07 //

# housing supply constraints in the western states

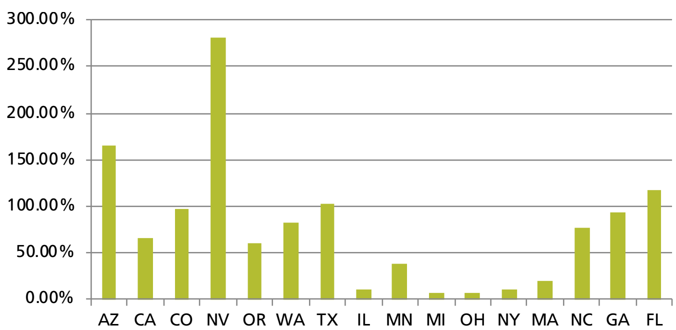
TREVOR WRIGHT
Portland State University

Trevor Wright is a Master of Real Estate Development (MRED) and Project Supervisor at Sound Native Plants.

*Any errors or omissions are the author's responsibility. Any opinions expressed are those of the author solely and do not represent the opinions of any other person or entity.*

**Housing policies have been a central focus of many local, state, and even federal regulations to address issues of access and affordability. These policies are many and wide in range; everything from tax policies to zoning laws create long-term, ripple effects in the housing market. Some legislatures are actively adding more barriers to development; perhaps it is a function of different interpretations of what causes inequity in housing affordability. The complexity of the issue of housing affordability is made even more convoluted when considering the heterogeneity of each individual market, and how overreaching federal policies can have positive effects in some markets and quite negative effects in others. Since the market for housing is driven by demand and more often than not, the private sector delivers the supply, the effectiveness of housing policies relies on a particular market's ability to produce more supply.**

**FIGURE 1.1**
**POPULATION GROWTH BY STATE, 1980 - 2019**




This paper will seek to analyze housing policies in select major markets in six western states— Arizona, California, Colorado, Nevada, Oregon, and Washington— and to what extent rising land prices, home prices, and rental rates are a response to regulatory barriers to housing production, demand shocks, and geographical constraints. This analysis will include an assessment of existing policies that create barriers to housing development in each state and local jurisdiction by analyzing rates of production, price trends, and population growth, both over time and variations within the market. Additionally, this paper will discuss current legislatures that are actively adding or removing barriers to development and how these policies might affect forecasting prices and rates of production.

## INDIRECT EFFECTS OF SUPPLY ELASTICITY ON WESTERN MARKETS

These six western states have seen a combined population increase of 82% since 1980, 37% higher than the nationwide growth rate, and a 30% share of the total national growth during the same period (FRED). Figure 1.1 displays total population growth by each state, from 1980 to 2019, and includes other states that contain cities in the 20-city composite Case-Shiller Indices for comparison. Fundamental urban economics suggests that strong growth in local populations typically elicit a response of increased production of housing, however responses to demand shocks vary from market to market. Economists Edward Glaeser and Joseph Gyourko argue that the conditions of local housing markets can be roughly categorized into three different classifications: markets with high demand and low production rates; many markets found on the coasts; high demand and high production rates; major markets of the south; and low demand with low production rates; some markets in the south as well as the Midwest (Glaeser & Gyourko, 2008).

In markets where demand is high, housing will typically respond with increased pricing, but this response can be temporary or permanent depending on a market's ability to react to the demand with an increased production of supply. The S&P/Case-Shiller Indices provide an excellent resource in measuring the growth of median home values in 20 select metropolitan regions in the U.S. By comparing median value growth rates of select cities over time along with their respective rates of construction, the indices can help demonstrate how rates of housing production correlate to the rate of increase in median home values.

Table 1 displays the growth rates of median home prices of the 20 cities in Case-Shiller indices at intervals of 10 years from 1990 to 2020, where the year 2000 is normalized to a value of 100 in order to compare growth

**TABLE 1**

| Market | Y-o-Y MHP Growth Rate (1990 -2019) | Y-o-Y MHP Growth Rate (2000 - 2019) | Median Home Value as of Q4 2019 | Construction rate as a % of total inventory 2000 - 2018 | Construction rate as a % of total inventory 2008 - 2018 |
|---|---|---|---|---|---|
| Seattle | 5.06% | 4.82% | $ 528,800 | 32.53% | 14.87% |
| PDX** | 5.46% | 4.55% | $ 410,900 | 29.66% | 12.47% |
| SF** | 4.44% | 5.03% | $ 990,000 | 13.91% | 6.67% |
| LA* | 3.62% | 5.45% | $ 722,650 | 11.57% | 5.49% |
| SD | 3.93% | 4.98% | $ 655,000 | 18.16% | 6.89% |
| Phoenix | 3.74% | 3.53% | $ 295,400 | 47.76% | 12.26% |
| LV | 3.23% | 3.42% | $ 309,300 | 65.19% | 13.01% |
| Denver | 5.29% | 4.14% | $ 458,000 | 37.63% | 14.83% |
| Dallas | N/A | 3.34% | $ 268,600 | 45.55% | 19.77% |
| Chicago** | 2.48% | 1.83% | $ 254,700 | 15.00% | 3.87% |
| MSP | 3.51% | 2.99% | $ 287,000 | 22.68% | 8.60% |
| Detroit** | N/A | 1.29% | $ 194,700 | 10.85% | 3.23% |
| Cleve. | 2.26% | 1.20% | $ 159,400 | 8.98% | 3.07% |
| NY*** | 3.12% | 3.60% | $ 409,800 | 12.97% | 6.61% |
| Boston** | 3.85% | 4.13% | $ 482,800 | 12.68% | 6.25% |
| DC | 3.16% | 4.38% | $ 436,200 | 36.02% | 13.61% |
| CHA | 2.82% | 2.61% | $ 258,500 | 56.50% | 19.91% |
| Atlanta** | N/A | 2.22% | $ 232,000 | 49.81% | 11.92% |
| TB | 3.41% | 4.14% | $ 248,000 | 35.03% | 11.76% |
| South Fla.** | 3.87% | 4.63% | $ 368,500 | 21.24% | 6.48% |

rates of home values across heterogeneous markets. Additionally, the table displays median home values in real dollars for each metro region as of the fourth quarter of 2019, sourced from the National Association of Realtors (NAR) local market reports, and the rate of construction calculated from data extracted from the Department of Housing and Urban Development building permit portal. The selected cities of the Case-Shiller indices represent major markets across the United States, including the west and east coasts, the south and the Midwest. Of the 20 cities, 8 of the biggest western markets that will be discussed in this report are represented, while some of the secondary markets in the six states of this study are not represented, such as Reno, Nevada; Tucson, Arizona; Sacramento, California; Tacoma, Washington--however this last city is represented as an incorporation of the Seattle Metropolitan Statistical Area (MSA).

It should also be noted that the Case-Shiller data reports repeat-sales of homes, as the sale of new homes cannot demonstrate value-growth until they have been sold to a second owner. Secondly, the median values reported by the NAR also reflect only existing home sales and rely on realtors to report transactions to a local multiple-listing service (MLS), and as such do not report for-sale-by-owner transactions.

Finally, as noted on the table, the Case-Shiller metro regions differ slightly in geographic boundaries than the MSA's defined by the NAR, and even further, neither may fully correspond to the number of building permits issued in total county numbers as reported by HUD, but the comparison of the data will at least provide insight into any patterns that may emerge between rates of construction and rate of median value growth. Hypothetically, if all the markets had zero barriers to building and the production of housing responded to demand without the presence of external factors, those markets with the highest rates of growth should be complemented by higher rates of construction.

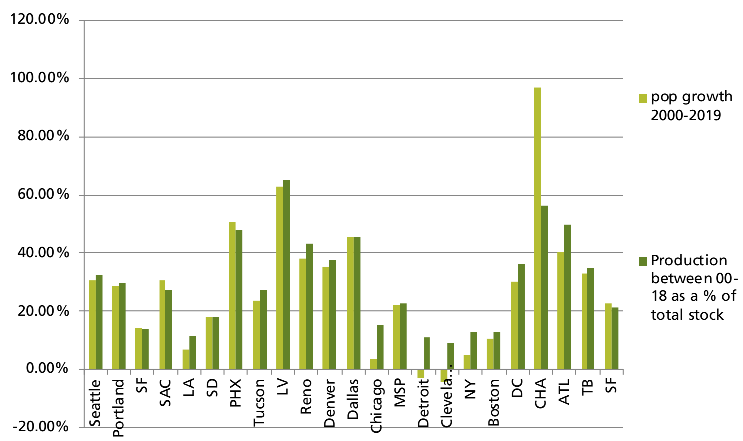
As the table demonstrates, 4 out of the top 5 cities with the highest growth rates in median value over 30 and 20 years are on the west coast, with South Florida being the exception in the 20-year period, and Denver being the exception over the 30-year period, although Denver reflected similar growth patterns as many western cities and is considered part of the western regional market.

The rate of construction was calculated by dividing the cumulative building permits issued between 2000 - 2018, as well as 2008-2018, by the total inventory in the housing market area to determine the percentage amount being produced over an 18 and 10-year period, respectively. Despite the fact that western west coast cities like Seattle, Portland, San Francisco, Los Angeles and San Diego have some of the highest median home prices, highest rates of price growth, and positive population growth, construction rates in these cities reflect the inverse. Cities with the highest production rates tend to have lower overall median home prices. Markets like Charlotte, Atlanta, Dallas, Las Vegas, and Phoenix, where demand is also strong, have all produced roughly half of their total housing stock in the last 18 years, and between 10%-20% of total stock within the last 8. These markets all have median home prices around $300,000 or less.

The indices imply that there are external factors on home values such as land use laws, infrastructure availability, zoning restrictions, tax policies, geographical constraints, and various other factors that may be restricting the ability for builders to produce more housing, limiting the supply and driving prices upwards, which will be assessed from market to market later in this report.

If markets had no regulatory barriers or geographical constraints, hypothetically the rate of construction should also correspond to the rate of population growth. Figure 1.2 outlines population growth, compared to the relative rates of construction. Despite the fact that western states had some of the highest growth in the last 40 years, Figure 2 demonstrates that the actual, major markets located in these states reflect different levels of demand, possible reflecting rising prices. Western markets that typically have higher regulatory barriers to construction, such as the California markets, Portland, and Washington have seen far less growth in the last 20 years than inland western markets like Las Vegas and Phoenix, that typically have a more elastic supply of housing.

**FIGURE 1.2**
**POPULATION GROWTH & CONSTRUCTION RATES**




Lastly, it is important to note the relationship between renting and owning a home. Typically, rising home prices will price out the lower end of demand for sales housing which increases competition in the rental markets and would then have the effect of increasing rental rates, and

FIGURE 1.3
MEDIAN HOME VALUES, Q4 2019

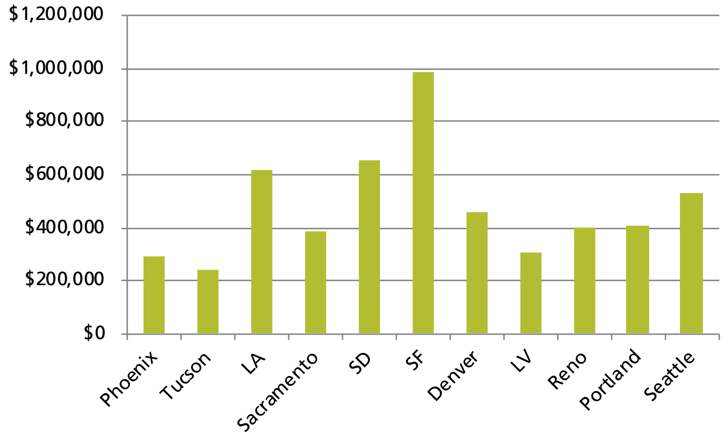



FIGURE 1.3
MEDIAN RENTAL RATES, Q4 2019

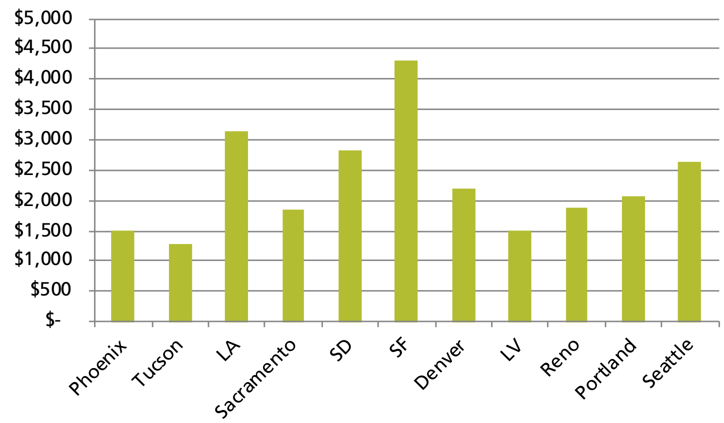
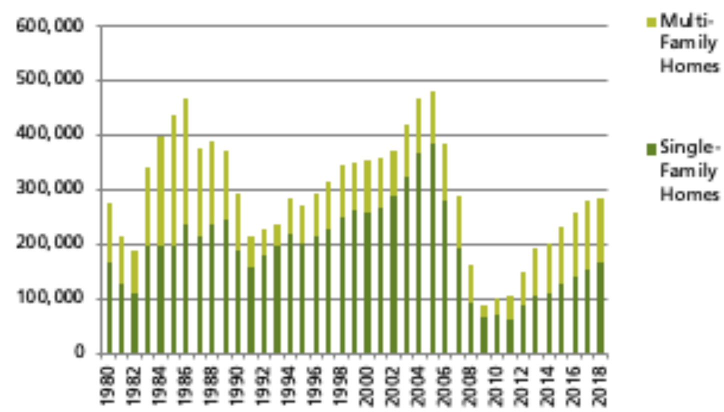



FIGURE 1.4
COMBINED PRODUCTION BY UNIT TYPE 1980 - 2018




vice versa. While this is not always the case, it is typically rare to see otherwise. A simple side-by-side graph comparison can illustrate the proportional rental market response to sales home prices (Figure 1.3). Data for median sales home values were sourced from local market reports from the National Association of Realtors (NAR), while median rental rates were sourced from the Zillow Rental Index, both are priced to date as of the fourth quarter of 2019.

