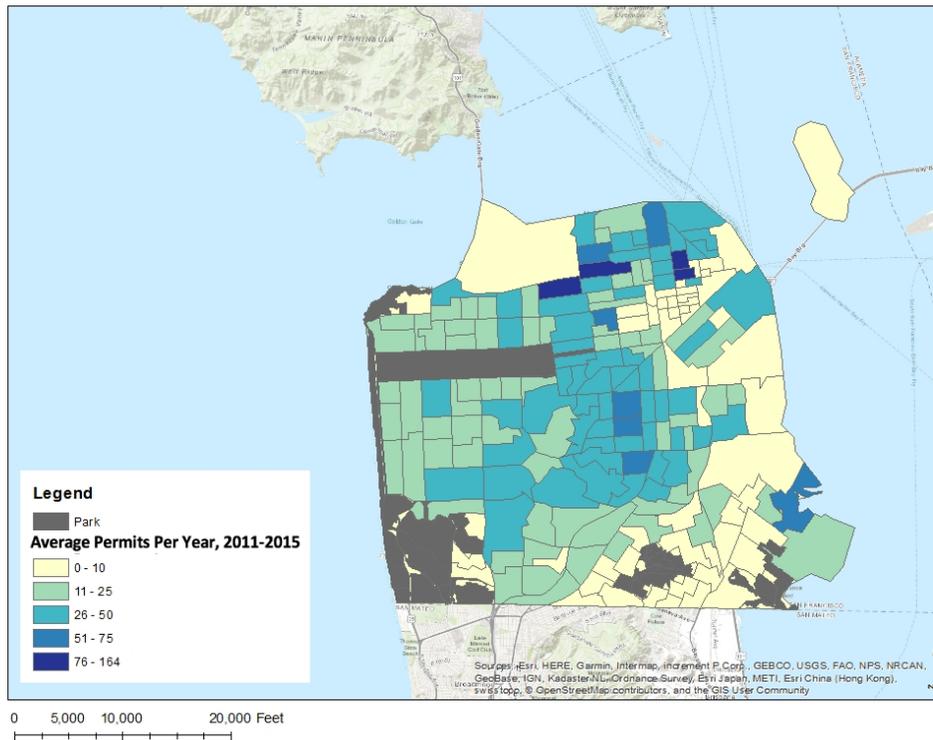
Source: San Francisco Department of Building Inspections Permit Data

