

Affordable Housing and the High Density Myth

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Housing affordability and density analysis by
Utah for Responsible Growth

Home prices in Utah and around the country have seen rapid increases as a result of strong economic growth. Home affordability is an issue that needs to be addressed with responsible, effective and sustainable growth decisions, not driven by those that profit from construction and development.

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Why do we have an affordability issue?

Over the last eight years, Utah has experienced unprecedented economic growth. Many of the incoming companies, especially those in the technology industry, have found the valleys of the Wasatch Front a desirable and logical place to build and expand. This growth, while positive in many ways, has caused a gap in the supply and demand curve of the Utah housing market. This gap has resulted in rapidly increasing home prices, making home affordability a growing issue.

Supply and Demand

At the most basic level, the major driving factor behind the affordability issue is the law of supply and demand. Before the recession, new home construction and demand in general were at peak levels. As the economy collapsed and demand for new homes significantly decreased,

home construction fell to a 50 year low (Figure 1). Since the recession, the economy has made a significant turn. While the rate of new construction has also increased, it has not rebounded at near the same rate at which it declined.

A number of factors have contributed to the slow rebound in the new home construction market. According to research by the Gardner Institute, the cost of developing raw land increased by 40 percent between 2007 and 2017. The costs of construction materials have also increased across the board in the last decade. Numbers from the National Association of Home Builders indicate that the price of lumber has increased approximately 60 percent in the last ten years.

Labor in the construction market has also been a barrier to increased new home construction. While the construction industry has seen some rebound since the recession, the number of construction workers has not kept pace. As the Gardner Institute points out, “many companies that went out of business never recovered, and

Figure 1
U.S. Single Family Home Starts (Thousands)



Source: US Census

would-be new talent is choosing a different profession.” While the 26 percent wage increase since 2007 has been a huge positive for construction workers, said increase has been a significant driver of increasing home prices.

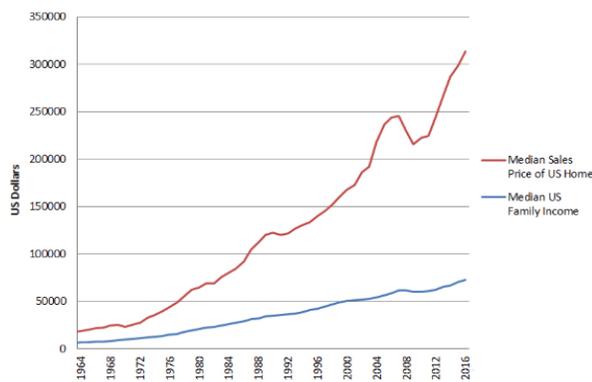
Exacerbating the issue of low supply and high demand is the unusually low inventory of existing homes for sale. Existing home listings were at an all-time high during the housing boom of the early 2000s. Over the last 10 years existing home listing have dropped by 70 percent. Much of this can be attributed to a lack of motivation for homeowners to sell. Two of the primary reasons for existing home sales are growing families and increases in income. Without affordable single-family homes to “move-up” to, many homeowners are staying put despite increases in their own homes value.

In a state like Utah where the economy has grown exceptionally well, the demand for housing has significantly increased. This economic growth fueling high demand combined with the factors contributing to low inventory are a perfect combination for affordability issues.

Stagnant Wage Growth

Another economic factor responsible for the home affordability issue is slow wage growth. According to the Mortgage Bankers Association,

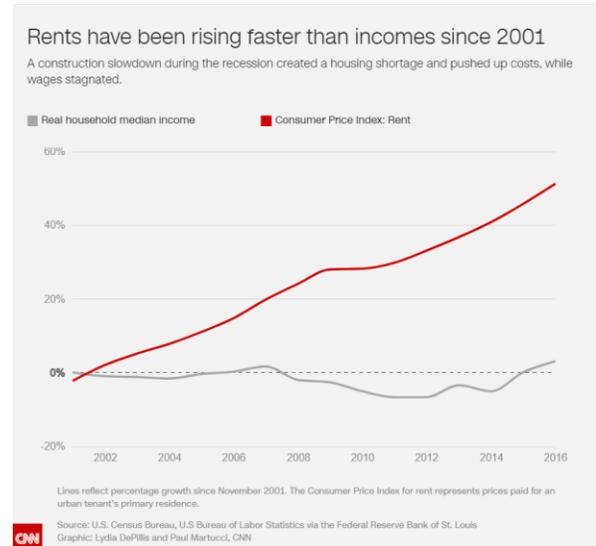
Figure 2
US Median Income to Median Home Price



Source: Federal Reserve

inventory shortages combined with continued less-than-expected wage earnings increases have caused home prices to increase at twice the rate of income growth for some time (Figure 2). Government employment reports have shown that wages have increased as little as 0.1 percent during certain months of 2018.

Figure 3



A similar occurrence can be seen in the rental market (Figure 3). Despite the strong economy, wage increases have continued to lag behind expected growth causing an affordability gap in both home and rent affordability.

Investors

Speculative investors are another driving force behind the lack of home affordability, especially among the more affordable multi-family units. A comprehensive survey of investors performed by the Gardner Institute highlights the fact that “the majority of investor’s activity is seen in townhomes and condominiums.” This hits first time homebuyers the hardest as the more affordable multi-family homes are taken off the market. It also furthers the affordability issue by raising the demand for more affordable homes thus increasing their prices.

The survey results also indicated that 70 percent of respondents saw increased investor activity in 2017. The other 30 percent indicated a decrease in 2017, but only as a result of such high activity in 2016. This type of price increasing activity amongst investors is a mirror of the housing price inflation they contributed to in the early 2000s.

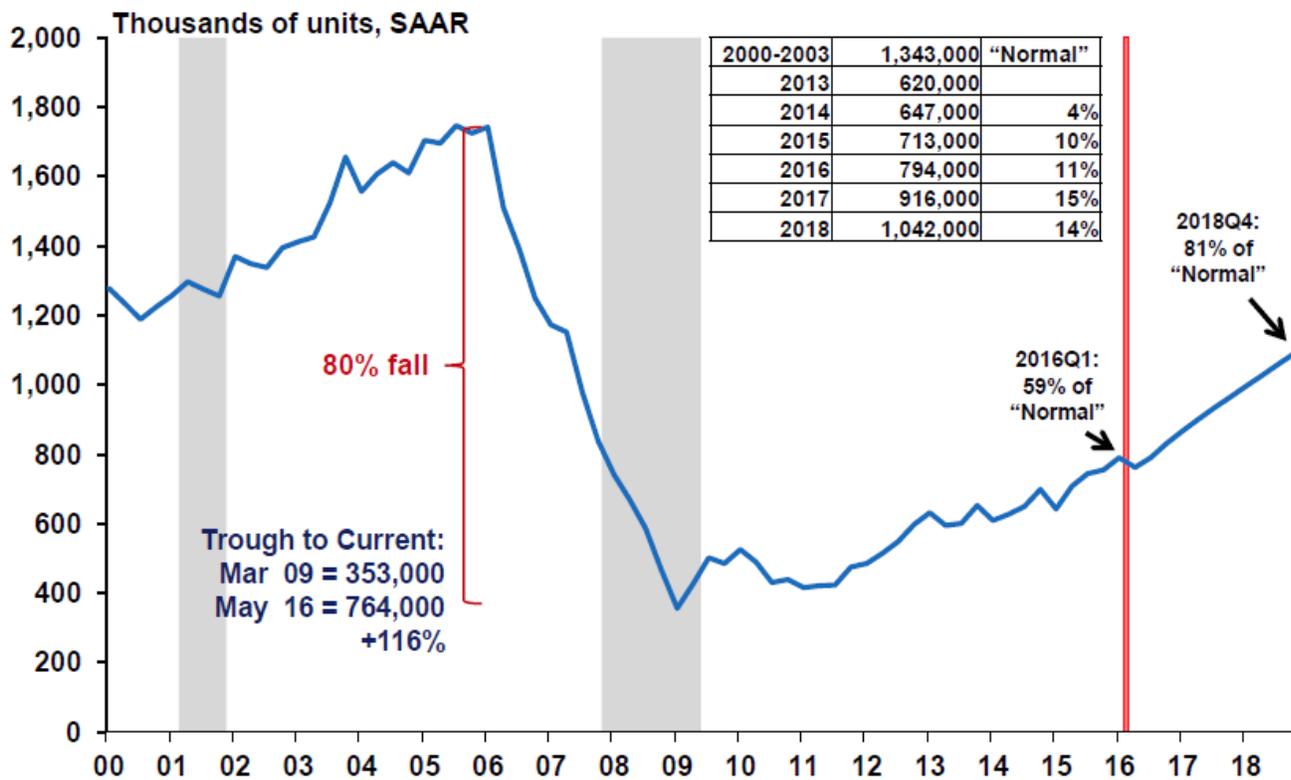
Imbalance of Home Starts

A more surprising cause of affordability issues relates to the imbalance of home starts in single-family homes vs. multi-family homes. This relates directly to the shortage in the existing home market. According to the National Home Builders Association, the number of single-family starts (Figure 4) has been much slower to return to normal pre-recession levels than have multi-family home starts (Figure 5). While it is projected that single-family home starts as of

2018 Q4 will only be at 80 percent of normal, multi-family home starts are projected to be at 100 percent of normal pre-recession rates.