Geographical constraints will be addressed by assessing the type of building being produced, assuming that a response to constraints would be to produce more multi-family units. Analyzing the type of unit being produced helps to clarify how markets respond to land supply constraints, if local housing policies favor single-family units to multi-family units, and how this affects total supply. Geographical constraints likely became an issue over time, as the majority of housing production consisted of single-family, detached residential units, which take up more square footage per resident. Figure 1.4 represents the combined-total units of housing produced between 1980 - 2018 for all six western states, separated by multi-family and single-family units. Nearly 50% or more of total annual housing production were single-family units.

Policies that favored single-family units lead to decreased land supply and strong communities, increasing the overall land values by decreasing total available supply per resident. Logically, it is understandable why single-family units are typically in higher demand, as increased values benefit homeowners, despite creating higher costs overall. Additionally, tall urban structures cost more per square foot, which would incentivize cheaper short-term production of single-family homes if demand is high, despite creating future supply constraints that will drive land prices up in the long term.

This report will now assess the various regulations, land use laws, tax policies and geographical constraints that may be directly affecting western markets' ability to build and indirectly affecting prices as a result. This report will move in state-alphabetical order, starting with Arizona.

## ARIZONA

The state of Arizona recorded a population of 7,278,717 as of 2019, about a 30% increase in population from 2000 and double the population increase nationwide, which was roughly a 15% increase (FRED). Despite the state doubling the growth rate of the national average, median home prices according to Zillow's Home Value Index (ZHVI) record Arizona's median home value at $277,574, or 10% higher than the national median home value. Zillow's Rental Index (ZRI), recorded rental rates just 4% lower than the national rate at $1,529/month. These figures demonstrate that despite strong regional growth in the state, prices reflect that the rate of housing production is maintaining pace with demand in the region, comparative to the surrounding housing markets nationwide.

Possibly the most notable housing policies in the state are centered around the Uniform Residential Landlord and Tenant Act of 1972 (URLTA), which sought to standardize landlord/tenant relations nationwide. So far, of the six states in this study, only Arizona, Oregon, and Washington have adopted these guidelines. Other notable legislation in the state includes HB 2115 and 2358, both of which relate to landlord/tenant relations in the state. HB 2115 sought to establish statewide, standardized landlord/tenant laws, keeping local jurisdictions from being able to regulate and alter the uniform code after December 31st, 2018. This bill, which passed in February 2019, allows local jurisdictions to maintain differences in landlord/tenant laws passed previous to the issuing of the bill.

HB 2358, signed in June 2019, further specifies landlord rights in stating that rent payments subsidized by rental assistance organizations are acceptable, provided that the full rent payment is still covered; partial payments are still considered grounds for eviction. Lastly, SB 1471 redirects property tax revenue on land sold and owned by the state to outside investors into a housing trust fund. This last bill doesn't increase property tax revenues per se, so theoretically it would have limited impact on investor sentiment in the state, but it does indicate that attention aimed specifically toward buyers from out-of-state reflects a large amount of investment in the Arizona real estate sector. The senate bills regarding landlord and tenant laws let landowners exercise greater power over their income streams, indicating a property-ownership-friendly environment.

### PHOENIX MSA

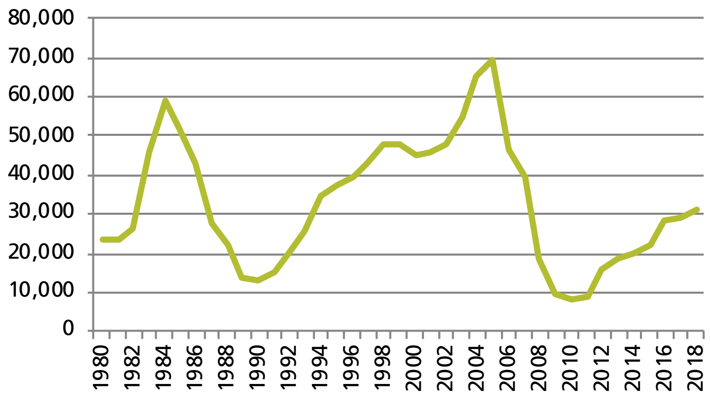
The Phoenix MSA, which includes Maricopa and Pinal Counties, contains nearly 5 million residents and 68% of the population share of Arizona. According to census data, the two counties have seen an average growth rate of 16.5% since 2010, and have averaged a year-over-year growth rate of 2.08%, though the area has seen weaker growth overall post-recession, at a rate of 1.64% (FRED). NAR recorded an average median home price of $295,400 as of the 4th quarter of 2019, and 108% of the national median. Rental rates were just over $1,500 dollars in January 2020, on pace with the national median (ZRI, 2020).

### SUPPLY ELASTICITY & PRODUCTION RATES

Phoenix, and Arizona in general, have typically been considered business-friendly environments, which have attracted enormous growth to the region over the last ten and twenty years. During the years leading up to the great recession, the state of Arizona passed Proposition 207 in 2006, which declared 'just compensation' for any reduced value caused by the local regulatory environment, initially titled the Private Property Rights Protection Act. The act also allows the government to grant waivers in lieu of compensation if the challenged regulation does not apply to the property 90 days after the claim is filed.

Additionally, the law prevents the state from exercising eminent domain on behalf of a private party, which prevents the government from using police power to increase tax revenue. This law has exceptional impacts on the city of Phoenix, which was the fastest growing metro region from 2000- 2019 among the 11 metro regions in this study (see Figure 2). Proposition 207 essentially allows landowners to negotiate the rezoning process with city and state officials, indicating that a good amount of control in the built environment lies with landowners. A survey published by the National Apartment Association (NAA) from 2019 indicates that the largest constraints to production in Phoenix were land constraints and infrastructure costs, followed by construction costs, the entitlement process, and community involvement.

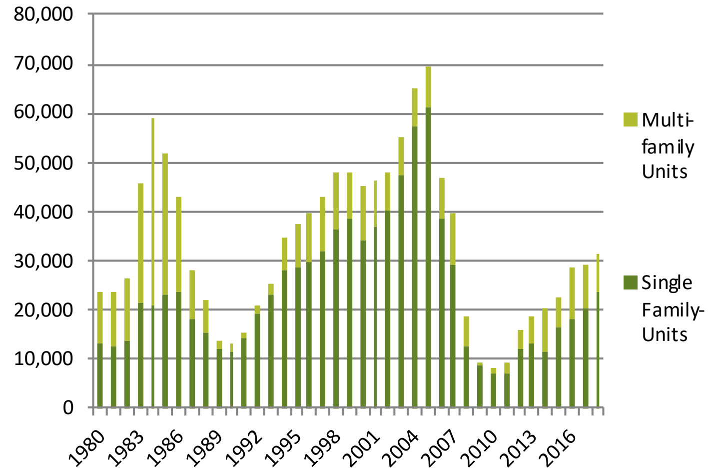
**FIGURE 2.1**
**TOTAL PERMITS PHOENIX MSA**




Despite strong incentives for housing development, as of 2018, the Phoenix metro has only produced about 43% of its peak production numbers in 2005, which may be contributing to rising home prices in the region (Figure 2.1). However, the population increased 4.33% from 2004-2005, while growth from 2018 -2019 was just 2.04%, indicating that supply is largely keeping pace relative to demand in the Phoenix housing market area (HMA). The 3.53% year-over-year median home price increase coupled with a lower percentage of new housing starts suggests that available, developable land in the region is becoming increasingly limited. Indeed, a recent study by Metrostudy, a residential data provider, indicates that vacant, developed land has dropped 5.1% from 2019, which suggests that the market is absorbing much of the abundant, new home supply provided in the early 21st century, driving prices up as available land within HMA boundaries dissipates (Sowers, 2020).

However, the absorption of new homes into the Case-Shiller repeat-sales indices and the median home values recorded by the NAR reveal that despite rising home values since the recession, the Phoenix MHV remains the lowest of the eight western cities covered in the index, maintains the second lowest median value growth rate, and has produced nearly half of its total housing stock between 2000 - 2018, indicating strong elasticity in the HMA (HUD). Relatively low home prices and rental rates indicate that the builders in the Phoenix HMA are addressing these land-supply constraints with increased multi-unit structures relative to single-family structures. The annual rate of permits for multi-family structures have bounced back to pre-recession levels, averaging around 7-8,000 permits annually, while single-family production remains only about 38%

**FIGURE 2.2**
**PERMITS BY UNIT TYPE, PHX**




of the pre-recession numbers, as demonstrated in figure 2.2. At any rate, multi-family production makes up an average of 30% of total production from 2012-2018, nearly double the share of total production from 2000-2007, which averaged 16% of the total production share.

Overall, the market maintains strong production relative to demand, though less overall production is leading to temporary price increases. The charts indicate that production is picking up again, reflecting strong elasticity in the market. Limited land supply may be resulting in decreased single family home production, and may also account for the increased share of multi-fam production. Land costs are also likely contributing to rising home prices, but overall, the amount of building has maintained relatively low prices. Additionally, investors are pumping more money into Phoenix again, who is reluctant to over-build after getting hammered in the recession, which could be a factor in limited building.

## TUCSON MSA

The Tucson MSA, which is located entirely in Pima County, recorded a population of 1,047,279 and 14% of the population share of Arizona, as of 2019. The area has seen a 5.96% rate of growth over the last 10 years and an average year-over-year growth of 1.06%, but like Phoenix, the average rate of growth was about 0.65% post-recession (FRED). Median home values were at $242,700 as of Q4 of 2019, 89% of the national median (NAR). Tucson also saw strong growth in home values post-recession, seeing stronger spikes in appreciation in 2017, appreciating about 10% per quarter during the year. Despite these gains in median value, Tucson remains largely affordable by nationwide standards, with median rental rates just under $1,300 as of 2020, 81% of the national median rental rate (ZRI, 2020).

## SUPPLY ELASTICITY & PRODUCTION

David Godlweski, president of the Southern Arizona Homebuilder's Association, accounts for this spike in home value growth to the city streamlining the permitting process and cutting down excess time on development approval, according to local publication Inside Tucson Business (Boan, 2018). Additionally, the city of Tucson has been investing more in road and infrastructure improvements, which has attracted larger businesses such as Caterpillar, a construction equipment manufacturer, and the expansion of Raytheon Facilities, a technology firm (Boan, 2018). As such, Regulatory barriers are few and far between, as Tucson has not seen quite the same demand as Phoenix, and therefore housing production has not run into heavy supply deficits over the last twenty years. While Phoenix had slowed production

**FIGURE 2.4**
**TOTAL PERMITS TUCSON MSA**

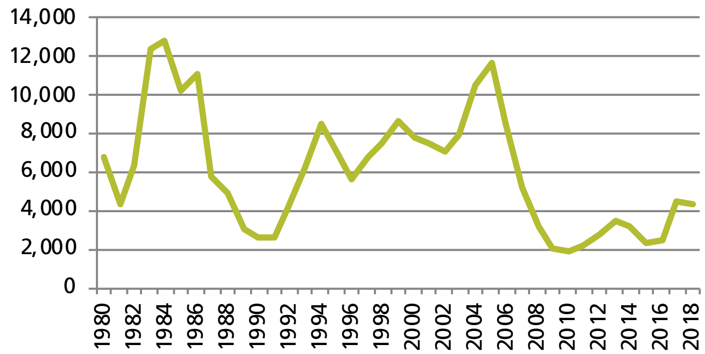
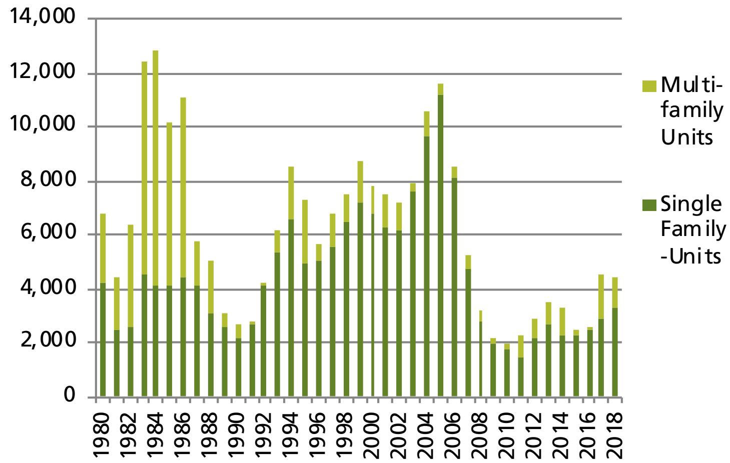



**FIGURE 2.5**
**PERMITS BY UNIT TYPE, TUC**




post-recession, building only one home per 4-5 new residents a year from 2011-2015, Tucson has maintained a production ratio of 2.20, which may contribute to lower overall home values in the region (HUD, FRED).