Figure 18: Average Permits per Year by Tract, 2006-2010



Source: San Francisco Department of Building Inspections Permit Data

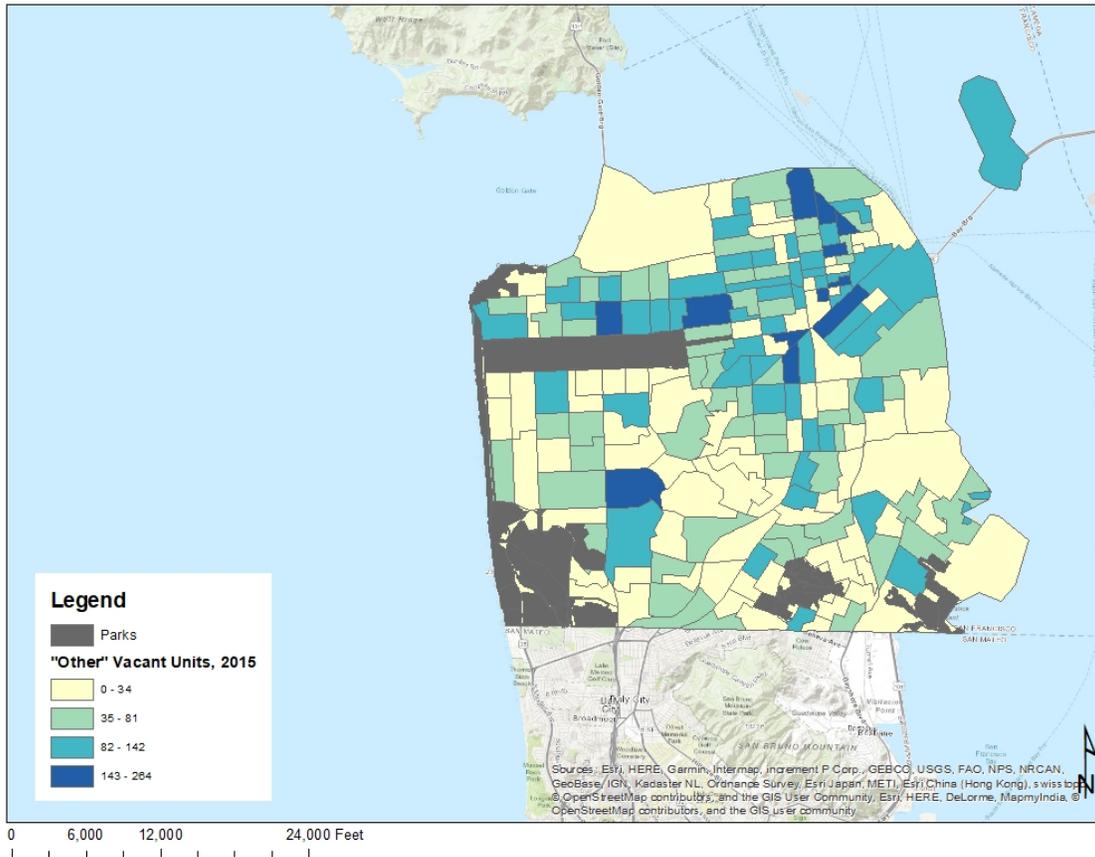
Figure 19: Average Permits per Year by Tract, 2011-2015



Source: San Francisco Department of Building Inspections Permit Data

Figures 17-19 reflect the growth of major renovations since 2000 depicted in Figure 16, with a larger number of tracts having an average of over 50 major renovation permits per year with each respective time period. The map demonstrates multiple nodes of clustering, such as Russian Hill, Nob Hill, Pacific Heights, as well as the Mission and Hayes Valley. To compare the location of these major renovations to the location of “Other Vacant” units, which is the category these renovations would likely be causing vacancy in, Figure 20 demonstrates the location of “Other Vacant” units by census tract. These findings may point to the fact that while major renovations certainly do not account for the majority of vacancies, especially those concentrated in the Northeast quadrant of the City, they may be contributing to the “other” vacant units in neighborhoods throughout the City. Once again, there does not appear to be an overwhelming correlation between major renovations and “other” vacant units, although there does appear to be a concentration of both in Nob Hill and Russian Hill.

Figure 20: Concentration of "Other" Vacant Units, 2015



Source: 2015 ACS 5-Year Estimates, Table B25004

## INTERVIEW RESULTS

While the assembled secondary data paints a picture of the vacancy trends in San Francisco, more qualitative data can assist in our understanding of the reasons why vacancy may have increased. Because the secondary data analyzed did not provide any clear, overarching reasons why vacancy may have increased, interviews were conducted with property managers, property owners, and brokers working with San Francisco's housing stock in order to explore a more nuanced narrative behind why vacancy might be increasing.

Interviews were completed with eight property managers, landlords, and brokers about their perceptions of vacancy in San Francisco, and their perspectives as to why vacancy might be increasing in San Francisco. Interviewees represented a range of perspectives, as well as a range of housing stock representative of San Francisco's housing stock overall. The housing stock managed/owned by interviewees included housing stock of all ages and sizes, with the smallest representation in San Francisco's newest housing stock. However, this is consistent with the age of San Francisco's housing stock more broadly, with only 4% of San Francisco's housing stock

constructed since 2005.<sup>49</sup> Interviewees were asked to discuss any differences in vacancy by building age or size, as well as reasons why property owners may be choosing to not occupy or lease their units. A summary of the interviewees is provided in Table 5.