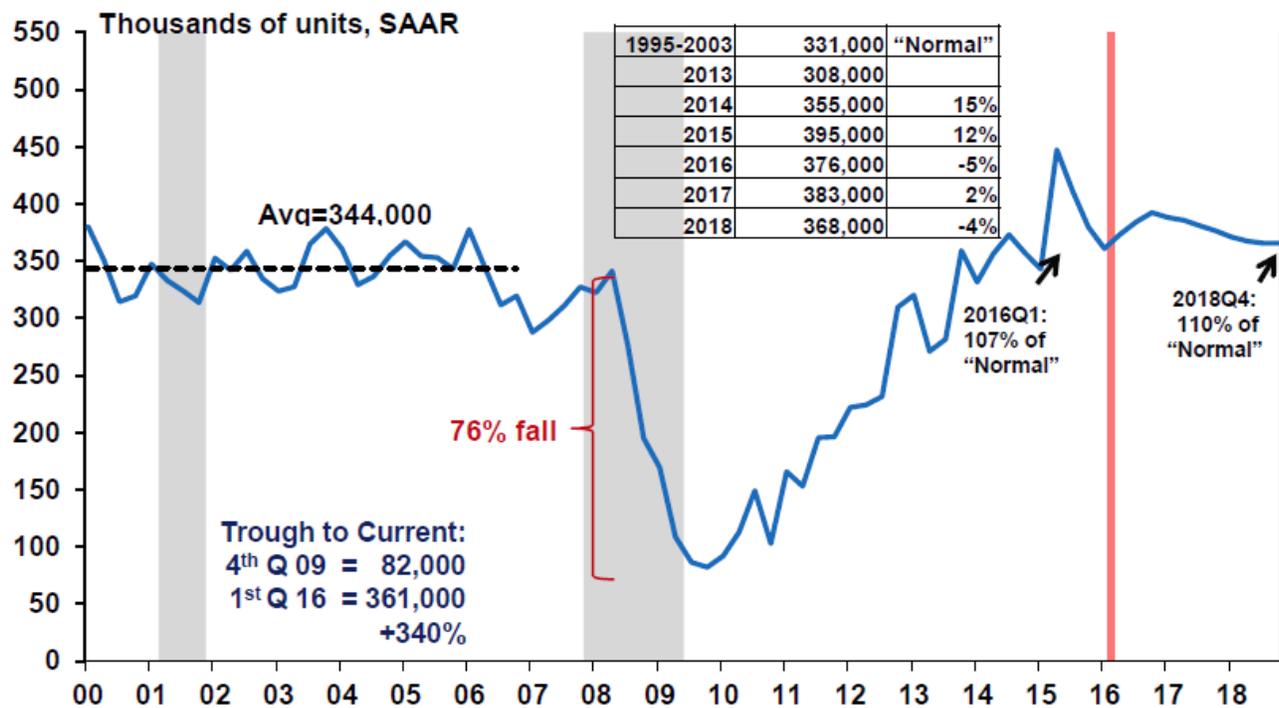
This imbalance of starts between the two different home types furthers the shortage of single-family homes available for the “move-ups” and creates a lack of motivation for current homeowners to sell. The housing market and affordability are ecosystems that require a balance of elements and not just a focus on one single factor. The lack of single-family homes actually contributes to the affordability issues we are seeing, especially with the lower income demographics that are struggling to find any affordable housing. Focusing on high density as the primary solution will not create the intended outcome of making housing more affordable. In fact, as we will see later on, a focus on high density has actually been proven to reduce housing affordability in metropolitan areas rather than increase it.

Figure 4
Single-Family Home Starts



Source: National Association of Home Builders

Figure 5
Multi-Family Home Starts



Source: National Association of Home Builders

Financing Complexities

Outside of anything related to construction and the real estate market itself, loan approval and financing can create significant problems for affordability and home ownership. This has a significant effect, especially on those who fit the demographics seeking more low cost housing.

The Gardner Institute points out that many quantitative measures of affordability do not necessarily take into account things like “FICO scores, student debt, job history, and other factors that a financial institution considers for homeowner credit worthiness.” These measures simply “don’t capture the complexities of the loan approval process.”

In determining the significance that financing complexities have on affordability, consider the information presented in the Gardner Institute housing study. “The threat to affordability from

rising prices may be secondary to increasing interest rates, which could significantly reduce housing affordability and homeownership opportunities for a large share of Utah households.”

Other Factors

Certain contributing factors to affordable housing issues are unavoidable and relatively inevitable. Economic growth for example is a contributor that is outside the scope of controlled factors causing increased home values. As the Gardner report states, “rapidly rising housing prices are an inevitable consequence of Utah’s high rates of population and job growth. Increased numbers of people and jobs boosts demand for housing.”

Geographical limitations of the Wasatch Front, particularly Salt Lake County, are especially unavoidable contributors to increasing home

prices. As open space runs out the land and development costs for new construction will continue to rise. It is important to note that this is an inevitable outcome regardless of density level. While building at an inflated high-density level on the remaining open land will increase the population capacity, the land will still run out at one point or another. This particular element of limited open space is a common denominator among other high-density metropolitan areas that lack anything resembling affordable housing.

Is Affordability a Crisis?

As the discussion of home affordability in Utah continues to take place, the word “crisis” has become a prevalent term used to represent the current state of the housing market. While this is certainly an effective buzzword in drawing attention to the issue, the question is whether it is an accurate depiction of the current situation.

Housing Inventory Ebb and Flow

As previously pointed out, the home supply is at the heart of the current housing affordability discussion. It is important to recognize the

historical ebb and flow of the housing inventory market. Much like the stock market, housing inventory in the U.S. has a natural cycle of rising and falling (Figure 6). Some peaks and valleys are certainly longer than others, such as the pre-recession market in the early 2000s, but historically the market has always rebounded in one direction or another. As displayed by data from the U.S. Census Bureau, inventory has already begun trending towards an increase in housing supply.

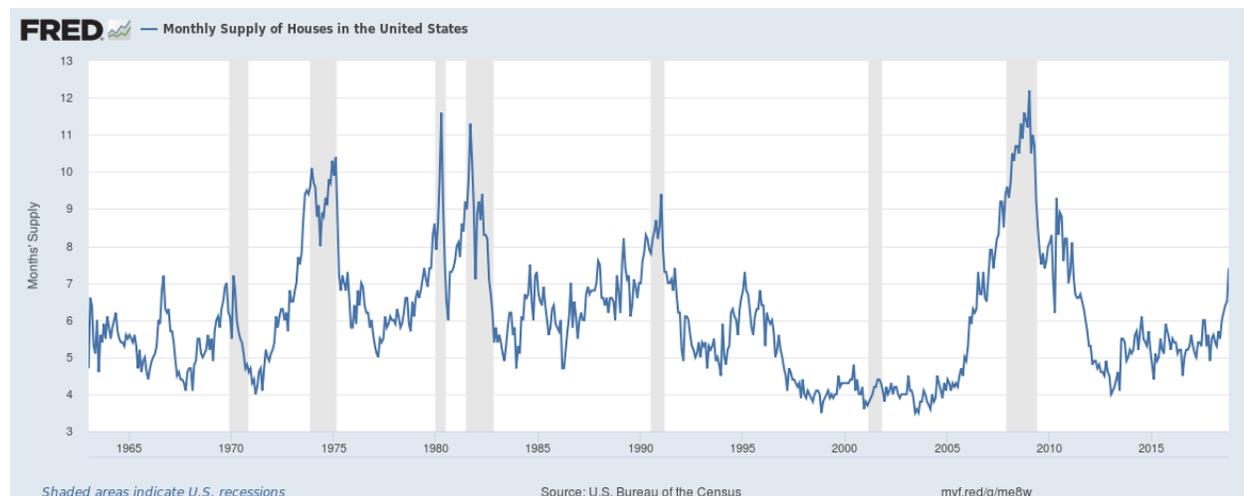
This ebb and flow pattern is a primary reason to exercise caution when considering long-term density plans as a solution to shorter-term supply issues. Addressing shortages or surpluses with 30 and 40-year density plans can have severe negative impacts on a supply and demand market that reacts in one to five years.