Some barriers in the region might include environmental impact regulations, such as the rainwater harvesting ordinance of 2008 (10597), Solar readiness ordinance of 2008 (10549), and the greywater landscape piping ordinance of 2008 (11089). These all create more added requirements for builders, though there is no strong evidence to suggest that these ordinances alone cause any serious supply constraints, and indeed offer alternative solutions to costly infrastructure expansion.

Figure 2.3 demonstrates total building permits in the Tucson MSA from 2000-2018, indicating similar patterns to Phoenix; The area has been building significantly less after post-recession as well, but on the whole, has produced nearly 30% of its housing stock in the last 18 years, indicating high elasticity to demand shocks. Figure 2.4 depicts the single-unit/multi-unit structure ratio, building mostly detached-single family homes, with an increase in total production in the years of 2017 and 2018, corresponding with recently relaxed government regulation toward building and infrastructure investment.

On the whole, the state of Arizona has had the second strongest regional growth out of the six states in this study, with the Phoenix metro adding 1.5 million people from 2000 to 2018 (Figure 1.2). The state, and its largest city, Phoenix, have had strong production rates and low regulatory barriers relative to other western states, contributing to lower median home prices and rental rates. The low regulatory environment and high rate of building exposes the state to large housing bubble risks, but permitting data indicates a slower overall production of housing in the wake of the 2008 recession. Though recent trends indicate rising values, the state is likely to maintain current production levels in light of possible geographic constraints and to avoid risking another mortgage crisis.

## CALIFORNIA

The state of California recorded a population of 39,512,223 as of 2019, about a 14% increase in population since 2000 and approximately 1% less than the national growth rate (FRED). Despite maintaining a similar growth rate to the national average, California's median home price is around $578,000 as of March 2020, and roughly 57% higher than the national median home value, according to the ZHV Index. As of January 2020, California's median rental rate was $2,657, or 40% higher than the national median (ZRI, 2020). The high price of living and middling growth rate of California with respect to surrounding western states imply that housing supply is relatively inelastic.

Land use laws and policies in California are renowned for their restrictive nature, involving environmental agencies and advocacy groups that have had a strong history of styming development in various housing markets. Perhaps the policy with the longest-lasting effect is Proposition 13 from 1978, which has indirectly affected high prices and low supply in the state. Proposition 13 is a tax provision that benefits long-time homeowners at the expense of everyone else, in that it restricts property tax increases on homes until they have been sold or remodeled, which burdens newly-constructed homes with increased tax rates to offset the loss from existing homes. This tax provision also creates fiscal incentives for municipalities to build commercial properties over residential construction to recoup lost tax revenue from housing, further exacerbating supply deficits according to Bloomberg Analysts Noah Buhayar and Christopher Cannon (Buhayar & Cannon, 2019).

Another large policy-issue in California that creates inelasticity stems from the inception of the California Environmental Quality Act (CEQA), and to a lesser degree, the California Coastal Commission (CCC). Both agencies were created with the goal of preserving the California landscape from excessive environmental harm, but have histories of abuse by local communities looking to prevent further development for personal interests. A study from 2015 by environmental and land use law firm Holland & Knight analyzed all CEQA lawsuits between 2010- 2012 and revealed that less than 15% of lawsuits were filed by organizations with a history of environmental advocacy (Hernandez, 2015), and also found that 80% of lawsuits were filed against infill development, which is typically considered more environmentally-friendly than suburban greenfill sites.

Another report by the California Legislative Analyst's Office in 2016 reported that CEQA appeals delayed projects an average of 2.5 years in California's 10 largest cities (Taylor, 2016). Various other news sources have cited the abuse of CEQA from other politically-motivated groups from anti-abortion activists to labor unions. The CCC also has strong political power over development in cities like San Diego, Los Angeles, and the Bay Area, where many of the metro regions are centered close to the coast. Most land along the coast is not zoned for infill development, further exacerbating housing supply issues in critical locations.

**FIGURE 3.1**
**TOTAL PERMITS 1980 - 2018**

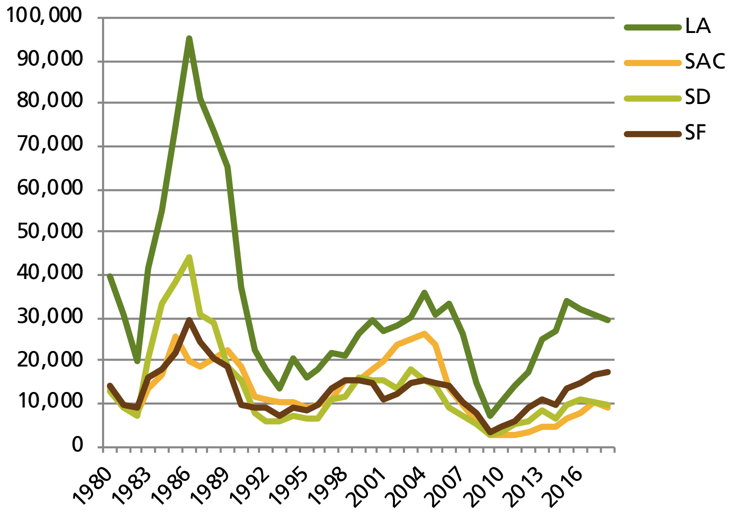



Figure 3.1 displays permitting levels over time from 1980 - 2018 in California's four largest markets: Los Angeles, Sacramento, San Diego, and San Francisco/ Bay Area. Between the years 2000 - 2018, these four large markets have only produced 50 - 75% of the housing produced between 1980 - 1999, essentially building less as the population grows. Permitting trends seem to be both direct and indirect effects from these policies, indicating strong barriers to development as housing production between 2000 - 2018 slowed to an average of 17% of total inventory among the four markets. After analyzing municipal barriers and unit-type production in relation to rising home prices, this study will assess current state legislation and the possible impacts it will have on production and prices.

## LOS ANGELES MSA

The Los Angeles MSA, which includes Los Angeles and Orange Counties, contains a little over 13.2 million residents, about one-third of the entire population of California. Despite its population wealth, the LA Basin has only seen an aggregate growth rate of 2.5% from 2010- 2019, and an average year-over-year growth rate of 0.32% from 2000- 2019, one of the lowest rates of metro regions in this study (FRED). Average median home price between LA and Orange Counties is around $700,000; Los Angeles County at $617,300 and Orange County at $828,000, 227% and 304% of the national median (NAR). Median rental rates ranged between $2,800 - $3,100 between the two counties (ZRI).

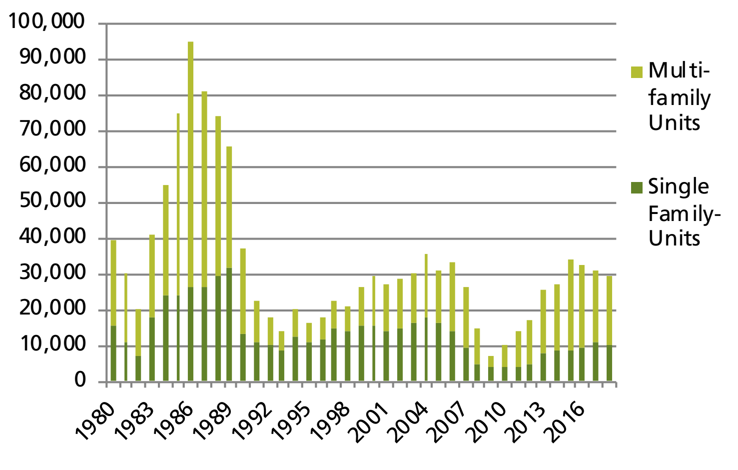
## SUPPLY CONSTRAINTS & PRODUCTION

According to Urban Footprint, an urban market data provider, and by way of Bloomberg, three quarters of residential land in Los Angeles is restricted to single-family zoning (Buhayar & Cannon, 2019). Most supply constraints in the Los Angeles MSA are a result of extensive, single-family residential zoning, and even as much as half to three-quarters of the land in the state is zoned only for single-family housing, according to UC Berkeley's Terner Center of Housing via the L.A. Times (Dillon, 2019). The 2019 NAA survey cites the biggest constraint to building in the L.A. HMA as being land supply, followed by construction costs and affordable housing requirements (NAA, 2019).

Despite median home prices and rents nearly double the national median, and possibly in response to it, the Los Angeles HMA is starting to see increased production, especially in multi-family housing as the area turns to infill development to accommodate a growing demand in a limited space (Figure 3.2). However, construction permit data in Figure 3.2 demonstrates that production numbers still remain far below annual production rates from the 1980's. Despite slowing demand and population growth since the 1980's and 1990's, the population has steadily been rising at a year-over-year rate 0.32%, while the median home price has been growing at a year-over-year rate of 5.45%, from 2000 - 2019 (FRED). Median prices outpacing demand growth at this rate indicate that slow, but steady annual demand of 32 basis points is being met with an annual price increase of 545 basis points, which would further imply a shortage in available supply of housing.

However, the percentage of housing production in multi-family units has gone from just under half the total annual production in 2010 to 66% of total production in 2018, indicating that the L.A. HMA is responding to supply constraints with greater density (HUD). Additionally, single-family unit construction permits only saw

**FIGURE 3.2**
**PERMITS BY UNIT TYPE, LA**



two years between 1980 and 1999 that produced less than 10,000 permits, while the period between 2006 - 2017 saw no annual production rates of single-family units over 10,000, reflecting geographical constraints on some level preventing further greenfill development.

The recent increase in applications for single-family permits can possibly be attributed to the State legislation reducing restrictions on utility-connection fees and other barriers against building smaller, secondary backyard homes, known as Additional Dwelling Units (ADU) hoping to infill in the expansive single-family residential neighborhoods in the L.A. HMA. According to the L.A. Times, the city has seen abou 13,300 applications to build ADU's since 2017 (Dillon, 2019).

### SACRAMENTO MSA

The Sacramento MSA includes seven counties; El Dorado, Placer, Sacramento, and Yolo Counties make up the Sacramento-Roseville-Folsom CMSA, while Yuba, Sutter, and Nevada Counties make up the peripheral areas of the metropolitan statistical area. The MSA contains 2,215,770 residents and approximately a 6% share of the total state population. The Sacramento metro has seen an 8.78% rate of growth in population from 2011- 2019, and has averaged a year-over-year growth rate of 1.35% from 2000 - 2019. Median home prices as of Q4 of 2019 were $385,000, 140% of the national median (NAR). Median rental rates as of 2020 were at $1,842, 15% higher than the national median (ZRI, 2020).

### SUPPLY CONSTRAINTS & PRODUCTION

The Sacramento metro region is affected by many of the same elements that affect other California metro regions, in that it suffers from land constraints within urban boundaries and a high proportion of single-family homes relative to the population. Many of the causes of Sacramento's rising housing prices are similar to that of many metro regions in that it is still recovering from a housing deficit after the recession of 2008. As the economy began to recover, demand for homes caused the median home price in Sacramento to increase 45% from 2012 to 2013 from a low of $149,250 in 2012, according to a housing review from the City of Sacramento (2013). Otherwise, perhaps the most prominent policy constraints include fees to incentivize affordable housing. Chapter 15.40 of West Sacramento's municipal code contains inclusionary zoning, charging fees of $6,476 per unit in lieu of providing inclusionary housing. Section 22.35.050 of the Sacramento County Code charges a fee of $2.92 per square foot of each market-rate unit provided, forcing the private sector to subsidize affordable housing in the region.