Table 5: Interviewee Overview

<b>Interviewee Category</b>	<b>Number</b>
Small property owner	1
Landlord/property owner	1
Broker	1
Rental Property Management Company	4
HOA Property Management Company	1

To summarize the results from my interviews:

- Similarly to the data analysis, there appears to be no single driving force behind an increase in vacancy in San Francisco.
- The reason a unit may be vacant really depends on the property owner and the housing stock. In a tight and complex housing market like San Francisco, there are a variety of forces contributing to the increase in vacant units.
- Key themes included the influence of San Francisco’s rent control and tenant protection ordinances on vacancy, and the influence of soft story retrofits.
- Interviewees often contradicted one another. For example, one interviewee would state that rent-controlled units have larger vacancy rates because landlords are “fed up” with the regulations, while another property manager stated that rent controlled units have lower vacancy rates because tenants are demanding them more. Another example is some property managers stating that larger buildings have lower vacancy because they are more likely to be run by someone in the business of renting, so they have reduced lengths of vacancies between tenants. On the other hand, another property manager stated that because owners of large buildings are in the business of renting, they can afford to wait longer between tenants, and are therefore in less of a rush to have a new tenant to pay the mortgage.

### *Vacancy by Building Size*

The question of vacancy by building size is no exception to the rule of “it depends.” The majority of interviewees explained that they felt small properties of 2 units or 3-9 units are most likely to be vacant; however, a few others explained that they do not feel vacancy depends on building sizes. Only one interviewee expressed that vacancy is more likely to be concentrated in larger 50+ unit buildings, with the reasoning that those are more likely to be newer-construction

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<sup>49</sup> Steven Ruggles et al., *Integrated Public Use Microdata Series: Version 7.0* [dataset], Minneapolis: University of Minnesota, 2017.

buildings not subject to rent control, and tenants are looking for rent-controlled units. This interviewee also felt that larger buildings have the largest vacancy rates because “they are less likely to be a mom and pop who needs to get a tenant in there to pay the mortgage - they can afford to hold off.”

While there was no consensus from interviewees, the majority felt that vacancy would be more common in smaller buildings. Some interviewees cited the fact that “larger buildings are meant to be investment properties,” where property owners are in the business of renting out their units. Smaller properties, however, have a “larger buyer pool” due to the differences in financing and the capital required to purchase them, so property owners might purchase a smaller building with a larger variety of intended uses (e.g. to occupy one unit and rent one unit out to a family member). Additionally, interviewees cited the fact that smaller buildings, such as 2 unit buildings, are more likely to be small property owners. An interesting distinction arose here with regards to navigating San Francisco’s tenant protection and rent control laws. A few interviewees discussed their opinion that large property owners, who are more likely to manage larger buildings, may also be more savvy with San Francisco’s rent control and tenant protection laws. Therefore, they might be less “afraid”, as one interviewee worded it, to rent out their units. However, landlords that are not in the business of renting and being landlords may be more likely to hold their unit offline or turn to Short Term Rentals as rental income. Another interviewee offered his opinion that smaller buildings are more likely to be “mom and pop” landlords, “many of whom have had awful experiences with rent control” but they “don’t want to sell the asset because they have a low tax basis.”

### *Vacancy by Building Age*

Interviewees were also divided in their opinions of how vacancy may differ by building age, and rent control came up as a deciding factor on either side of this debate. One interviewee felt that new-construction units, or any units built since 1980 that are not subject to rent control, are likely to have higher vacancy rates. This interviewee explained that “tenants are informed” and come to them “looking for rent-controlled units.” Therefore, this property manager felt that units which are not rent controlled, which naturally means newer-construction housing stock, are more likely to experience vacancy as a result of a lease-up period. Another interviewee stated that they did not feel there was a difference in vacancy rate for buildings of different ages, but that the reason for the vacancies that do occur would differ by building age. For example, this interviewee expressed that vacancy in new-construction housing stock is most likely to be related to corporate housing.