Rental Market

Though the discussion around rental availability and affordability is not primary to home ownership, it is an important point to discuss when determining whether we are experiencing a crisis.

While the supply of available rental units is definitely lower than normal, it is not at any type of critical level. A point in time search of rental units on ONLY KSL.com displays an availability of over 2500 units below \$1000 a month in Davis,

Figure 6
Monthly Supply of U.S. Houses



Salt Lake and Utah Counties. The same search for units between \$1000 and \$1500 a month displays an availability of over 2800 units. This gives a combined point in time count of more than 5000 available rental units below \$1500 a month. This indicates that rental units are available to those with lower incomes, even at a time when home affordability is low.

The Gardner report also identifies some additional numbers that support the access of rental affordability along the Wasatch Front. Roughly 30 percent of households in the state of Utah are renters. This rate is well below the national average of 36.6 percent, indicating that the lack of home affordability is not at unprecedented levels. This rate of 30 percent is with a relatively affordable rental market as Salt Lake City sits at 141st on a list of 250 U.S. cities ranked by average rental rate. Those cities that top the list are three to four times higher than Salt Lake City on average.

Again, this is important information to consider when examining the accuracy of the word “crisis.” In general, the discussion of home ownership affordability is very different from that of housing. The ability to own a home versus access to safe and affordable housing are not parallel. The idea of a housing crisis in

proper context is simply not supported by the current rental market numbers.

Homeless Population

Another statistic that is certainly relevant when evaluating a potential housing crisis is the current homeless count of Utah. While the ideal number of homeless in the state will always be zero, the last two years have seen decade lows in point in time homeless counts according to the US Department of Housing and Urban Development (Figure 7). The count in 2017 was down 25 percent from the decade peak in 2012. While there is still work to be done, there are clear indications that the trend continues down. Not exactly a trend that supports the idea of a crisis.

Other Affordability Indicators

Additional information found in the Gardner Institute study shows that affordability is not at crisis levels.

The Housing Affordability Index (HOI) is a housing affordability measure created by Wells Fargo Bank and the National Association of Home Builders. Essentially, the HOI is an index that represents the percentage share of homes sold in an area that were affordable to a household earning the corresponding median income. According to the measure, an HOI above 50 indicates good affordability for that area, where below 50 is less affordable. Over the last 10 years, Salt Lake County bottomed out at 30.8. Since that time, affordability levels have climbed significantly. The 2017 HOI for Salt Lake County was 64.6, well above the score of 50 required for good affordability. The lowest of the Utah metropolitan areas in 2017 was St. George at 51.3, still above the 50 index mark required to indicate good affordability.

Another takeaway from the Gardner study is the relatively high home ownership rate for younger generations in Utah when compared to other

Figure 7



Source: US Department of Housing and Urban Development

states. The ownership rate of the 25-34 year age group in Utah was 50.4 percent in 2017 compared to the national average of 37 percent. As the Gardner Institute states, “The comparatively high homeownership rate for Utah’s millennial generation suggests that affordability hasn’t been a serious impediment to ownership.” It also appears that any decline in the ownership rate since 2000 can be attributed to “student debt” and a slight shift in “preferences toward apartment living.” Nothing related directly to affordability.

Clearly, the numbers created to indicate home affordability in a particular market do not support the idea of a housing “crisis.” While we may have a housing affordability issue that should be addressed, we are not at any type of critical level. Crisis in this instance appears to be nothing more than a buzzword used by developers, political leaders and the media to further a particular agenda.

Is High-Density Housing a Solution?

In response to the home affordability issues, many developers, homebuilders, political leaders and even the media have strongly advocated for high-density housing as a solution. They continue to push the idea that we are in a housing crisis that can only be solved by filling all remaining open space with levels of density two and three times that of the highest current rates in the state. Yet little has been presented in the way of data to support that this is a viable solution.

Effectiveness of High-Density Housing

As the argument for high-density housing as a solution to affordability issues grows, there has been a curious lack of data to support the idea as a viable solution. The majority of groups and

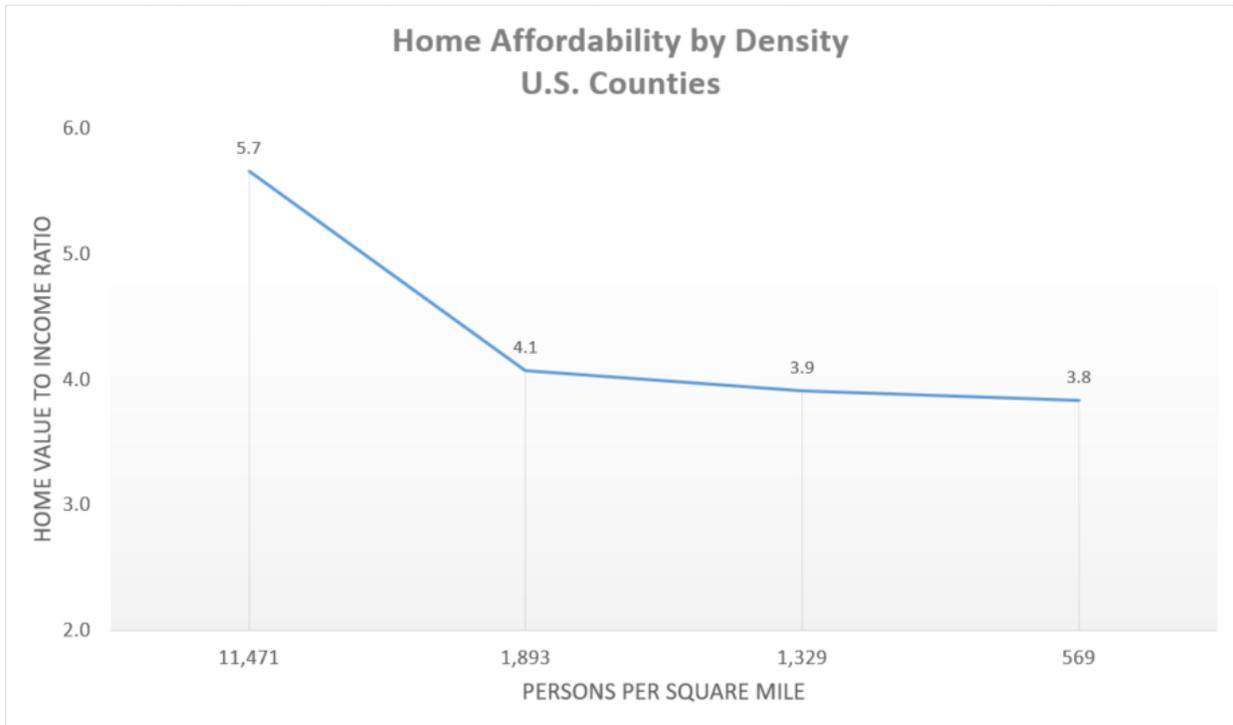
individuals that push the concept as a method of affordability seem to rely on logic at face value rather than presenting evidence to back it.

A widely used method of evaluating housing affordability is called the Median Multiple. The Median Multiple is an affordability factor that is calculated by dividing the median home value for a particular area by the corresponding median income. As the Gardner Institute states, “The measure is used by the World Bank, the United Nations, and Harvard’s Joint Center for Housing Studies to compare housing affordability across countries, states and metropolitan areas.” Basically, the Median Multiple is a way to determine the affordability of home ownership in different areas, relative to their variations in income levels. It acts as an equalizer as compared to simply publishing home prices. The lower the Median Multiple the more affordable home ownership is in that area.