**FIGURE 3.3**
**PERMITS BY UNIT TYPE, SAC**

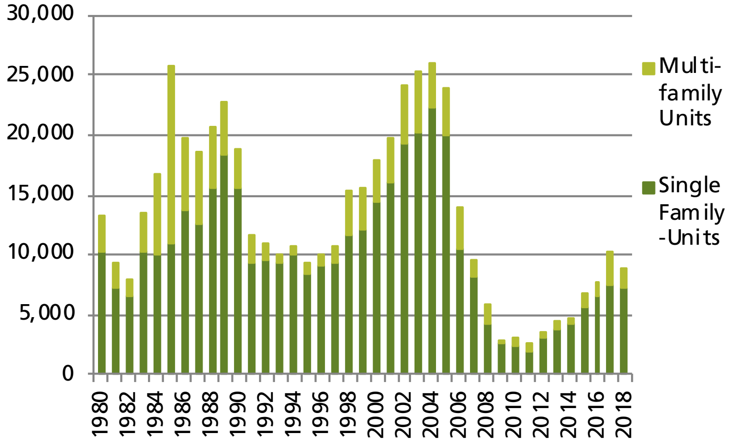



**FIGURE 3.4**
**PERMITS BY UNIT TYPE, SD**

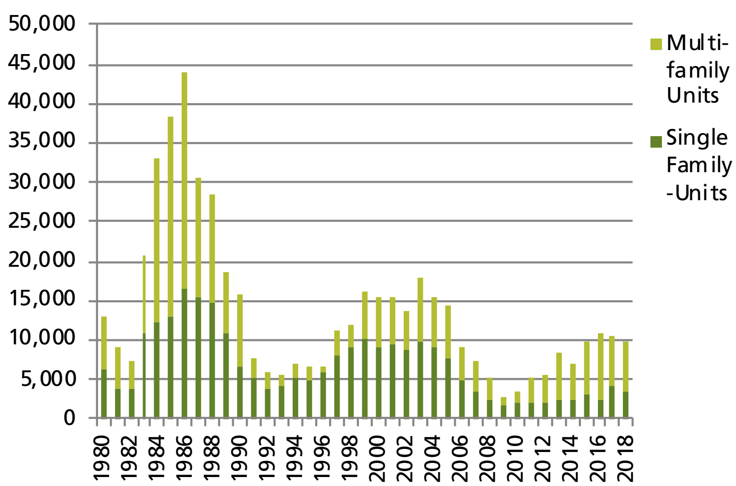



Figure 3.3 displays permitting by unit-type in the Sacramento MSA, indicating that the market strongly favors single-family homes in the area, with the largest share of production of multi-family homes reaching 33% in 1987 (HUD). While Sacramento has been largely building single-family homes, it is clear that permits for multi-family homes have decreased in recent years, potentially due to increased fees for the affordable housing fund set up by the county. The numbers from HUD also suggest a weakness to housing recessions in the Sacramento market, as it saw huge spikes in production before the recession in the early 90's as well as the recession of 2008.

## SAN DIEGO MSA

The San Diego MSA is completely encompassed in San Diego County, and recorded a population of 3,338,330, an 8% share of the state-wide population. The San Diego market saw a population growth rate of 6.41% from 2011- 2019, and averaged a year-over-year growth rate 0.84% from 2000 - 2019, seeing similar trends as the Los Angeles market, though with slightly stronger demand. Median home prices have reached $655,000 as of Q4 of 2019, 241% of the national median (NAR). Rental rates were just over $2,800 as of 2020, 75% higher than the national median rental rate (ZRI).

## SUPPLY CONSTRAINTS & PRODUCTION

Many of the supply constraints in the San Diego area revolve around a variety of factors, but mostly due to the land development code and the airport land use compatibility plan. The San Diego metro is ringed with 16 naval and military installations, in addition to San Diego International Airport. The proximity of the airport to San Diego's downtown, along with topographical constraints, have limited height and density in key neighborhood areas close to the central city core, according to the City of San Diego's Housing Element (2010). Additionally, the majority of these neighborhoods contain planned development covenants that restrict changes to the area, which has forced much of the development outward rather than upward.

Strong suburban development from the late 90's to the years before the recession of 2008 made up, on average,  64% of total development (1996-2006) with the maximum share at 85% ('96) and the minimum share at 52% ('06) (HUD). Figure 3.4 demonstrates similar numbers in single-family production throughout the 1980's, but these numbers are offset by a greater share of production going toward multi-family units. It isn't until about 2011 that the San Diego market sees multi-family units make up the majority share of housing production, although the overall numbers have shrunk considerably from earlier years, as we have seen as the common trend in most western markets. The San Diego HMA produced 18% of the total housing stock from 2000 - 2018, which matched with an 18% increase in total population during the same period (FRED). However, the Case-Shiller indices report that the San Diego market had the 3rd highest year-over-year growth rate in median home value at 4.98%, indicating that matching rate of production with population increase is only maintaining current housing deficit levels. Indeed, the 2019 NAA survey indicated that the main barriers to production in San Diego were land supply, environmental restrictions, community involvement, and construction costs.

### SAN FRANCISCO MSA

The San Francisco MSA consists of Alameda, Contra Costa, Marin, San Francisco, and San Mateo Counties, recorded a population of 4,729,484, and a 12% share of the state-wide population. The San Francisco MSA has seen its population grow 7.65% from 2011 - 2019, and has an average year-over-year growth rate of 0.67% (FRED). The MSA includes San Francisco, Oakland, and other parts of the northern bay area, and has by far the highest median home price in this study at $990,000, 364% of the national median, and actually down since Q2 of 2019 from 1.05 million (NAR). Median rental rates as of March 2020 were around $4,312, about 270% higher than the national median (ZRI). Only Santa Clara County, which compromises the southwestern bay area, recorded higher median home prices in Q4 of 2019, at $1,246,000. The Bay Area has attempted to respond to these prices with various housing policies and increased density production.

### SUPPLY CONSTRAINTS & PRODUCTION

The Bay Area has seen prices fall from the first half of 2019 to the second half of 2019, though it is unclear whether this reflects slowing demand because of unattainable prices or an efficient supply increase of denser housing. The effects of rising prices in the San Francisco MSA are not limited to housing production, but also various municipal measures that have limited growth in the past. Proposition M was approved by voters in 1986, declaring that developers cannot build more than 875,000 square feet of office space within a 12-month period (Smith-Tenta, 2020).

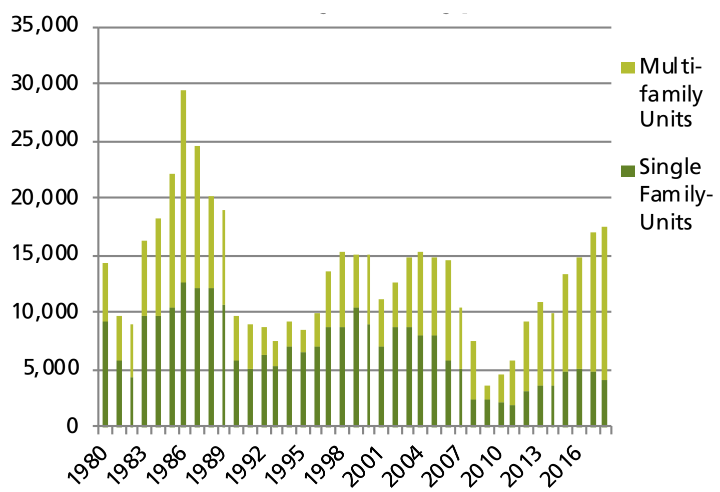
Anti-development measures have continued into the 21st century, with recent office development regulations now affecting the housing market. The recent approval of Proposition E ties the amount of developable office space to the city's affordable housing goals, capping office development in order to incentivize affordable housing production. According to Costar analysts, 2,042 units of affordable housing would need to be produced in order to allow 875,000 square feet of office space (Smith-Tenta, 2020).

Proposition D, which passed on March 3rd, 2020, sought to tax landlords on vacant storefronts, with the intent on providing support to small businesses. The measure seeks to block landlords from removing small and medium-sized retailers, and resulting tax revenues would go to a fund to help small businesses. San Francisco has also recently altered their zoning to mandate mixed-use in core-city areas, but real estate analysts suggest this measure might disincentivize mixed-use production if landlords risk taxes on vacancies in addition to the lost income (PYMNTS, 2020).

In addition to rent control and inclusionary zoning, these measures introduced by the municipal government involve altering the equilibrium of supply and demand in the free market, and may see negative effects in their policy if development is not incentivized to build in the region. Restricting certain types of development to encourage others may result in an unequally-tighter supply of space, exacerbating prices. The 2019 NAA survey also suggests that in addition to political complexity, construction costs, land supply, affordable housing requirements, approval timelines, infrastructure constraints, environmental restrictions, and community involvement have all contributed to barriers in apartment construction.

The San Francisco MSA seems to have also met its threshold for single-family homes, as Figure 3.5 illustrates. From 1980 to 2007, single-family unit construction permits ranged between a minimum of 5,000 to 10,000 permits. Over a 30-year period (1990-2019), the San Francisco HMA has seen a year-over-year growth rate in median home price of 4.44%, and a rate of 5.03% from 2000 to the present, indicating that strong, single-family home production has had effects on land supply, and possibly, higher prices, indirectly (FRED). While the graph also demonstrates a high production of multi-family units, The city of San Francisco contains 4,972 people per square mile, according to 2018 estimates by the U.S. census. The high level of density on a limited land supply and high levels of single-family production imply indirect effects on increased housing prices. Local, anti-large-scale-development policy as an attempt to mitigate higher prices in the region may also be contributing to lack of production and indirectly affecting prices, though there is no true objectively analytical process to measure this. However, 2013-2018 saw higher overall production rates of multi-family construction, making up 66-75% of total annual production share, which may have recently helped to ease rising prices in the region (HUD).

**FIGURE 3.5**
**PERMITS BY UNIT TYPE, SF**



State-wide policies on the table for the next legislative cycle in California will likely include a number of altered bills introduced in their last session, many of which were tabled as municipal governments were reluctant to adopt aggressive, state-level housing policies that may not account for heterogeneous factors within each market. The UC Berkeley Terner Center for Housing has archived many of the recent updates in California legislation, and the following information is a courtesy of their 2019 California Housing Legislation Roundup.

Perhaps the bill that would have had the biggest effects on California's housing production was SB 50, proposed by State Senator Scott Weiner and backed by Governor Gavin Newsom.

SB 50 was a proposal to upzone near transit centers and allow the construction of four-plexes in single-family, residential neighborhoods, but so far has been tabled three times because many local politicians fear it removes too much control from local government. Advocates for affordable housing were also against it, for fear that the bill may spur gentrification and displacement (Dillon, 2020). The bill had been amended to include affordable housing components, but still hasn't passed in the Senate.

Other notable bills in the California legislative session of 2019 include AB 1763, which expands density bonuses for 100% affordable housing projects, especially transit-oriented-development projects. AB 1763 passed, as well as AB 68, 881, & 670, which were bills advocating for infill development by eliminating restrictions to ADU development in single-family homes and restricting homeowner's associations from banning ADU development.

SB 330, SB 13, and AB 1483, are all more or less alterations to earlier bills that have helped to reduce impact fees, make the approval process more transparent and organized, and expedite building permit processes.  Lastly, AB 1485 creates more flexibility for Bay Area projects, increasing the median income percentage for IZ requirements. Additionally, funds have been established to bring in revenue for more affordable housing projects.

While many proposed housing bills were stalled in the state legislative session of 2019, incremental changes to encourage infill development have been successful, though will likely not produce the number of units that are necessary to achieve equilibrium in the housing supply, relative to demand. The ADU bills create infill mostly on a voluntary basis, and do not provide large-scale supply immediately. Bills that have created processes to expedite development projects may help California see some increase in production, but many restrictions remain in place; CEQA requirements, Inclusionary Zoning, and Rent Control tend to offset some of the other deferrals in permitting, according to the Building Industry Association of Southern California, the Los Angeles/Ventura chapter in their 2019 Emergency Housing Response Kit. The report argues that all types of development needs to be encouraged at this stage, and not just transit-oriented development and affordable housing (BIASC, 2019).

As a result, housing production may see some increase in production, but unless state laws can align more closely with municipal interests, or if municipal governments took more aggressive action, it is unlikely that California will see massive increases in housing production if restrictions continue to deter developers. As the charts demonstrated, building production in the 21st century hasn't reached high numbers seen in the 1980's, indicating earlier levels of development and demand than a state like Arizona, which saw much higher rates of construction from the mid-90's to the mid-00's. California's historical housing production data provides some insight into the long-term fallout of certain housing policy choices.

## COLORADO

The state of Colorado recorded a population of 5,758,736 as of 2019, about a 25% increase in population since 2000 and approximately 10% higher than the national growth rate (FRED). The steady growth rate in Colorado has seen prices rise with demand, with the state's median home price reaching to about $403,000 as of March 2020, or 38% above the national median (ZHVI, 2020). Median rental rates are $2,012 as of 2020, seeing a particularly high increase between 2014 and 2016 (ZRI, 2020). The current median rate is 21% higher than the national median. Despite the western half of the state being occupied by a large portion of the Rocky Mountain Range, the state has little geographic barriers to development to the east, indicating inelastic supply and possibly policy constraints on development.

While the 2019 legislative session focused largely on Tenant/Landlord Law which will be covered in a specialized study on the subject, the 2014 state legislative session saw a few bills enacted and a few stalled regarding valuation, construction, and affordable housing components. SB 14-080 loosens restrictions on appraisal credential requirements, which could possibly reduce costs for developers, but also exposes developers to risk of improperly valued properties. HB 14-1165, if not postponed indefinitely, would have required 95% of all construction costs due on the date of invoicing, with exceptions to projects under $150,000, single-family home construction, buildings with 4 or fewer residential units, or projects with public entities. This bill would have reduced flexibility to large-scale developers and increased incentive to build single-family homes.