The majority of property owners were on the other side of this debate, explaining their opinions that rent-controlled units, which naturally mean older housing stock, are more likely to be vacant. One interview offered a distinction between vacancy by building age depending on whether or not the unit is “offline,” or vacant “for rent or sale.” This interviewee explained that

there is no difference in vacancy by building age for units that are vacant for rent or for sale, but there is a difference in vacancy by building age for those units that are being held offline, which are more likely to be older, rent controlled units. One interviewee rationalized that rent controlled units may also have longer vacancies between tenants because you only get “one bite at the apple,” both in terms of rent and tenant. Therefore, landlords might want to wait longer in between renting out a rent controlled unit to lock in the highest rent possible, as well as to make sure they have a tenant that they feel confident in.

Another interviewee cited that older housing stock is more likely to be vacant due to the major repairs and renovations that would need to occur to modernize the housing stock. The majority of San Francisco’s housing stock is built before 1939 and is in need of repairs and renovations, so as one interviewee noted, landlords will hold units vacant after a tenant has ended their lease to undergo upgrades to the unit before placing the unit back on the rental market.

### *Rent Control & Renter Protection Ordinances*

During the interviews, rent control arose as a common theme in determining vacancy, in terms of rent controlled units having either higher or lower vacancy. In particular, property owners, managers, and brokers discussed future plans for the unit as a crucial consideration of whether or not to take the unit offline as a result of tenant protection laws. For example, one broker explained that if a property owner is thinking of selling their building within the next couple of years, they will recommend that the property owner not rent out the unit, as selling the unit with a tenant will lower the value of the building, and San Francisco’s tenant protection laws would not allow them to terminate their lease.

This paper is not attempting to evaluate rent control and just cause eviction laws as policies, nor is this paper trying to evaluate the claims of these landlords to determine whether or not it may be true that rent control is contributing to vacancy. However, it became clear in these interviews that whether or not the claims of these property owners is true, there is a perception that landlords would rather hold their units vacant at times than navigate San Francisco’s renter protection laws.

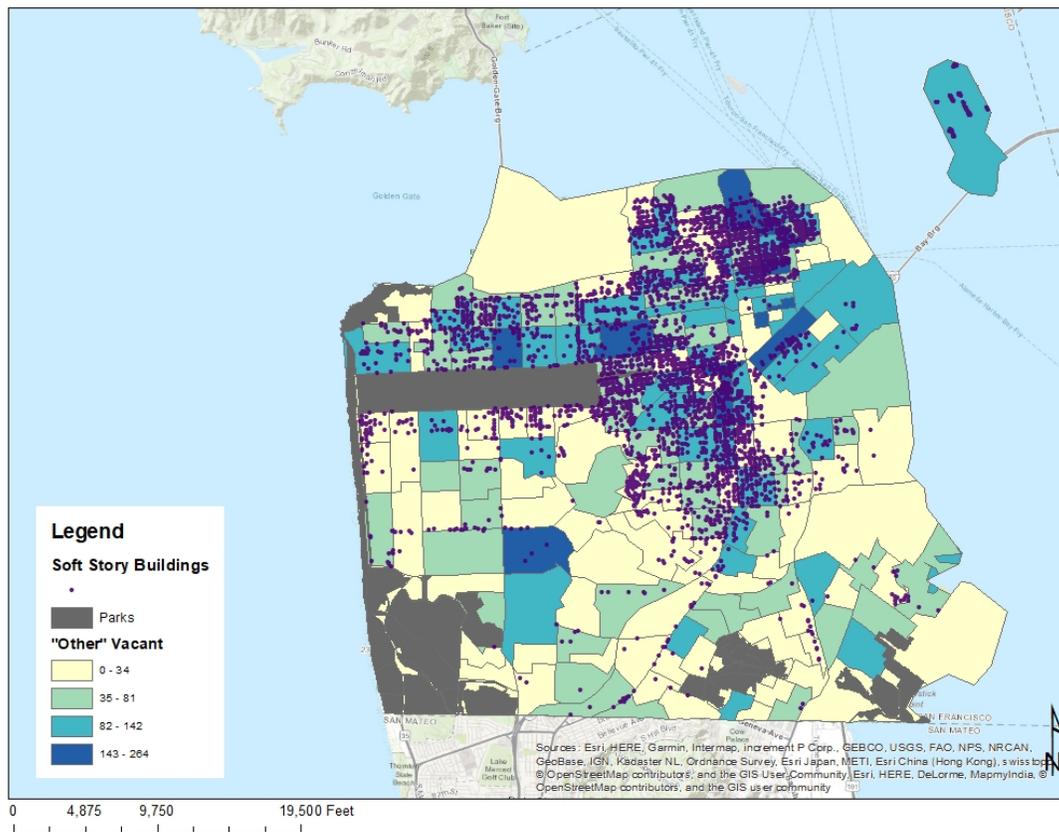
### *Soft Story and other Seismic Retrofits*