One of the most effective ways of determining the relationship between high-density and affordability is a Median Multiple comparison of the largest U.S. metro areas, cross-referenced by population density. This is a relatively easy comparison as all of this data can be obtained from the U.S. Bureau of the Census.

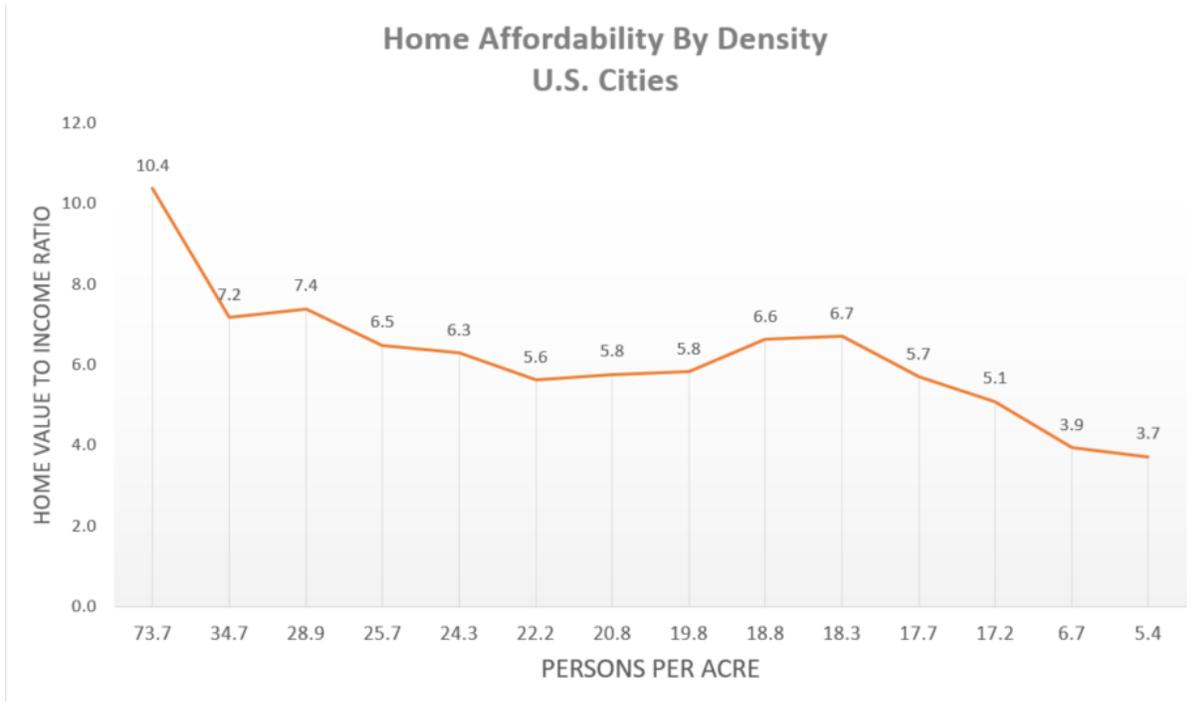
The first Median Multiple comparison was done at a county level, using the 100 most densely populated counties in the U.S. (Figure 8). Again, data was gathered exclusively from the U.S. Census tables. While the largest drop in the trend line occurs between the 25 most populated counties and next group of 25, the downward trend in the Median Multiple is clear. The 25 most populated counties in the United States have an average Median Multiple of 5.7. The average trends down to 3.8 for the bottom 25. A calculation of the Pearson Correlation Coefficient indicates a nearly 70% positive correlation between population density and a higher median multiple.

Figure 8
Median Multiple by U.S. County



Source: US Census

Figure 9
Median Multiple by U.S. City



Source: US Census

The second Median Multiple Comparison was done using 130 US cities and towns (Figure 9). This comparison uses persons per acre as opposed to per square mile, but still reads highest to lowest density from left to right. Similar to the county comparison, there is a clear and steady trend downward in the Median Multiple as the population density decreases. The top 10 highest populated cities in the US have a whopping 10.4 average Multiple Median, followed by the next 20 with an average of 7.3. The remaining cities between 18 and 25 fluctuate between 5.6 and 6.7, with a clear drop off starting at 18 persons per acre and below. The average Median Multiple of the ten most densely populated cities in Utah came in at 3.9.

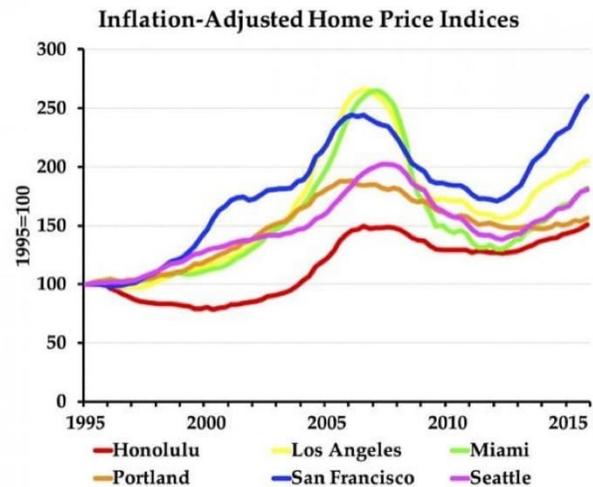
The data clearly indicates a strong positive correlation between population density and a higher median multiple. Again, this is data directly from the US Census used to create the most widely used indicator of home affordability. While a causation claim is not being made, it does appear that, long-term, higher density is correlated with a higher median multiple.

Up vs. Out

The Cato Institute performed a similar study of US Census data and data from the Federal Housing Agency, but on a more granular level. They examined home affordability levels adjusted for inflation in higher density cities versus lower density cities. They looked at the Median Multiple, but also at home price increases adjusted for inflation.

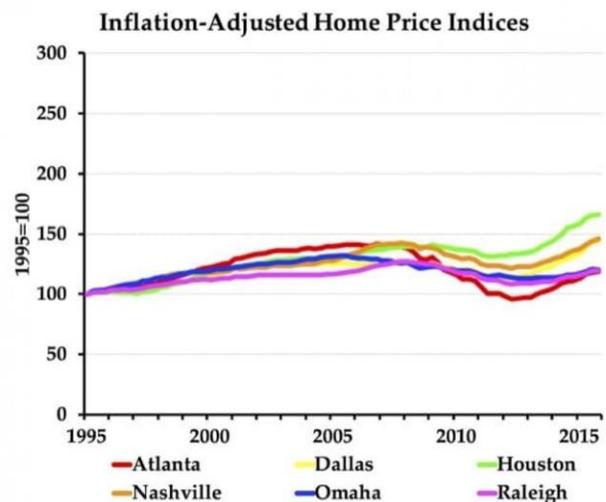
As indicated in Figure 10, cities with some of the highest density urban areas have seen rapidly increasing housing prices. Even after adjusting for inflation, home prices today are higher than they were at the peak of the 2006 housing bubble.

Figure 10



Source: US Census and Federal Housing Agency

Figure 11

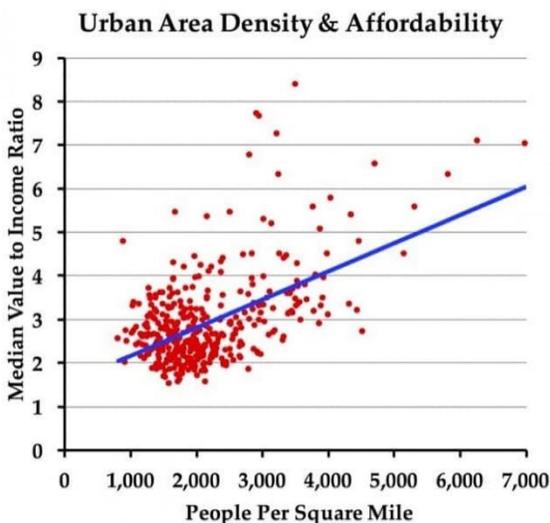


Source: US Census and Federal Housing Agency

Yet, as the Cato Institute points out, this is not a nationwide problem. “Prices in many other areas remain quite reasonable. Houston and Dallas/Fort Worth are the nation’s fastest-growing urban areas, yet they remain affordable (which is one reason they are growing so fast).” This, according to the Cato Institute, can be attributed mainly to the fact that these cities find ways to grow out.