With regards to the affordable housing component, SB 14-216 and 14-219 were both stalled, and would have required the Colorado Department of Housing (DOH) to design a proposal for statewide incentives for affordable housing development and assemble an affordable housing analysis as well. The trends in statewide legislation demonstrates the state's unwillingness to address affordability as well as showing limited interest in increasing housing production.

The 2016 legislative session saw minor alterations in zoning in various municipalities that allow the development of tiny homes, and the 2017 legislative session introduced more affordable housing options, with the state electing to largely fund assistance through housing vouchers, which typically give lower-income people more mobility than in-kind assistance to housing. SB 17-021 approved the housing voucher program, while HB 17-1309 and SB 17-085 were attempts to increase fees to finance a statewide affordable housing fund, both of which were postponed. Despite anti-growth sentiment in many Colorado, communities, legislation points toward a developer-friendly environment.

### DENVER MSA

The Denver MSA includes Adams, Arapahoe, Broomfield, Clear Creek, Denver, Douglas, Elbert, Gilpin, Jefferson, and Park Counties, and recorded a population of 2,967,239, approximately half of the statewide population share. The population has grown at a cumulative rate of 14% from 2011 - 2019, and has seen an average year-over-year growth rate of 1.52% from 2000 - 2019 (FRED). Median home prices have grown 4.14% year-over-year from 2000 - 2019, and 5.29% since 1990 (FRED). As of 2019, median home prices were $458,000 as of Q4 of 2019, 168% of the national median (NAR). Median rental rates were $2,176 as of March 2020, approximately 137% of the national median (ZRI).

**FIGURE 4.1**
**TOTAL PERMITS DENVER MSA**

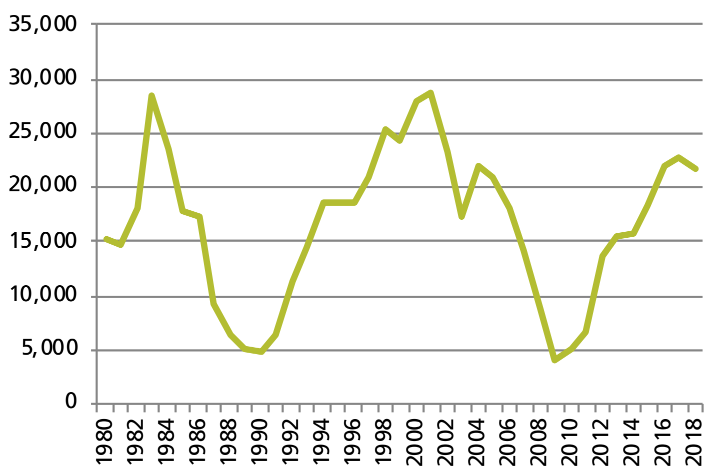
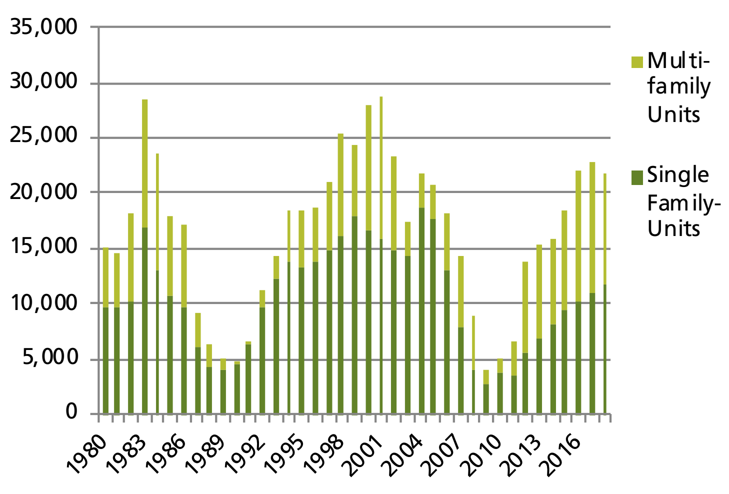



**FIGURE 4.2**
**PERMITS BY UNIT TYPE, DEN**




## SUPPLY CONSTRAINTS & PRODUCTION

The Denver Metro has become increasingly anti-growth, despite seeing strong population gains in recent years. Most notably, the City of Lakewood passed Question 200 in 2019, which limits housing growth in the city to 1% annually; this would restrict building to approximately 700 units per year, according to the Denver Post (Aguilar, 2019). Boulder has a similar measure, and the city of Golden has had a growth cap since 1995. This pattern almost escalated into a proposed ballot measure called Initiative 122, which would have allowed for voter-approved limits on housing growth, for all municipalities, but was recently shut down (Karlik, 2019).

Other issues involve the various metro districts within the Denver HMA, which are agencies designed to finance public improvements that are not otherwise being offered. These metro districts often finance public improvements through increased property taxes, according to the Colorado Association of Homebuilders (2019). Developers in the region tend to use the bonds to finance these improvements for large-scale planned communities, and as a result, current homeowners often receive property tax increases to fund new developments. This might explain anti-growth sentiment in many Denver neighborhoods.

The Denver HMA has seen two major waves of housing production similar to other western markets over the last 40 years-- one in the 1980's, and one from the mid-90's to the mid-00's before the 2008 recession, as evident from figure 4.1. These two waves saw a 50% or larger share of single-family homes (figure 4.2), which may be exacerbating the overall developable land supply, which is noted by the NAA as being the chief barrier to housing production according to their survey (2019). In addition to the growth limits imposed by satellite cities, the year-over-year median home price growth of 4-5% from 1990-2019 seems to reflect these constraints, as median home values in Denver are the 3rd fastest in growth over a 30-year period and tied for 8th in price growth with the Tampa market over a 20-year period out of the 20 markets included in the Case-Shiller indices (FRED).

Although it is tied with the Tampa market in price growth, median prices in Tampa are $248,000, nearly 84% lower than median prices in the Denver HMA. The similar growth rates yet different median values imply barriers to production in housing in Denver, likely due to anti-growth sentiment in the community and extreme caps on housing growth ordained by many of the satellite communities in the Denver market. Despite this, multi-family unit structures have increased in production share post-recession, and might indicate a response to available land by building upward. However, increased building heights typically require higher income streams to subsidize the construction costs, which were listed as the second largest barrier in the NAA survey, which might be responsible for increased rent prices as well.

## NEVADA

The state of Nevada recorded a population of 3,080,156 as of 2019, about a 34% rate of growth since 2000 and roughly 20% higher than the national growth rate (FRED). Nevada, along with Arizona, was one of the fastest growing states in the beginning of the 21st century prior to the great recession of 2007. Despite a minor slow down in the ensuing years, the state has seen a quick economic recovery. Median home rates in Nevada have climbed to $305,000 as of 2020, surpassing the national median growth rate in 2013 and quickening its pace since. Though the median home price is 19% higher than the national median, the median rental rates in the state are approximately $30 lower than the national median, around $1,560 (ZHVI, ZRI, 2020).

Nevada, like Arizona, is a state that has seen strong growth in recent years as other western markets have priced out many residents from their respective housing markets. Markets like Las Vegas and Reno have provided affordable options, and the state of Nevada is typically known for being a business-friendly environment. Gambling and tourism are top employers, but are being eclipsed in this respect by large technology firms that have located in the state, presumably also seeking cheaper land for business extensions. Additionally, the state of Nevada has no income tax, which puts more money in people's pockets. Perhaps the most notable legislation regarding housing in the state of Nevada occurred during the most recent legislative session in 2019.

Critical bills include SB 448, which essentially builds off of the state's tax-credit fund for affordable housing, allocating more tax credits from state funds to increase supply of affordable housing units. One housing bill that did not pass was SB 398, which would have deferred housing policy to local governments. Don Tatro, head of the Northern Nevada Builders Association backed the opposition to SB 398, worrying, along with others in opposition, that the passage of the bill might encourage laws like rent control and inclusionary zoning, which essentially require developers to subsidize affordable housing (DeHaven, 2019). Lastly, SB 103 passed, which allows local governments to reduce fees charged to affordable housing developers.

The Nevada state government has responded largely to affordability issues in the state with developer-based incentives, reducing fees and allocating tax credits rather than forcing developers to subsidize housing with rent control and inclusionary zoning policies. These types of developer-incentive policies tend to increase more production overall, mitigating rising prices to short-term periods of demand increase or other external factors like interest rates and incomes. However, unless legislation addresses density incentives, the market will dictate the types of units being produced, and many developers may find that single-family homes, while cheaper to build, will drive land costs up in the long term as developable land dwindles.

### LAS VEGAS MSA

The Las Vegas MSA is located entirely in Clark County, Nevada, and is typically known as the Las Vegas Valley. The Las Vegas metro recorded a population of 2,266,715 as of 2019, and accounts for a 74% share of the statewide population. The population has grown at a cumulative rate of 15.54% from 2011- 2019, and has seen a strong, average year-over-year growth rate of 2.46% from 2000 - 2019 (FRED). Median home prices as of Q4 of 2019 were $309,300, 114% of the nationwide median (NAR). Median rental rates in the Las Vegas metro were around $1,500 as of January 2020, 94% of the national median (ZRI). Despite strong population growth, the Las Vegas HMA has only seen a year-over-year median growth rate of 3.42%, ranking it 13th in median price growth out of the 20-city index, implying strong production numbers.

**FIGURE 5.1**
**TOTAL PERMITS LAS VEGAS MSA**

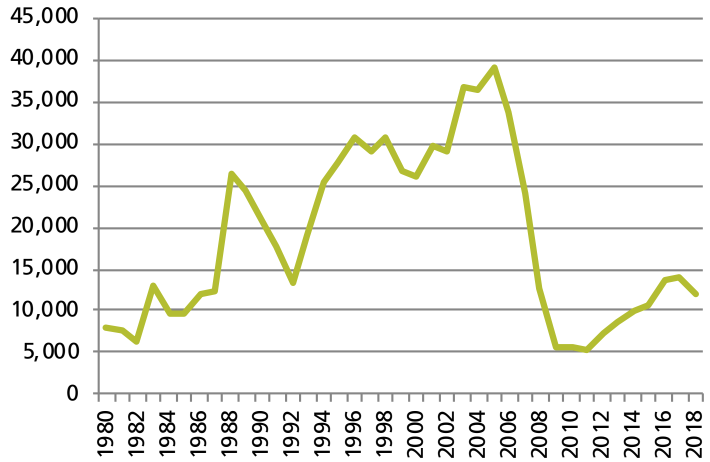
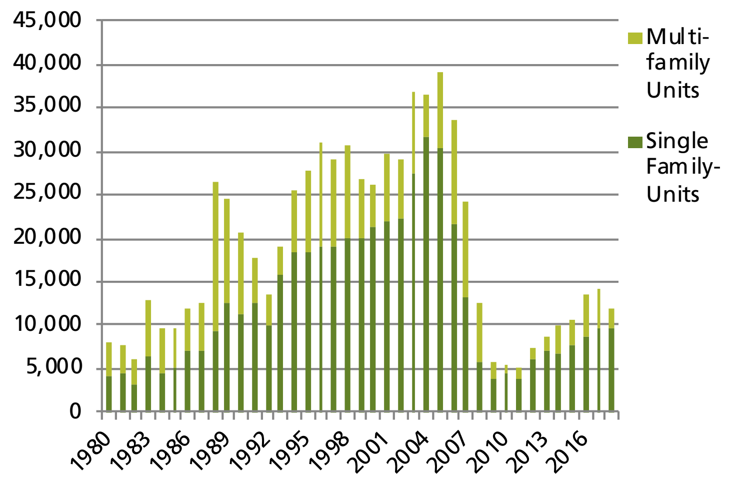



**FIGURE 5.2**
**PERMITS BY UNIT TYPE LV**




## SUPPLY CONSTRAINTS & PRODUCTION

Las Vegas was one of the many HMA's that was hit hard from the 2008 recession due to a strong production of housing in the years leading up to it. Markets like Las Vegas tend to be prone to overbuilding when market demands are high, but it also means that they tend to recover quickly because of elastic supply regulations to housing production. Despite the senate bills that increased incentives for developers to build by transferring the housing subsidies to local municipalities statewide, AB 421 passed in the 2019 legislative session, which has the capacity for increasing insurance costs for developers because the bill increases buyer's power with regards to litigation in construction defects. While the previous period for filing a claim was 6 years, the bill increased the period to 10 years, which may have an effect on costs for developers and subsequently will increase risk for developers and may lower overall production.

Production numbers in the Las Vegas HMA indicate that the building industry has been favoring single-family unit production, which has made up no less than a 50% share of total production since 1980, with the exception of a few years between 1982 - 1984 and 2008 (figure 5.1 & 5.2). However, production rates between the mid-90's and mid-00's increased dramatically, exceeding peak production numbers from the 1980's by 38%; this contrasts with other western markets in California for instance, where production numbers have yet to exceed numbers from the 1980's in the four comparable markets of this study, with the exception of Sacramento (HUD). Like Phoenix and other high-production markets during the early 2000's, the Las Vegas HMA is still recovering from the recession, but has seen increased production, exceeding 10,000 permits in 2015 for the first time since 2009 (HUD). Prior to 2009, the last time Las Vegas saw annual permits below 10,000 was 1985. Strong production increases can be expected as long as market conditions remain relatively healthy, as LV continues to maintain an elastic supply of housing in response to demand shocks.