Several interviewees also mentioned San Francisco’s soft story ordinance when discussing causes for vacancy. One interviewee provided their opinion that vacancy in the older housing stock in particular is likely attributable in large part to soft story retrofits. The interviewee explained that “as tenants leave, landlords aren’t renting units out because they know they need to do seismic retrofitting.” Another interviewee echoed these thoughts that soft story and seismic retrofitting contribute to vacancy, adding that while property owners are doing major structural retrofits to buildings for seismic retrofitting, they will take that opportunity to evaluate other major renovations, including the addition of Accessory-Dwelling Units (ADUs). The property

owners view the soft story retrofit as an “opportunity to add units to a building while that assessment is being done.” This suggests that while soft story retrofits may not be causing units to be vacant on their own, landlords are using the opportunity to do other major structural changes and renovations that may require units to be vacated.

To explore this further, Figure 21 shows geocoded soft story buildings identified by the San Francisco Department of Building Inspections, mapped over the distribution of “other vacant” units by census tract, as units vacant for soft story retrofits would be most likely to fall into this category (See Figure 21).

Figure 21: Soft Story Buildings and "Other" Vacant Units



Source: 2015 ACS 5-Year Estimates, Table B25004 and Soft Story data from San Francisco Department of Building Inspections

The map does seem to show a clustering of soft story buildings in areas where there are more “other” vacant units, suggesting that landlords may in fact be vacating their units before undergoing seismic retrofits. However, it is unclear whether or not it is truly necessary for landlords to hold these units vacant while these buildings are undergoing retrofits, or whether, as mentioned above, landlords may be using this opportunity to increase their scope of work.

When asked to elaborate more on how often soft story retrofits may require them to relocate tenants, one interviewee responded that “about 70% of our soft story work has not required residential tenants to be displaced. The other 30% do require work in their units...so they have to be displaced for 2-3 months while the work is being done.”

### *Other Causes for Vacancy*

In addition to all of the potential causes for vacancy described above, interviewees cited a few other potential contributing factors from their experience. One interviewee, who works primarily with older housing stock, described feeling that vacancy in the older housing stock has increased as a lot of the newer housing stock has come online in recent years. This interviewee sort of described a “shuffling around” that has led to increased turnover in the older housing stock, as people who now have more options are moving out of older housing stock and into newer housing stock.

Plans to sell homes came up frequently as a cause for vacancy, as briefly mentioned in the rent control section. One interviewee stated “with all of the rent control restrictions, for a lot of owners it makes sense to keep it vacant if they know they are going to sell because there is a buyout.” This interviewee explained that because the buyout is costly, a property owner might hold the unit vacant to avoid the buy-out; they explained that this is especially true for small landlords who may not be able to afford the cost for the buy-out.