A similar presentation of the US Census tables performed by the Cato Institute draws identical conclusions to the previously presented data (Figure 12). Political leaders “continue to propose making housing more affordable by ‘building up,’ that is, by rezoning existing neighborhoods to higher densities and subsidizing developers who will build those densities. However, this never works. There is simply no relevant data to support this idea. The densest urban areas tend to be the least affordable, due partly to higher land costs and partly because higher-density housing costs more to build per square foot than single-family homes.”

Figure 12



Source: US Census

Why Density is Not Affordable

At this point, it is clear that high-density housing is not a viable solution to affordability. In fact, the data shows just the opposite, that mass high-density contributes to existing affordability issues. It is a worthwhile exercise to examine some of the reasons that this is the case.

Again, much of this has to do with the housing eco-system. There are many variables related to housing affordability, all of which create a ripple effect on prices. If you look at the multi-family,

or higher density, homes (condos, townhomes, duplexes, etc.) for sale right now along the Wasatch Front, only 25% of them are priced below \$225,000. This correlates back to the discussion in the first section of the study, that availability of single-family homes, investor activity, construction costs, and demand in general, all contribute to higher home prices. As seen by the current market of high-density homes, just having density does not equate to affordability.

A study on the correlation of density to affordability was recently performed by Chapman University. Their findings were very similar to those of the Cato Institute and our US Census study. They concluded that the “pack and stack” method of approving bigger and bigger development in an attempt to relieve the housing shortage only seems to push prices higher, because builders want a return on those huge investments. In San Francisco, for example, building a townhome building can cost more than double that of detached homes. Units in condominiums can cost up to 7.5 times more to build. Joel Kotkin, an urban studies fellow at Chapman, argues that increasing building density actually makes the housing crisis worse. While acknowledging that it does not parallel basic, incorrect assumptions about high density, he identifies that this study does help to explain why the world’s biggest cities have been unable to build their way out of soaring home prices.

Adam Brinklow, a journalist for the real estate section of the San Francisco Weekly, referencing the Chapman study identified the outcome at the current pace. “If the present building trends continue to proliferate, even the young Millennials who are supposed to fuel our tech economy will eventually drift away, back toward the suburbs or to cities in places like Texas, where housing costs are on average less than 30 percent of monthly take home pay. That means a city that becomes older (we have the smallest

percentage of child residents of any large city), whiter (white people now count for only a fifth of suburban flight), and, of course, wealthier, since only those who can afford those giant buildings will stay.”

The Cato Institute also attributed these outcomes to cost. They indicate that high-density housing can cost as much as 50 to 70 percent more than lower density units. If California, for example, truly wants to provide affordable housing to low-income people, it needs more low-density housing. This means loosening regulation on current urban-growth boundaries.

The same mistakes made by California are happening in Denver. The city has been regulated by an urban-growth boundary that has made housing twice as expensive as in peer cities such as Albuquerque, Dallas, and Phoenix. Instead of rethinking the boundary regulation, Denver allows developers to build higher so long as they set aside a few units for “affordable housing.” Ultimately, builders just raise the prices on other units, which in turn increases overall pricing of surrounding real estate exacerbating the affordability issue.

Higher population densities also increase costs in areas outside of construction. Impact fees, for example, become larger the denser the development is. Impact fees are necessary funding for cities in order to recover costs associated with infrastructure. As the Gardner Institute points out, “The cost cause of fee increase is mainly attributed to high population growth which is creating demand for new infrastructure.” The more people that are packed in to open space the more expensive it is to maintain an infrastructure to support the density.

Another contributing factor to consider is open space. Many high-density, unaffordable cities have a lack of remaining open space for growth.

This is an unavoidable outcome in many areas along the Wasatch Front. Regardless of the density levels, at some point it becomes inevitable that home prices will rise when there is nowhere left to build. However, we can learn from the past mistakes of other cities that tried to pack all remaining open land with high-density which is negatively correlated with affordable housing.

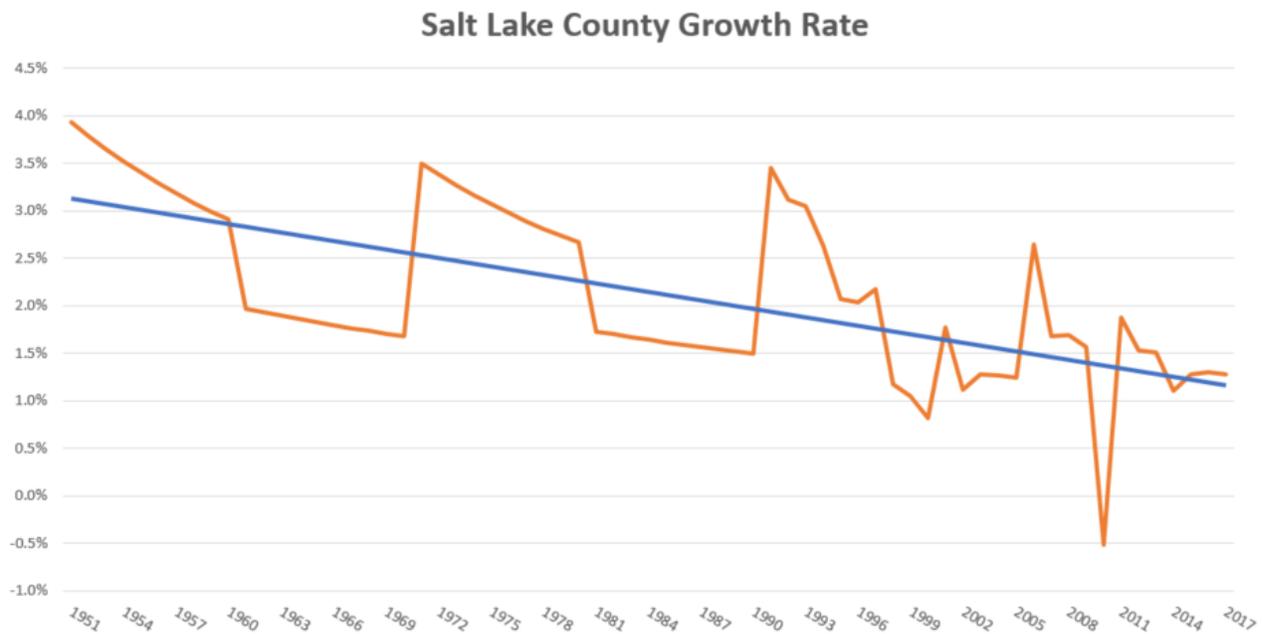
As discussed earlier, investors are partly to blame for the density to unaffordability correlation. As the Gardner study pointed out, “In today’s market, townhomes are the most attractive product for investor buyers, followed by condominiums, and single-family homes respectively.” They go on to say that, “with the majority of investor activity seen in townhomes and condominiums, products targeting first time home buyers are taken off the market as well as forcing these buyers to look elsewhere and potentially making it harder for them to purchase.” Connecting this to the supply and demand concept identifies investor activities as a clear contributor to unaffordable housing markets. They are removing units that target first time buyers while at the same time raising the floor of housing affordability.

Repeatedly, growing metropolitan areas have failed to increase affordability by futilely packing in high-density housing. Obviously, supply and demand are at the core of home affordability. This is not to suggest that high-density housing is responsible for the current housing crisis. However, the data suggests that high density, at best, does little to nothing to bring home affordability to an acceptable level. While causation is not being suggested, there is a strong negative correlation between mass amounts of density and a higher median multiple, especially in the long term.

What About Future Population Accommodation?

Another common narrative that is used to support the push for high-density housing, especially in the Salt Lake Valley, is the need to accommodate for growth projections. While numbers differ depending on the source, some estimates say that Salt Lake County is projected to grow by up to 600,000 people in the next 40 years. Many political leaders and members of the media believe that it is our responsibility to ensure housing exists for all those that are projected to live here in the future.