## RENO MSA

The Reno MSA consists of Washoe and Storey Counties in Northern Nevada, and recorded a population of 475,642 as of 2019, a 15.4% share of the state population. The Reno MSA population has increased 11.16% from 2011 - 2019, and has had a year-over-year average growth rate of 1.62% from 2000 - 2019 (FRED). Median home prices in the Reno HMA reached $398,100 in the fourth quarter of 2019, about 146% higher than the national median, and nearly $100,000 more than homes in the Las Vegas HMA, despite having about one-fifth of the population (NAR). Median rental rates have reached $1,875 as of January 2020, nearly 18% higher than the nationwide median (ZRI).

## SUPPLY CONSTRAINTS & PRODUCTION

Rising home values have become prevalent across the region due to a variety of factors, including developable land constraints, costly permitting fees, poor infrastructure, and construction labor shortages, leading to higher construction costs (Hidalgo, 2020). According to Don Tatro, the CEO of the Builder's Association of Northern Nevada, luxury housing developments are the main source of permit numbers in single-family units, as sales housing is seeing a similar problem with financing; most production can only finance the costs with higher sales prices (Hidalgo, 2020). Mayor Schieve blames lack of infrastructure investment on statewide policies to attract new business that didn't account for city expansion to accommodate growth, resulting in development capacity that has been stretched thin (Mueller, 2020). However, the Mayor has initiated permit fee deferrals and sewer connection fee deferrals in order to incentivize more development as of 2020, in order to create a more elastic supply of housing.

The Reno MSA has seen strong growth in the housing market over the course of the decade. According to data provided by the Zillow online real estate database, prices for homes have doubled since 2011, rising to approximately $400,000 in Reno and Sparks, and 46% above the national average (ZHVI). Economic growth has both resulted in and been a factor of the rising population in the Reno HMA, however figure 5.3 suggests that it hasn't quite rebounded to pre-recession levels-- Nevada was hit especially hard because of a strong increase in the production of housing prior to 2007, however has been steadily recovering since 2010. HUD data from 2018 suggests that sales units under construction make up a little less than 20% of the estimated demand, while rental units under construction make up 74% of demand, indicating the shift in demand from home-purchasing to renting, likely due to rising home values in the region (HUD).

**FIGURE 5.4**
**TOTAL PERMITS, RENO MSA**

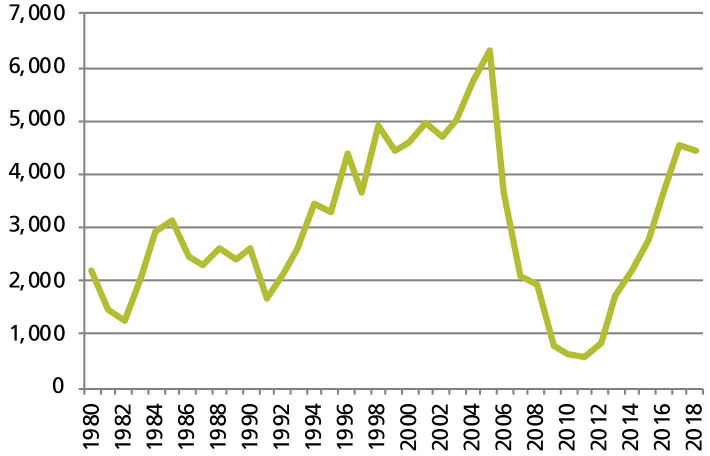



**FIGURE 5.5**
**PERMITS BY UNIT TYPE RENO**

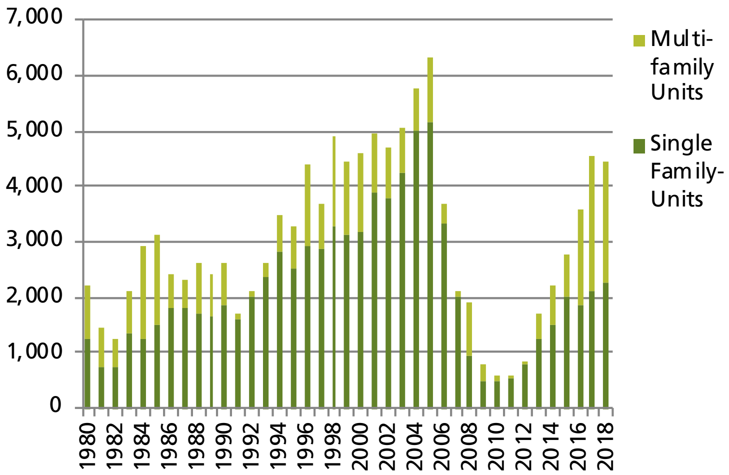



Figure 5.4 outlines the trend of building permits for multi and single-unit residential property types in Washoe County, indicating a growing demand for multi-family units over time due to rising home prices beyond levels pre-recession. However, HUD market reports from 2018 record a large percentage of single-family homes being used as rental units, about 37%, so the contraction of single-family building permits indicates increasing land prices rather than sales prices; the graph demonstrates that multi-family housing is making up a larger share of production, about 50% since 2016 as cheap single-family units become increasingly difficult to pencil on a fixed supply of land with proper infrastructure (HUD). Year-over year production rates for Washoe County record a 14% increase in production from the end of 2018 to the end of 2019. This was a large margin of increase in issued permits compared to 2018, which saw a 3% decrease in production from the calendar year 2017 (HUD, 2020). Nationally, the U.S has averaged a 5% year-over-year rate of housing production from the end of 2017 to the end of 2019, as many in-demand metros struggle to increase their housing stock on pace with the demand in their respective HMAs (Trading Economics Database, 2020).

The volatility of production in the Reno HMA suggests numerous factors at play, namely fluctuations in housing prices and rents as the local government continues to modify regulations and fiscal incentives for building. Rising construction costs and a tight labor pool that have not quite recovered to the numbers before the great recession have also continued to create strain on prices and housing development, exacerbating a tightening supply as the local economy continues to expand.

## OREGON

The state of Oregon recorded a population of 4,217,737, about a 19% rate of growth since 2000 and about 4% higher than the national growth rate (FRED). Oregon maintains a steadily increasing median value, capping around $372,000 as of March 2020 as it continues to absorb migrants from surrounding states, maintaining a median price around 33% higher than the national median, only a slight increase from 2010 (ZHVI, 2020). The state's rental rates rapidly increased as it began to break away from the national median in 2014, sitting around $1,800 as of 2020, a 25% increase in 6 years (ZRI, 2020). Since then, the state issued the first statewide rent control law in 2019 in response to the soaring rental rates.

The state of Oregon has seen immense regulatory increases since the 1980's and 1990's, with the last decade or so seeing rent control, inclusionary zoning requirements, and the elimination of single-family residential zoning. SB 608 was the historic statewide rent control bill, signed into law in 2019 prohibiting rental increases by more than 7% in a given year, plus inflation. Oregon also enacted HB 2001, effective August 2019, which removes residential, single-family home zoning (R1) from local zoning codes, allowing duplexes up to four-plexes on one lot in cities with a population of 25,000 or more. Additionally, HB 2700 was not enacted, which would have extended the tax credit payment period another 10 years. HB 3349-A was also not enacted in 2019, which would have removed mortgage interest deductions from taxes on properties other than principal residences. Perhaps one of the biggest bills passed was SB 1533 in 2016, which allowed municipalities to enact inclusionary zoning regulations, and also ended a statewide ban on construction excise taxes.

While the state of Oregon battles affordability issues with housing, the 2016 and 2019 legislative sessions introduced a fair amount of proposals aimed at addressing these issues. Certain bills, such as HB 2001 create more supply elasticity in the state, allowing increased density and construction, while bills like SB 1533 offset this elasticity by discouraging development through reduced feasibility of projects by decreasing rental revenues and increasing taxes. Many other bills were passed on the topic of affordable housing pilot programs and tenant protections. Oregon's rent control law, though restrictive, is actually fairly liberal, since 7% is actually quite a large margin of increase compared to most rental increases, which typically just increase with inflation. According to Costar Analytics, Annual rent growth moderated to about 2.5%, both in 2019 and in 2018, performing far below the rent cap passed at the beginning of the year. Areas in Portland with the lowest rent growth include all three neighborhoods with the strongest construction pipelines, including Northwest, Southeast and downtown Portland. (Anderer, 2020).

Another impediment to increased supply in the state involves the urban growth boundaries set on cities to preserve farmland and natural resources. Although the intent is to increase infill development within urban areas, often times, the market can't deliver projects that generate revenues profitable enough to build in areas that cities designate for infill. Additionally, it creates inequities in land values along the boundary and leads to speculative development leading up to years that the boundary is scheduled to expand. While the state is looking to address housing issues, many policies address demand-side issues while little, with the exception of tax credits and HB 2001, address supply.

## PORTLAND MSA

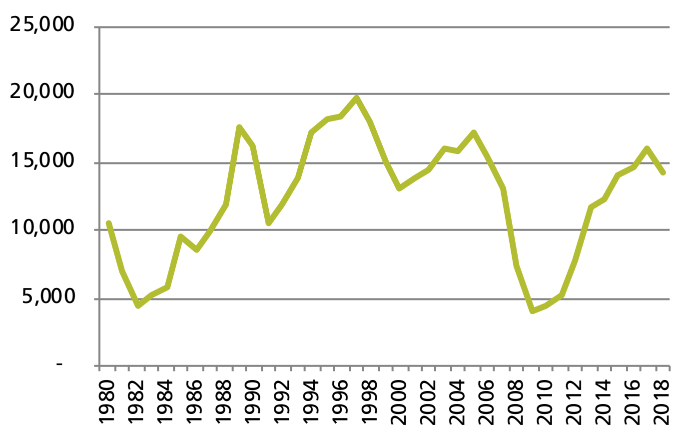
The Portland MSA includes 5 counties from Oregon and two in Washington across the river to the north, and recorded a population of 2,492,412 as of 2019, a 59% share of the state population. The Portland Metro population has grown at a rate of 10.15% between 2011-2019, and has seen an average year-over-year growth rate of 1.27% from 2000 - 2019 (FRED). The median home price was $410,900 in the fourth quarter of 2019, 151% of the national median home price (NAR). Median rental rates have risen to $2,049 as of January 2020, a 16% increase since the fourth quarter of 2014 and 129% of the national median rental rate (ZRI).

## SUPPLY CONSTRAINTS & PRODUCTION

Housing production in the Portland metro is fairly inelastic compared to other markets, which is a result of rapid population growth in the last 20 years and policy responses to the correlating rise in prices. Much of Portland's housing policy rests on the urban growth boundary in addition to recent statewide policies such as inclusionary zoning and rent control. Many local variations of these policies make it even more difficult to produce housing and include extra regulations that slow down the permitting process such as bird-safe window glazing which add extra costs on development and a strong, historical preservation commission which has had political power over design and size of new construction when the site is within the realm of a historical landmark (Tenny, 2020). As of 2020, supply-side housing policies are limited to tax credits for affordable housing development and FAR bonuses to increase density, but have had little overall effect on production rates, which actually decreased by 12% from 2017 to 2018. Additionally, the 2019 NAA survey cited land supply constraints as the largest barrier to construction, followed by infrastructure constraints and community involvement.

The Portland metro has a population of roughly 2.5 million people, which is comparatively similar to the Las Vegas MSA, which has a population of about 2.25 million people. Despite this, the Case-Shiller indices indicate that median home prices in Portland are nearly $100,000 dollars more than median home prices in Las Vegas, and additionally, the Portland HMA has seen the highest year-over-year growth in median home price of the entire 20-city index over a 30-year period (1990 - 2019) and the 5th highest year-over-year growth in a 20-year period (2000 - 2019, FRED). Figure 6.1 might explain this effect, which demonstrates that Portland saw a record high of annual housing permits of 19,780 in 1997, while the record high annual permit numbers in Las Vegas were nearly double that at 39,237 in 2005 (HUD). Despite having

**FIGURE 6.1**
**TOTAL PERMITS PORTLAND MSA**



roughly 250,000 more people than the Las Vegas MSA, Portland has produced about 35% of the housing that Las Vegas has produced between 1980 - 2018. Other factors notwithstanding, the Portland metro simply has a smaller stock of housing per resident, which might be contributing to higher prices in the region.