Interviewees also discussed the impact of major repairs and renovations, aside from soft story retrofits, on vacancy. However, interviewees seemed to indicate that these are not long-term vacancies, but maybe only for a month or so in between tenants. One major property management company in San Francisco estimated their properties at a 5% vacancy rate, with 4 out of the 5 percentage points attributable to repairs and renovations in between tenants.

Another cause interviewees mentioned was second homes or pieds-a-terre. Interviewees seemed to form a consensus that this is not something they see very frequently, but they know it exists, and it is one of the pieces of the puzzle. One interviewee explained that owners of multi-unit buildings will sometimes keep a unit vacant for themselves as a city home or a second home.

Interviewees were also asked to discuss investment properties, or properties that are purchased solely for a real estate investment, but there is no intention of ever occupying or renting those units. Interviewees either felt that they know this exists, but it’s not something that they interact with on their day-to-day work, or they doubted that this was really much of an issue at all.

### *Vacancy by Neighborhood*

Interviewees were also asked to comment on whether or not they feel vacancy rates differ by neighborhoods. Once again, answers across interviewees were not consistent. Some interviewees

explained that there shouldn't be differences in vacancy by neighborhood, as the desirability of that neighborhood should be reflected in the rent price. Another interviewee explained that differences by neighborhood are most likely a result of differences in the housing stock. For instance, you might tend to see a higher concentration of vacancy in neighborhoods like Western Addition, or Hayes Valley because there's a greater concentration of small buildings in those neighborhoods.

Two interviewees indicated differences in vacancy by neighborhood resulting from the resident base. One interviewee explained that Downtown San Francisco is likely to have a more transient base, especially with large numbers of students who go to the Academy of Arts Downtown, and then may leave once their one or two years of school are over; these types of residents are likely to reside in some of the older, large buildings downtown. Another interviewee distinguished vacancy by neighborhood based on schools. This interviewee noted that neighborhoods that have better school systems tend to have fewer vacant units; those units are in extremely high demand. These neighborhoods that have better schools are also likely to have a higher concentration of families, which can mean less turnover, and therefore fewer vacancies.

## **CONCLUSIONS AND RECOMMENDATIONS**

A key theme throughout this research has been the fact that there appears to be no single driving force behind San Francisco's increase in vacant units; San Francisco's housing market and housing crisis are complex, and it is likely a combination of many factors contributing to this vacancy increase. Although Airbnb and Short Term Rentals do not seem to be overwhelmingly correlated with vacancy, as the use of Airbnb has increased, so has vacancy in the City. Additionally, while major renovations have increased along with increases in vacancy, concentrations of vacancy and major renovations appear to overlap only in a select few areas. While SROs do seem to be correlated with vacancy, they likely only contribute to a small portion of the total increase in vacancy in San Francisco. Again, it is important to acknowledge that recent regulations have aimed to address the impacts that for-profit SROs and Short Term Rentals have had on the housing markets, but the data used in this paper's analysis predates those regulations; these regulations have likely returned units to the market that this analysis has not captured.

While many interviewees cited rent control laws as contributing to San Francisco's vacancy, rent control has been in place in San Francisco since well before the starting point of this analysis in 2000, although aspects of the tenant protection laws have changed. One cannot definitively conclude that rent control laws are contributing, or not contributing to San Francisco's vacant housing stock. It is, perhaps, a compounding effect of all of these reasons that could lead to vacancies. For example, perhaps Airbnb has provided landlords who are frustrated with rent control laws with an alternative way to obtain rental income instead of renting to long-term tenants.

The fact that interviewees each had different reasons for why units might be vacant, or different reasons for why vacancy might differ by housing stock, illustrates that the issue of vacancy in San Francisco may really differ on a case-by-case basis. The differences in answers from interviewees likely reflects the fact that they are each working with slightly different housing stock and different property owners, each of which can combine to create unique circumstances.