Figure 13



Source: US Census

Growth Rate

When evaluating this narrative, it is important to recognize that projections are very subjective to external factors and interpretation. One factor to strongly consider is our own influence over population growth in a given area, as a result of policy and planning. In its simplest form, if we build 100,000 units we will increase at some

point by 100,000 households. If we build 25,000 units we will increase at some point by 25,000 households. The unfounded idea that we have to accommodate for all of the future population projections is false and against the laws of economics. Again, projections are relative to external factors. If we begin to look at sustainable growth outside of the Wasatch Front, we will see those projections begin to shrink as migration moves to areas with more open space and available resources for housing.

A look at growth data from the US Census illustrates this concept very well. For quite some time the growth rate of Salt Lake County has been declining (Figure 13). In the 90s, Salt Lake County saw many years with a population

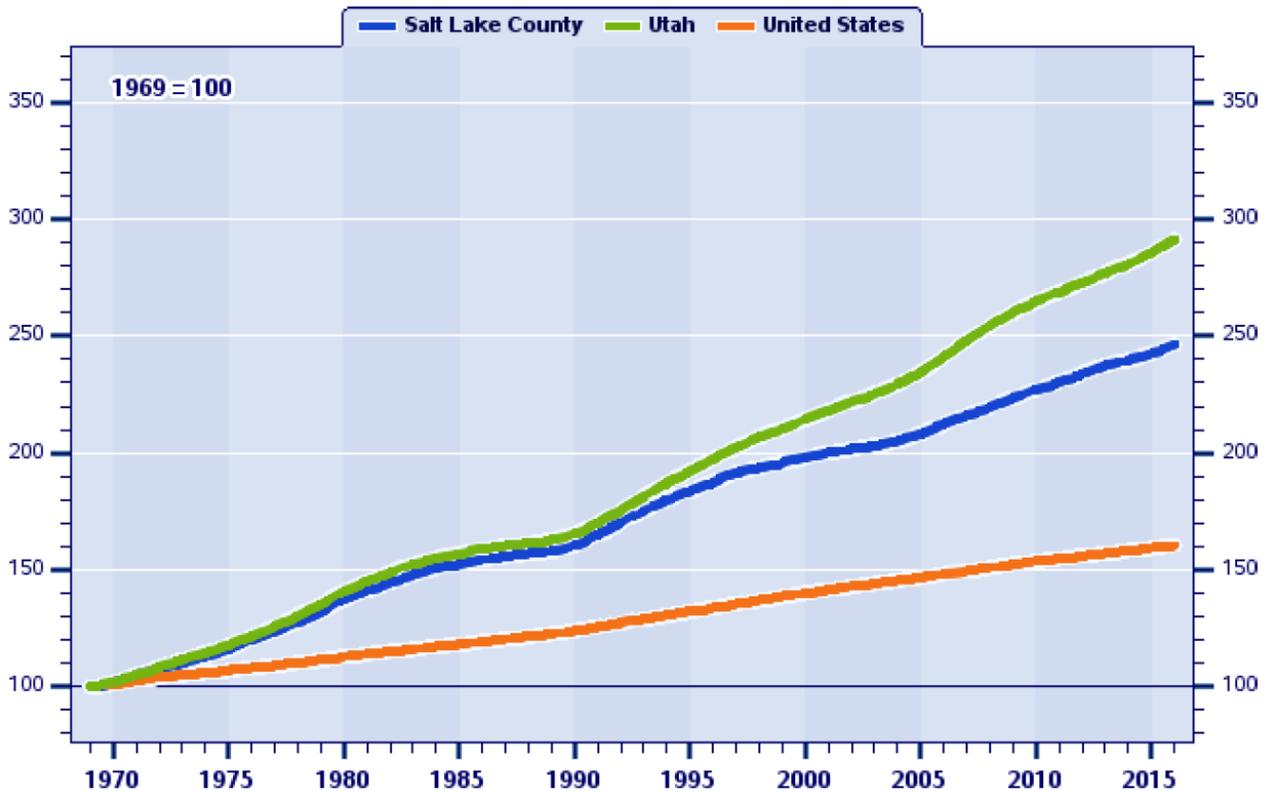
increase of 20,000 people year to year. The last few years have seen an average closer to 14,000 a year with all indications pointing to continued decline.

According to a population study by the Gardner Institute, the rapid growth Utah as a state has experienced is beginning to moderate. The Gardner report indicated that, “the sum of

natural increase and net migration remains positive, but declined by 6,325 compared to last year. Declining births is a recent national and Utah trend beginning in 2008. Utah's 47,310 births are at the lowest level since 2000. Utah maintains one of the highest fertility rates in the nation. However, Utah's total fertility rate (2.12 in 2017) is currently second to South Dakota (2.23 in 2017). After increasing each year since 2012, Utah's net migration decreased in 2018 to 23,248, below last year's estimate by 3,843 or 14.2 percent."

state as compared to Salt Lake County, there is a noticeable trend. Before 1990, the population growth of Salt Lake County compared to all other Utah counties combined was at least equal. Since 1990 a widening gap has occurred between Salt Lake County and the rest of Utah. That gap continues to grow as more people find benefits to living in Utah outside of Salt Lake County. While a deeper dive into migration is outside of the scope of this study, it is clear that the natural economic migration trend is moving the growth away from Salt Lake County and into other parts

Figure 14 Population Indices (1969=100): 1969-2016



Source: US Bureau of Economic Analysis

Natural Migration Trends

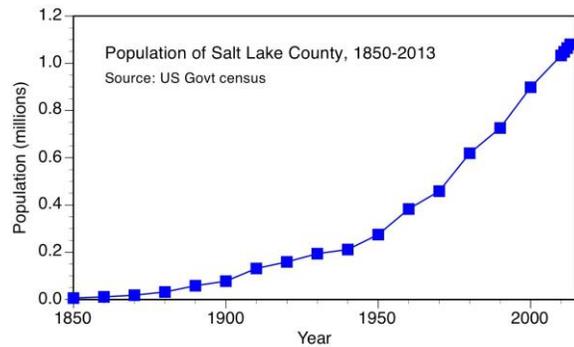
Another extremely important element to consider, especially as it relates to Salt Lake County, is the economic principle of migration. As the Gardner Institute mentions, the rate of growth is beginning to slow, but our growth is still positive. When examining the growth of the

of the state. A Deseret News article recently reported that Salt Lake County is no longer in the top counties for growth in the state of Utah. Morgan County, Tooele County, Utah County and Wasatch County are all growing at significant rates and have much more open land compared to the Salt Lake Valley. This confirms

what the population growth is telling us. The data clearly indicates a natural trend.

As the population data identifies, there is an enormous disconnect between the reality of our growth and migration patterns and the false narrative that we need high density housing to support the incoming growth. Not only will high-density housing “solution” not solve the problem of population growth, but also it is artificially forcing the natural migration trends back in the wrong direction. This ends up making worse the very problem it is supposed to solve.

Figure 15



Historic Growth

Another curious set of data that goes against the high-density narrative is the historical growth rate of the Salt Lake County. The very strong upward trend in population growth began around 1950. Growth rates since then have been as high, and in most years higher, than they are now. This narrative has been presented as if some type of unexpected population growth has occurred and high-density housing is the only way to solve it. Not only does the data in this section clearly indicate a natural migration away from Salt Lake County and an overall decline in growth, but also this pace of growth has been occurring for the last 70 years. This contradicts any idea that enormous levels of housing density are needed to address some unexpected growth. There is simply no reason that population

projections should be used as justification for a major shift towards high-density housing.

What Effects Does High-Density Housing Have?

At this point, the data and research from numerous sources and institutions has clearly identified that affordability, as a “crisis,” is a questionable term. While there may be some level of affordability issues, it is simply not at a critical level. It has also identified that increased levels of high-density housing fails to make housing more affordable and, in some cases, may actually contribute to a higher median multiple. The previous section also concludes that there is no need to shift density levels in any major way to accommodate for growth projections. Growth rates are already beginning to slow and natural migration patterns are shifting increases away from areas with decreased land availability. While it’s clear that high-density will not increase affordability, it’s important to look at the effects that shifting to higher density levels can have.