**FIGURE 6.2**
**PERMITS BY UNIT TYPE PDX**

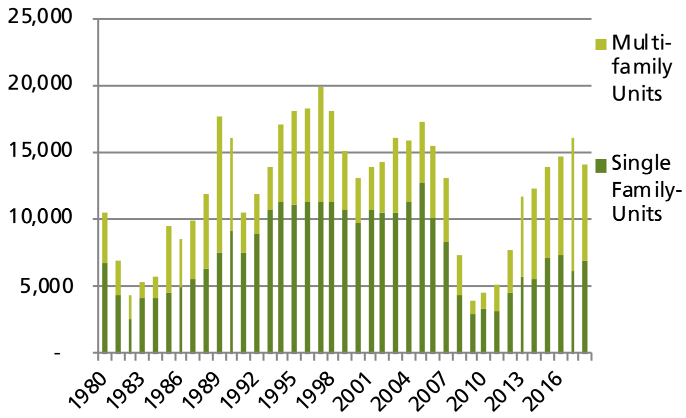



Figure 6.2 displays housing units produced by type, and indicates that the Portland metro, like many western markets, has produced largely single-family homes, with recent increases in multi-family unit production share. While supply got hit hard in 2008 like all the cities in this study, production numbers bounced strongly back in 2013, seeing a surge in multi-family housing shortly after in 2014 and 2015 when rental rates escalated to record highs. Portland's highest median rental rate was in the fourth quarter of 2016, which recorded a rate of $2,067, and has since seen rates drop to lows of $1,900 in between then and the current rate at $2,049 (ZRI). This indicates that the increased supply in response to high rental rates seemed to have alleviated price increases-- temporarily, at the very least.

## WASHINGTON

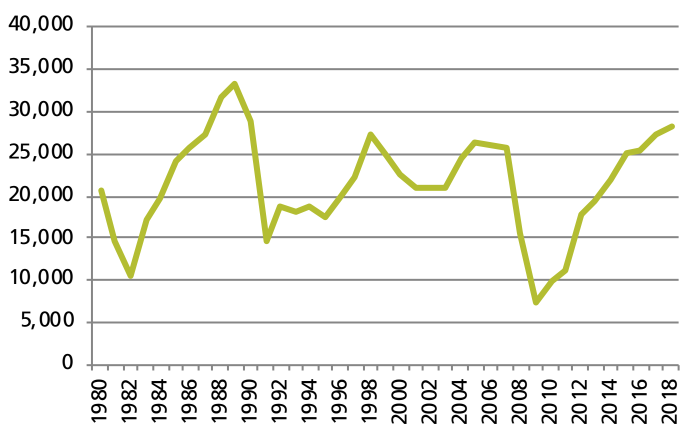
The state of Washington recorded a population of 7,614,893 as of 2019, a 22% increase since 2000 and about 7% higher than the current national growth rate (FRED). Like many of the other western states, Washington has maintained higher median home prices than the national median over the last decade, sitting around $426,000 as of 2020, about 42% higher than the national median (ZVHI, 2020). Median rental rates in Washington have also been high relative to the national median, recording a rate of $1,973 as of 2020 (ZRI, 2020). Also like other western states, the general gap in prices and rents between Washington and the national median has been increasing over the last decade, indicating a diminishing housing stock relative to the demand in the region.

Like Oregon, the state of Washington heavily regulates the housing market through various policies. Perhaps the most notable policy is the State Growth Management Act (GMA) which was adopted by the state in 1990 and acts as a non-geographically-designed urban growth boundary. The GMA requires state and local governments to develop comprehensive plans and implement them through capital investments and development regulations. The act is designed for local governments to comply within a statewide framework while allowing local governments to implement plans and regulations that protect and preserve natural resources. The GMA has had similar effects to California's CEQA in that local communities have used the GMA to enact moratoriums on building in order to prevent the types of development that are deemed undesirable (Clark, 2018).

Aside from the GMA, the 2019 legislative session introduced a suite of bills aimed at tackling housing affordability in the state, focusing specifically on adding more supply, creating more funding opportunities for affordable housing development, and tenant/landlord protections. On the supply side, the state has passed a handful of bills that subsidize developers to incentivize infill. The bills likely to have the largest impact on increased housing production start with HB 2673, which exempts infill development from SEPA (State Environmental Policy Act) review in urban growth areas, that also acts as a similar policy to California's CEQA (Bertolet, 2020). The new bill redefines "infill" to include more development options. Secondly, HB 2630 and SB 6231 passed as well, which extends the 3-year property tax exemption on home improvements to also apply to newly constructed ADU's. The last impactful, supply-side bill to pass the recent legislative session was HB 2343 and SB 6334, which extends density and limits parking requirements around transit hubs (Bertolet, 2020).

Other impactful bills died in either the state senate or house, but bring to light other policies that could be enacted in future sessions. Most notably, HB 2452 and SB 6201, which would have set graduated real estate excise taxes to the lowest rate (1.28%) regardless of the total property value. SB 6364 and SB 6388 would have scaled down impact fees based on house size and prohibit higher impact fees on multi-family homes vs. single-family homes. Other bills sought to relegalize middle-housing on single-family residential zoned areas and add density in other forms, but did not pass.

**FIGURE 7.1**
**TOTAL PERMITS SEATTLE MSA**




## SEATTLE MSA

The Seattle MSA includes King, Snohomish, and Pierce Counties, and recorded a population of 3,979,845 as of 2019, a 52% share of the statewide population. The Seattle metro has seen a cumulative growth rate of 13.58% between 2011- 2019, and has had an average, year-over-year growth rate of 1.34% from 2000 - 2019 (FRED). Median home values were $528,800 as of Q4 of 2019, and is 194% of the national median home price (NAR). Rental rates in the Seattle metro were last recorded at $2,630 as of January 2020, 65% higher than the national median rental rate (ZRI).

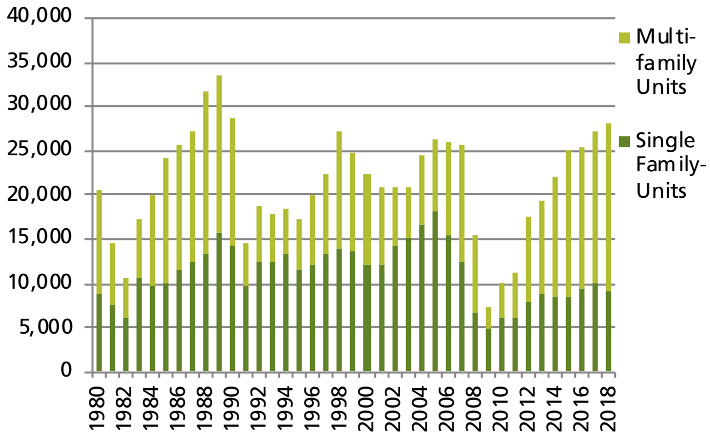
## SUPPLY CONSTRAINTS & PRODUCTION

The Seattle MSA specifically will be worth keeping an eye on as statewide bills take effect, since the metro region has had strong rental increases over the last 20-30 years, despite seeing strong production rates. Local communities have had large impacts on development; as an article sourced from the Master Builder's Association of King and Snohomish Counties outlines, moratoriums are often used in satellite cities to recalibrate growth goals, but are more often used as a tool for communities to hand-pick developments that are considered desirable. These are typically cited under reasons concerning capacity and infrastructure, but do not typically offer solutions in the wake of shutting down production.

The Puget Sound region also has geographical constraints, with ocean on the west end and a mountain range to the east, which has historically been dealt with by way of denser construction. Yet, population demand has tested these limits, as the NAA 2019 survey listed land constraints as the number one barrier to more construction, followed by construction costs and timeline impacts (NAA, 2019). Indeed, Figure 7.1 demonstrates that despite rapidly increasing median home rates, in recent years, the Seattle MSA has reached production rates close to its high of 33,000 permits annually in 1989, receiving just over 28,000 permits in 2018 (HUD).

Production does not seem to be an issue in Seattle, but the increased cost of building density comes with the increased price for units in a high demand area. As mentioned previously, the Seattle HMA grew nearly 15% in the last 10 years, despite heavy regulation and high prices, putting it on an average growth rate with more affordable markets like Phoenix and Las Vegas. Figure 7.2 illustrates the share of housing production in multi-family housing vs. single-family housing, demonstrating an average share of 46% multi-family housing production over a 40-year period, consistently higher than most markets in this study from 1980 - 2018 (HUD). Since

**FIGURE 7.2**
**PERMITS BY UNIT TYPE SEA**




2012, multi-family housing has made up over 50% of total annual production, yet the Case-Shiller indices indicate that Seattle has seen the 3rd highest year-over-year increase in median home price over a 30-year period, and 4th highest over a 20-year period (FRED).

The data seems to indicate that housing prices are both an indirect effect of land availability and housing policy. The Seattle metro has met demand with a large supply of multi-family housing, yet arguably more would be built if there were less regulations in place that allow municipalities to place moratoriums on building for 6-month periods. This regulation is perhaps the most strict, as it allows municipalities to stall all and any construction for the set period, and even allows extensions, if necessary. Recent legislation provides options to subsidize developers by reducing fees and creating affordable housing funds from tax credits rather than forcing developers to subsidize affordable housing through inclusionary zoning, so it may be possible that recent laws could spur even more development in a high-demand market, which in turn might cool prices and rents.

## SOURCES


*Aguilar, John. "Lakewood Struggles with New Growth-Control Law." The Denver Post, 18 Dec. 2019, www.denverpost.com/2019/12/18/lakewood-slow-growth-housing-cap/.*

*Anderer, Emily. "Despite New Regulations, 2019 Indicators Point to Good Year for Portland's Multi-family Sector." Costar News, 23 Mar. 2020, https://product.costar.com/home/news/675144507*

*Andersen, Michael. "5 Reasons Portland's Fourplex Legalization Would Be a Big Deal." Sightline Institute, 16 Jan. 2020, www.sightline.org/2020/01/15/5-reasons-portlands-fourplex-legalization-would-be-a-big-deal/.*

*Andersen, Michael. "Do Portland's Low-Density Zones Need a 'Deeper Affordability' Option?" Sightline Institute, 13 Jan. 2020, www.sightline.org/2020/01/10/do-portlands-low-density-zones-need-a-deeper-affordability-option/.*

*Andersen, Michael. "Straight Talk, Many Angles: Ten Portlanders for Fourplexes." Sightline Institute, 16 Jan. 2020, www.sightline.org/2020/01/16/straight-talk-many-angles-ten-portlanders-for-fourplexes/.*

*Bertolet, Dan, et al. "Updated: Housing Bill Tracker for 2020 Washington Legislative Session." Sightline Institute, 25 Mar. 2020, www.sightline.org/2020/01/23/washington-could-raise-the-bar-for-statewide-action-on-housing/.*

*Bertolet, Dan, et al. "Washington Stops at Incremental Housing Steps." Sightline Institute, 24 Mar. 2020, www.sightline.org/2020/03/19/washington-stops-at-incremental-housing-steps/.*

*Brewer, Jan. "2006 Ballot Propositions and Judicial Review" AZ Office of Secretary of State. Wayback Machine, 2006. web.archive.org/web/20061214044231/www.azsos.gov/election/2006/Info/PubPamphlet/english/Prop207.htm*

*Boan, Christopher. "Housing Experts See Positive Trends in the Tucson Market." Inside Tucson Business, 25 May 2018, www.insidetucsonbusiness.com/business/housing-experts-see-positive-trends-in-the-tucson-market/article_6d4e4ba8-5dfe-11e8-ae21-cf11a53afbc1.html.*

*"BIA Housing Emergency Response Kit." Building Industry Association of Southern California: Los Angeles/Ventura Chapter. Accessed May 1, 2020. www.bialv.org.*

*Buhayar, Noah, and Christopher Cannon. "California's Affordable Housing Crisis: Why Prices Are So High and How to Solve It." Bloomberg.com, 6 Nov. 2019, www.bloomberg.com/graphics/2019-california-housing-crisis/.*

*City of Las Vegas. "Zoning Code; Unified Development Code." 22 Oct. 2018, https://www.lasvegasnevada.gov/Business/Planning-Zoning/Zoning-Code*

*City of Phoenix, Planning and Development. https://www.phoenix.gov/pdd/devfees/impactfees/draftifp; https://www.phoenix.gov/lawsite/Documents/G-6541%20adopted%201.9.19%20effective%20first%20bill-day%20March%202019.pdf*

*City of Portland, Portland Housing Bureau. "State of Housing in Portland: 2019." Dec. 2019. https://www.portland.gov/sites/default/files/2020-04/phb-soh-2019-web.pdf*

*City of Reno. "Housing our Future: Truckee Meadows Regional Strategy for Housing Affordability." https://www.reno.gov/home/showdocument?id=81148; https://www.reno.gov/home/showdocument?id=61401*

*City of Reno. "Zoning Code RENOvation." https://www.reno.gov/government/departments/community-development-department/building-planning-and-engineering-division/zoning-information-annexation-land-development-adopted-pud-spd-handbooks/land-development-code-update*

*City of Sacramento. "2013 – 2021 Housing Element." 17 Jul. 2013. http://sacramento.granicus.com/MetaViewer.php?view_id=34&clip_id=3316&meta_id=401360*

*City of San Diego. "Constraints to Development: Housing Element FY 2005 – 2010." Oct. 2006. https://www.sandiego.gov/sites/default/files/legacy/planning/genplan/pdf/housingelement/hedraft061013pt2.pdf*