If the causes are numerous and social and economic factors may be compounding one another, this may point to the utility of a vacancy tax as an all-encompassing method of addressing vacant units. If targeting these potential causes individually (e.g. SRO laws, Airbnb laws), will only get at a portion of the vacant units, targeting all vacant units through a vacancy tax may be an efficient way to incentivize units being placed back onto the rental market. However, we still do not have a clear understanding of the number of vacant units in San Francisco. Prior to implementing a vacancy tax, it is important to establish a baseline understanding of the true number of vacant units in the city so that the impacts of the policy can be evaluated, and the policy can be further refined in future years.

*Recommendation #1: Monitor Soft Story Retrofits and Incentivize Tenancy When Possible*

Due to the fact that major renovations seem to be correlated with soft story renovations, and the fact that several interviewees brought up the impact of soft story retrofits on vacancy, it might be worth exploring whether or not the City should monitor soft story retrofits, and how often landlords are requiring tenant vacancy for soft story retrofits. If it seems to be as common as a few interviewees indicated, then the City could try to maintain occupancy during soft story retrofits by providing incentives for landlords to continue to rent units. One potential conflict with another City policy here could be a tradeoff between adding additional units during retrofits, which would increase the City's housing stock, and reducing vacancy.

Additionally, a vacancy tax should be structured so as to not penalize property owners who are complying with the law and making sure that their units are safe in the event of an earthquake. If soft story retrofits would only require a resident to be displaced for a maximum of 2-3 months, as one interviewee suggested, then defining the occupancy requirement for the vacancy tax could ensure that this is not the case. For example, Vancouver defines their occupancy requirements at 6 months or more.

*Recommendation #2: Carefully structure the vacancy tax so as to not undermine the ADU program or small property owners*

When crafting the vacancy tax, San Francisco policymakers should be careful to ensure that the vacancy tax does not unduly burden certain populations, nor undermine other policy goals of the City. For example, if a homeowner adds an additional Accessory Dwelling Unit to their property, partially as a result of City incentives and policies to add additional housing stock by adding

ADUs, they may be subject to the tax if they decide to not rent out their ADU at times, or if construction of their ADU requires them to vacate their unit for an extended period of time. A homeowner may be less likely to add an ADU if they always have to keep it occupied in order to avoid the tax. However, these ADUs are helping contribute to the housing stock, and helping to achieve some of the same goals as a vacancy tax. Thus, policy makers should integrate some type of exemption for vacancy in ADUs or vacancy resulting in ADU construction. Relatedly, policymakers should be careful to avoid or minimize negative impacts on small property owners as a result of the vacancy tax. However, this should be done carefully so as to capture second homes and investment properties, while also not unduly burdening small property owners.

*Recommendation #3: Continue to monitor the impacts of the new Airbnb and Short Term Rental regulations*

Starting in October, a new law in San Francisco took effect requiring Airbnb to verify that all of their hosts have been registered with the City. Since this law went into effect, we have seen significant drops of nearly 50% in Airbnb listings.<sup>50</sup> However, it is possible that the number of listings will rise again slightly, after hosts have completed registration and complied with the new regulations. It is too soon to know whether the new law has permanently placed Short Term Rental units back on the long-term rental market, but it seems so far that it is trending toward that direction. San Francisco should continue to examine whether vacancy has declined again after the implications of the law on the housing market can be fully realized and measured.

*Recommendation #4: Collect data on San Francisco's Vacant Housing Stock*

While Vancouver did not start to collect data on vacancy until after the vacancy tax took effect, Vancouver did begin to collect data on foreign property transfers before that took place, albeit possibly not far enough in advance to truly study an impact. If San Francisco decides to implement a vacancy tax and wants to later evaluate the effectiveness and make improvements to the policy, it is vital that we have a baseline understanding of how many vacant units there truly are, where those vacant units are, and what types of units are vacant. As this paper has demonstrated, we don't have 100% clear understandings of any of these items. If San Francisco begins to collect information about vacancy in advance of the tax, we can better understand whether the tax is having the desired effect, or if it's more effective in some types of housing stock than in others.

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