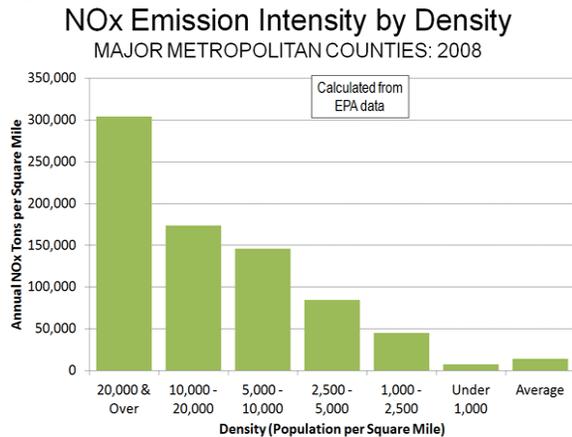
Correlation with Higher Median Multiple

To recap the first section of this study, high-density has a strong positive correlation with a higher median multiple. Major metropolitan areas have continually failed to build their way out of rapidly decreasing affordability with high-density as the primary solution. Data from the US Census and the Federal Housing Agency have illustrated a clear trend in the density to affordability level. Cities that have tried to solve their problem by “pack and stack” have decreased in affordability, while the fastest growing cities that have implemented balanced growth have been able to maintain very reasonable levels of affordability.

Increased Pollution and Traffic

The Salt Lake Valley has a terrible pollution problem and a growing traffic problem. Increased population and a lack of adequate public transit have contributed to these issues. One of the biggest contributing factors to our pollution problem is the topography of the valley. Because we are in a geographical bowl, the air pollution gets trapped, severely

Figure 16



exacerbating the issue. Data from the Environmental Protection Agency clearly correlates increased density levels with higher levels of pollution intensity and traffic congestion. The report summarizes the latest Environmental Protection Agency (EPA) data on the density of daily traffic densities and road vehicle nitrogen oxides (NOx) emissions densities by counties within the 51 metropolitan areas with more than 1 million population in the United States as of 2010. The EPA data indicates a strong association between both higher population densities and higher traffic densities, and higher population densities and higher road vehicle nitrogen oxides (NOx) emission intensities. In both cases, the relationships are statistically significant at the 99 percent level of confidence. The simple fact is, the higher the population density, the greater the traffic density and the greater the pollution.

A study from NASA also corroborates the findings of the EPA on pollution. NASA used satellite observations to directly measure the air pollution's dependence on population. It looked at four of the world's major regions: The United States, Europe, China and India. While the levels of pollutants varied from region to region, there was a clear correlation between pollution and density. "Even though larger cities are typically more energy efficient with lower per-capita emissions, more people still translates to more pollution."

Potential for Increased Crime

While there are a number of external factors that can contribute to crime rates, it is worth consideration that there is a notable correlation between density and crime. In a comparison of the 100 most densely populated counties in the United States, the top 25% of counties when ranked by population density have an extremely high average rate of violent crime as compared to lower density areas. The upper quarter have an average violent crime rate of 569 per 100,000 people as reported by the Federal Bureau of investigation. Contrast that with the bottom 25 in density, which have an average violent crime rate of 420 per 100,000 people. The lowest average rate was that of the second quarter of counties (medium-high density) at 390 violent crimes per 100,000 people. It is significant to note however that this quarter of counties also has a significantly higher median income than the others in the comparison.

Increased Depression Rates

The US National Library of Medicine and the National Institutes of Health have all correlated increased risks of mental health issues with increased population density, traffic noise and pollution. "Studies have shown that the risk for serious mental illness is generally higher in cities compared to rural areas. Epidemiological studies further confirmed that the risk for

schizophrenia was higher in people who grew up in cities (versus rural areas), thereby exhibiting a dose-response relationship: The more time spent in an urban environment as a child, the higher the risk for schizophrenia as an adult.” A study published in an October 2004 issue of American Journal of Public Health also showed positive correlation between cases of clinical depression and increased population density in developed countries. “Symptoms of major depressive disorders include lethargy, worthlessness and disengagement from things suffers used to find interesting. This depression may stem from various environmental factors including a diminished sense of community and meaningful social interaction.” The potential mental health effects of living in very population dense areas are especially harmful to adolescents.

Is Some Level of High-Density Effective?

While the content of this study clearly indicates that high-density housing alone is not an effective solution to improving affordability, it is not intended to suggest that high-density should not exist. While we do not support mass high-density as a solution to affordability, we are also not in support of an Urban Sprawl solution. Higher density, multi-family homes are very much a needed part of the housing supply and demand market. The key to effective high density is controlled moderation of levels as well as strategic placement of units.

Access to Opportunity

High-density housing that is geared towards affordability needs to be located in areas that provide access to opportunities for the intended demographic. The McKinsey Global Institute warns of the dangers of improperly located

density. “The best thing cities can do is to make more land available for housing, preferably land that puts poor people near opportunities. Siting affordable housing on the outskirts of town runs the risk of cementing poverty, rather than alleviating it. McKinsey recommends cities pursue transit-oriented development (housing built around new lines and stations), open up unused public land, and have policies designed to get development started quicker (like higher taxes for land that sits idle). “Inclusionary planning,” meanwhile, allows developers to build more densely in return for commitments to make more affordable housing available.”

In order to alleviate the risks of “cementing poverty,” the right location is key. These developments need to be near easy access to public transportation for those that do not have vehicles. In order to ensure that traffic is reduced, and for those that do have vehicles, it should be near transportation corridors. It is also extremely important, as the institute points out, that they be near opportunity. This means close proximity to job centers where there is access to employment.

What is the Answer to Affordable Housing?

In an effort to provide solutions and not just problems, it is essential to explore effective solutions to affordability issues. However, it is also vital that the solution be equal to that of the problem. The use of the buzzword “crisis” is exaggerated and inaccurate. All data points critical to evaluating housing affordability give no indication of crisis level. In fact, many of the quantifying measurements designed to indicate home affordability suggest a shift in the correct direction for Salt Lake County and the state of Utah. While some corrective action and long-term evaluation makes sense, the unwarranted

push for massive increases in density is severely over reactive and unnecessary.

More Inventory of All Types

Primarily, we need all inventory of all types, not just multi-family. As pointed out in the first section, the basic economic principle of supply and demand is at the heart of any issues relating to affordability. Again, it is crucial that we not be too reactive in comparison to the situation. A recent article in the Deseret News points out that Salt Lake had 48.6 percent inventory growth from 2017 to 2018. This shift in inventory was the second highest in the country for the same period. This falls directly in line with the historic ebbs and flows of the housing market supply. Because of the severity of the recession, the gap in supply was longer than normal, but the market is naturally beginning to correct itself. As we examine inventory we must also remember the basic principles of the market. Increasing inventory of only multi-family homes would be a tremendous mistake for a number of reasons. As the data from the National Home Builders Association indicates, multi-family starts are already above that of normal, pre-recession levels. The slower growth has been the return of single-family starts, which has had the greatest effect on affordability.

In an article on affordability, Roger Valdez, the Director for Seattle for Growth points out, “We don’t need more affordable housing; we need more housing so it will be affordable. If the number of housing units meets or exceeds the number of people that want and need them, those people have more freedom of choice, more mobility and more opportunity.” As the Gardner Institute reports, the number of existing home listings dropped 70 percent in a 10-year period. As previously discussed, this is a direct result of a lack of “level-up” housing causing many would-be sellers to stay put. Joel Kotkin of Chapman University says a possible way to assist

in affordability is to include “small, wood-framed, single family houses, the type we usually call starter homes” as opposed to only problematic high-density units.

Planning Outside of the Wasatch Front

Many of the fastest growing metropolitan areas in the United States that are maintaining affordability are doing it by growing out not up. In speaking to increasing affordability, the Cato Institute says, “The only real solution is to repeal the state laws and local plans that created the problem in the first place. That means abolishing growth boundaries and other constraints and allowing developers to build and sell homes outside of existing urban areas.” For the Salt Lake metropolitan area, this means planning for growth outside of the Wasatch Front. This means looking to the plethora of open space in places like Tooele County and the Cedar Valley.