*City of Seattle, Affordable Middle-Income Housing Advisory Council. "Draft of Recommendation Summaries." 6 Sep. 2019. http://www.seattle.gov/Documents/Departments/Mayor/AMIHAC%20-%20Meeting%20Documents/Meeting%208%20-%20September%206/Attachment%20B%20Draft%20recommendation%20summaries%20090919%20v1215am.pdf*

*City of West Sacramento. "Housing Policies and Studies." https://www.cityofwestsacramento.org/residents/housing/housing-policies-and-studies*

*Clark, Kristen M. "To Slow Growth, Some Washington Cities Halt Development." Crosscut,30 May 2018, crosscut.com/2018/05/slow-growth-some-washington-cities-halt-development.*

*Colorado Association of Home Builders. "Background on Metro Districts." https://www.hbacolorado.com/advocacy/colorado-metro-districts*

*Coté, Marc, and Denise Rodriguez. "Updating Seattle's Backyard Cottage Rules Will Allow for More Affordable Housing." The Seattle Times, 28 May 2019, www.seattletimes.com/opinion/updating-seattles-backyard-cottage-rules-will-allow-for-more-affordable-housing/.*

*DeHaven, James. "Autopsy of an Affordable Housing Bill: Nevada Democrats Killed Measure amid Fears about Local Control." Reno Gazette Journal, 17 June 2019, www.rgj.com/story/news/politics/2019/06/17/nevada-affordable-housing-bill-killed-fear-local-government-control/1456183001/.*

*Dillon, Liam. "California Bill to Dramatically Increase Home Building Fails for the Third Year in a Row." Los Angeles Times, 30 Jan. 2020, www.latimes.com/california/story/2020-01-29/high-profile-california-housing-bill-to-allow-mid-rise-apartments-near-transit-falls-short.*

*Dillon, Liam. "How Lawmakers Are Upending the California Lifestyle to Fight a Housing Shortage." Los Angeles Times, 10 Oct. 2019, www.latimes.com/california/story/2019-10-10/california-single-family-zoning-casitas-granny-flats-adus.*

*Federal Reserve Bank of St. Louis. https://fred.stlouisfed.org/*

*Garcia, David. "2019 California Housing Legislation Roundup." Terner Center for Housing Innovation, UC Berkeley, 14 Oct. 2019. https://ternercenter.berkeley.edu/blog/2019-california-housing-legislation-round-up*

*Glaeser, Edward, Gyourko, Joseph. "The Economic Implications of Housing Supply." Journal of Economic Perspectives, Vol. 32 No. 1, Pgs. 3-30. 2018.*

*Glaeser, Edward, Gyourko, Joseph. Rethinking Federal Housing Policy How to Make Housing Plentiful and Affordable. AEI Press, 2008.*

*Heck, Denny, et al. "Missing Millions of Homes- Preliminary Findings of the New Democratic Coalition Housing Task Force." (PDF) NDC, Accessed 4 May, 2020.*

*Hernandez, Jennifer. "California Environmental Quality Act Lawsuits and California's Housing Crisis" Hastings Environmental Law Journal, Vol. 24, No. 1. 23 Dec. 2018.*

*Hernandez, Jennifer. "New CEQA Study Reveals Widespread Abuse of Legal Process by 'Non-Environmentalists'". The Planning Report - planningreport.com. 21 Dec. 2015, https://www.planningreport.com/2015/12/21/new-ceqa-study-reveals-widespread-abuse-legal-process-non-environmentalists*

*Hidalgo, Jason. "Google's Massive 1,210-Acre Facility Rising in High Desert at Tahoe Reno Industrial Center." Reno Gazette Journal, 1 Aug. 2019, www.rgj.com/story/money/business/2019/07/31/google-massive-reno-nevada-facility-rising-high-desert/1871965001/.*

*Hidalgo, Jason. "Inside Reno's Housing Crisis: Why Aren't More Affordable Homes Being Built?" Reno Gazette Journal, 25 Feb. 2020, www.rgj.com/in-depth/money/business/2019/07/01/nevada-affordable-housing-market-crisis-reno-sparks-washoe-county-construction/1446528001/.*

*Hidalgo, Jason. "Switch: Largest Data Center Building in World Opens near Reno." Reno Gazette Journal, 15 Feb. 2017, www.rgj.com/story/money/business/2017/02/15/switch-largest-data-center-building-world-opens-near-reno/97925188/.*

*Irby, Kate, et al. "Bad News for Gavin Newsom's Housing Goals: New Home Permits Are down in California." The Sacramento Bee, 3 July 2019, www.sacbee.com/news/business/real-estate-news/article232979792.html.*

*MacDonald-Evoy, Jerod. "Arizona Housing Trust Fund to Get $10 Million in Budget." Arizona Mirror, 22 May 2019, www.azmirror.com/2019/05/22/arizona-housing-trust-fund-to-get-10-million-in-budget/.*

*MacDonald-Evoy, Jerod. "Bill Would Fund Homeless Programs by Taxing out-of-State Real Estate Investors." Arizona Mirror, 28 Mar. 2019, www.azmirror.com/2019/03/28/bill-would-fund-homeless-programs-by-taxing-out-of-state-real-estate-investors/.*

*Morales, Margaret. "Washington Takes a Stand for Granny Flats." Sightline Institute, 8 May 2020, www.sightline.org/2020/03/11/washington-takes-a-stand-for-granny-flats/.*

*Mueller, Tabitha. "Reno's '1,000 Homes in 120 Days' Program Seeks to Boost Inventory amid Shortage, but at What Cost?" The Nevada Independent, 8 Mar. 2020, thenevadaindependent.com/article/renos-1000-homes-in-120-days-program-seeks-to-boost-inventory-amid-shortage-but-at-what-cost*

*National Apartment Association. "Barriers to Apartment Construction Index." 23 Apr. 2019. https://www.naahq.org/news-publications/barriers-apartment-construction-index*

*National Association of Realtors. "Local Market Reports." Research Reports, Research and Statistics. https://www.nar.realtor/research-and-statistics/research-reports/local-market-reports*

*Karlik, Michael. "Proposed Initiative Could Restrict Colorado Housing Growth." Colorado Politics, 3 Dec. 2019, www.coloradopolitics.com/news/proposed-initiative-could-restrict-colorado-housing-growth/article_31099602-fca4-11e9-abbd-2fc8181e18d3.html.*

*Lochhead, Colton. "Nevada Lawmakers Tackle Widening Affordable Housing Gap." Las Vegas Review-Journal, 5 May 2019, www.reviewjournal.com/news/politics-and-government/2019-legislature/nevada-lawmakers-tackle-widening-affordable-housing-gap-1656534/.*

*Lum, Monique. "Portland's Inclusionary Zoning Policy." Center for Real Estate, Portland State University, 1 Apr. 2019, https://www.pdx.edu/realestate/sites/www.pdx.edu.realestate/files/01_inclutionary_housing_wi20_p2.pdf*

*Polletta, Maria, and Ryan Radazzo. "Marijuana, Landlords and Horse Racing: What Arizona Gov. Ducey Decided on Final Bills." The Arizona Republic, The Republic | Azcentral.com, 11 June 2019, www.azcentral.com/story/news/politics/arizona/2019/06/10/how-arizona-gov-doug-ducey-acted-bills-affecting-marijuana-ballot-measures-and-more/1387508001/.*

*Randazzo, Ryan. "Cracking down on Bad Landlords Would Be Illegal for Cities under Arizona Bill." The Arizona Republic, The Republic | Azcentral.com, 9 Apr. 2019, www.azcentral.com/story/news/politics/legislature/2019/04/08/arizona-bills-landlord-and-tenant-act-new-rules-gail-griffin-doug-ducey/3402472002/.*

*"Reno-Area Housing Market Tight; Prices Are Rising." Https://Www.kolotv.com, 8 Feb. 2020, www.kolotv.com/content/news/Reno-area-housing-market-tight-prices-are-rising-567695171.html.*

*"Reno Not Immune to California Housing Affordability Crisis." PropertyRadar, 28 Feb. 2018, www.propertyradar.com/blog/reno-not-immune-to-california-housing-affordability-crisis.*

*"Reno's Housing Future Hangs in the Balance." BizNEVADA, 29 May 2019, biznevada.com/2019/04/renos-housing-future-hangs-in-the-balance/.*

*Sacramento County. "Sacramento County's Affordable Housing Ordinance." 9 Jun. 2015. https://planning.saccounty.net/PlansandProjectsIn-Progress/Pages/Affordable-Housing-Ordinance-Amendments-Project.aspx*

*"San Fran Close To Passing Vacant Site Tax." PYMNTS.com, 5 Mar. 2020, www.pymnts.com/news/retail/2020/san-fran-close-to-passing-vacant-retail-site-tax/.*

*Sawant, Kshama, "Rent Control FAQ's and Myths." Seattle City Council, City of Seattle. https://www.seattle.gov/council/meet-the-council/kshama-sawant/rent-control/rent-control-faqs-and-myths*

*Segall, Eli. "Nevada's New Housing-Related Laws Impact Builders, Tenants." Las Vegas Review-Journal, 16 June 2019, www.reviewjournal.com/business/housing/nevadas-new-housing-related-laws-impact-builders-tenants-1687634/.*

*Slothower, Chuck. "Costs Escalating for Multifamily Development." Daily Journal of Commerce, 3 Mar. 2020, djcoregon.com/news/2020/02/28/costs-escalating-multifamily-development/?utm_term=Multifamily%2Bdevelopment%2Bcosts%2Bescalating&utm_campaign=Multifamily%2Bdevelopment%2Bcosts%2Bescalating&utm_content=email&utm_source=Act-On%2BSoftware&utm_medium=email.*

*Smith-Tenta, Cara. "San Francisco Office Shortage Feared After Affordable Housing Measure Passes." CoStar News, 5 Mar. 2020, product.costar.com/home/news/shared/643491391?utm_source=newsletter&utm_mediu m=email&utm_campaign=personalized&utm_content=p4*

*Sowers, Scott. "Housing May Be Hot In Phoenix, But It's Still Affordable." Builderonline.com, 13 Jan. 2020, www.builderonline.com/building/housing-may-be-hot-in-phoenix-but-its-still-affordable_o*

*State of Arizona, Department of Housing. "Arizona: 2019 Housing at-a-glance." 2019, https://housing.az.gov/sites/default/files/documents/files/AZ_Housing_At_a_Glance_%202019.pdf*

*State of Colorado, Legislative Council Staff. "Colorado General Assembly: 2019 Summary [Major] of Housing Legislation." 12 Aug. 2019. https://leg.colorado.gov/publications/summary-housing-legislation-2019; https://leg.colorado.gov/sites/default/files/14houseandpropertylegis.pdf; https://leg.colorado.gov/sites/default/files/tiny_houses_ib_16-15_2016.pdf; https://leg.colorado.gov/sites/default/files/housing.pdf; https://leg.colorado.gov/sites/default/files/housing_0.pdf*

*State of Oregon, Oregon Legislative Policy and Research Office, 80th Legislative Assembly. "2019 Summary of Legislation: Housing." https://www.oregonlegislature.gov/lpro/SMLByChapter/2019%20-%20Housing.pdf*

*State of Oregon. "Oregon Laws, 2019." https://www.oregonlegislature.gov/bills_laws/lawsstatutes/2019orlaw0412.pdf*

*State of Oregon. "Oregon Laws, 2017." https://www.oregonlegislature.gov/bills_laws/lawsstatutes/2017orlaw0745.pdf*

*State of Washington, Central Puget Sound Region. "Before the Growth Management Hearings Board, Final Decision and Order." Case No. 19-3-0015, 20 Apr. 2020.*

*Taylor, Mac. "Considering Changes to Streamline Local Housing Approvals." California Legislative Analyst's Office, 18 May, 2016. https://lao.ca.gov/reports/2016/3470/Streamline-Local-Housing-Approvals.pdf*

*Tenney, Sam. "Buckman Project Team Receives Design Advice." Daily Journal of Commerce, 9 Mar. 2020, djcoregon.com/news/2020/03/05/buckman-project-team-receives-design-advice/?utm_term=-Buckman%2Bproject%2Bteam%2Breceives%2Bdesign%2Badvice&utm_campaign=A%2Bconversation%2Bwith%2BKenechi%2BOnyeagusi&utm_content=email&utm_source=Act-On%2BSoftware&utm_medium=email.*

*Theriault, Denis C. "Affordable Housing Mandates Win Final Approval from House." The Oregonian, Oregonlive, 4 Mar. 2016, www.oregonlive.com/politics/2016/03/affordable_housing_mandates_wi.html.*

*United States Census Bureau. "Quickfacts." https://www.census.gov/quickfacts/fact/table/US/PST045219*

*United States Department of Housing and Urban Development. https://www.huduser.gov/portal/home.html*

*Woods, Alden. "Critical Mass: Arizona Is Now Third-Worst in the Nation for Affordable Housing." The Arizona Republic, The Republic | Azcentral.com, 18 Mar. 2019, www.azcentral.com/story/news/local/arizona/2019/03/15/arizona-third-worst-nation-affordable-housing/3175202002/.*

*Zillow. "United States Home Prices and Values." https://www.zillow.com/home-values/*