As the tech boom continues to grow and job centers in Utah County multiply, this increases the feasibility of sustained growth in outlying areas such as Juab and Sanpete counties. Improved transportation corridors and enhanced public transit in these areas will make potential commutes very similar geographically to Utah, Davis and Weber County commutes when Salt Lake City was the primary job center in the state. These outlying areas have a significantly better chance of creating affordability than trying to confine growth to an already packed Wasatch Front. This is not in any way a call for uncontrolled urban sprawl. Careful planning and regulation should absolutely be a part of continued growth. However, the avoidance of urban sprawl does not require confinement of millions of people to a 500 square mile area.

Reduce Barriers to Financing

As the Gardner study discusses, some level of housing issues exist that have nothing to do with

the housing market itself. Financing is one of the primary barriers to home ownership. A McKinsey Global Institute evaluation of financing resolves that, “Cities can help lower-income residents afford new homes by minimizing barriers to finance, particularly in the developing world. The report suggests three ways: reducing the cost of issuing mortgages (by, for example, standardizing the way properties are valued), reducing the cost of funding mortgages, and setting up mandatory savings funds that offer below-market interest rates.”

In speaking on government regulation affecting financing and affordability, Edgar Olsen, Professor of Economics and Public Policy at the University of Virginia says, “To serve the interests of taxpayers who want to help low-income families, Congress should shift the budget for low-income housing assistance away from supporting housing projects and toward helping tenants pay their rent. It should also eliminate subsidies for the construction of new housing projects. Phasing out housing projects to shore up the housing voucher program would ultimately free up the resources to provide housing assistance to millions of additional people. In the entire country, there are only about 600,000 homeless people on a single night and more than 3 million vacant units available for rent. People who want to provide housing assistance to more of the poorest households should support expansion of the housing voucher program rather than subsidizing the construction of additional housing projects.”

Allow the Market to Correct Itself

While some action and planning will be beneficial, history indicates a recurring cycle that will correct itself. As discussed multiple times throughout this study, the housing market has a natural ebb and flow pattern. The severity of the recession definitely caused a larger than normal

ebb, but we are already seeing numerous signs of a rebound.

Affordability indicators are showing significantly positive increases and inventory is working its way back to normal. As we see increases in inventory, it is also important to consider the investor market in relation to the supply of multi-family homes. The Gardner Institute reports that nearly 40 percent of investors will plan to sell their property within the next five years. With the natural return of inventory, we will also see an increase in the number of available multi-family units as the existing home supply grows. All of this combined with the already larger than normal construction starts of multi-family homes could create negative results if we continue to overbuild high-density housing.

The Cicero Group, a well-respected Utah-based data and predictive analytics firm often recognized by the Salt Lake Chamber of Commerce, recently released information regarding the projected inventory vs supply problem in the state. “With the one-to-two-year lead time that it takes to complete housing units, I anticipate that housing supply will catch up to demand within 12-18 months,” said Randy Shumway, chairman and partner of Cicero Group. “That means we’ll continue to see residential unit values be strong and even increase in the near term, but that construction will finally be at pace with Utah’s population growth in about year.” With the housing supply naturally correcting itself within the next two years, an attempt to artificially increase it with forced high-density will send the supply and demand curve wildly in the opposite direction.

Conclusion

Fueled by developers, politicians and the media, a growing narrative of a housing “crisis” and an ultra-high-density solution is sweeping its way

through the state. Developers have curiously hired PR firms and legal experts to “educate” the residents along the Wasatch Front of the need for their proposed communities. Despite a complete absence of any analysis and historical data to support the ideas, politicians have also joined the developers in the high-density housing movement. Said developers and politicians, along with the media, target those who identify the lack of analytical and historic support for this plan by resorting name-calling. Some of the most common are NIMBYs (not in my backyard), citizen mobs and neighborhood busy bodies. This is a calculated tactic intended to characterize those who opposed their ideas as torch bearing, pitchfork carrying, anti-development protesters. It makes it easier for them to push their narrative if they can make the opposition appear to be careless individuals who are only concerned about themselves.

Those who support high density continue to create these strawman arguments. They constantly ignore the truth and substitute it with a distorted version, artificially strengthening their own argument. The reality is, we are not what the developers, political leaders and media want the public to believe we are. We are not anti-development. We are not anti-multifamily housing or anti-apartment. We are not NIMBYs that will accept nothing but low density, single-family homes on sprawling one-acre lots. This is a false narrative created by those who profit from high-density development.

This concept about the myths and realities of urban sprawl are discussed at length by Dr. Larry S. Bourne, PhD FRSC MCIP RPP, a professor of geography and planning, and director of the graduate planning program, at the University of Toronto. He points out that the traditional and correct definition of urban sprawl refers to suburban development that is “haphazard, disorganized, poorly serviced, and largely unplanned.” Many have begun to incorrectly

define it as, “any extension of the suburban margin; to other it is synonymous with the spread of development onto sensitive green lands and agricultural soils, increases in highway congestion, or the proliferation of new subdivisions of homogenous and low-density, single-family housing.”

This gross improper defining of urban sprawl has developed a false narrative that there are only two ways of thinking when it comes to growth, you either support a high-density solution or you support unregulated, uncontrolled urban sprawl. This assumption is wildly false and inaccurate. The support of balanced growth of all housing types, centered around well planned coordinated communities is not and never has been “urban sprawl.” Dr. Bourne explains the reasoning for this falsification of urban sprawl as rhetoric that “serves as a protective ‘all-reason’ umbrella under which special-interest groups and politicians can cluster in order to advance their own political agendas, and in so doing shield themselves from potential criticism over those agendas.” He continues to say that we must separate “myth from reality.” It needs to be accepted that suburban growth is very likely to continue as long as populations continue to grow and a significant number of individuals desire single-family housing.

“Our challenge is to design objectives that more accurately reflect the development trajectory of large and growing urban regions. These should not be pie-in-the-sky objectives or pious statements against sprawl, which are comforting to some but largely useless as guidelines for policy decisions. Nor should they be objectives that benefit one special-interest use or user in isolation from, or at the expense of, the needs of others. Instead, they should provide concrete goals and targets that recognize the difficult trade-offs involved in satisfying the often conflicting demands for economic spaces and environmental conservation. They should also

recognize the uneven costs and benefits that flow from those decisions, and identify the needs of the next generations for affordable housing and living space. The fourth challenge is to address the excessive use of space by non-residential uses, and to insist that such activities pay the true spillover costs of their developments.”

As a citizen action group, we are logical thinkers, driven by actual data and research. We support methods that are proven to work and not those that have been proven to fail. We are a citizen group that supports well-balanced and well-planned growth in Utah with a mix of all housing types. We recognize that growth will inevitably bring change to our communities, and we embrace the reality of change when it is done responsibly. We advocate for fairness to all parties impacted by growth - existing residents, future residents, local leaders, and the developers themselves. Development should be a collaborative effort that harmonizes the needs and visions of a community, with the desires of the builder.

In addition to the data shared, surveys show that a majority of Utahns do not support the opinions of state leaders. A recent survey of 2,213 residents across nine of the largest counties along the Wasatch Front and in Northern Utah show that 56% would oppose a high-development in their community. The survey also shows that 80% of respondents believe long-term planning decision should be made at the community level, by local government or other community groups, versus 6% that support those decisions being made by the Utah State Legislature. Similarly, a whopping 88% say that they most trust community leaders and organizations regarding communication about development plans vs 2% who say they most trust state leaders. The data were weighted to ensure that the demographics of the respondents were reflective of all registered

voters in the nine selected counties in Utah, specifically in regards to age, gender, and county.

Our goal is to give voice to residents who feel that the current “growth narrative” in Utah favors developer interests and state power over local control. Land use planning and zoning should remain in the sphere of municipal control, supported and influenced by citizen input and backed by supporting data. We believe residents know their communities best, and have a vested interest in how their communities are shaped and influenced by growth.

Research resounding concludes that high-density housing has historically failed to produce affordability. Cities that have attempted to build their way out of affordability issues with HDH are now the most unaffordable in the country. Along with long-term correlation with a higher median multiple, high-density solutions are also correlated with a number of other problems such as increased pollution, potential for increased crime, increased rates of mental health issues and a strain on public resources to name a few. Experts across the country point to a number of other solutions as more effective responses to affordability issues. We call on political leaders to adhere to these proven methods as opposed to decision making that puts the developers above all else.

Supplemental Data Regarding the Development of Southwest Salt Lake County

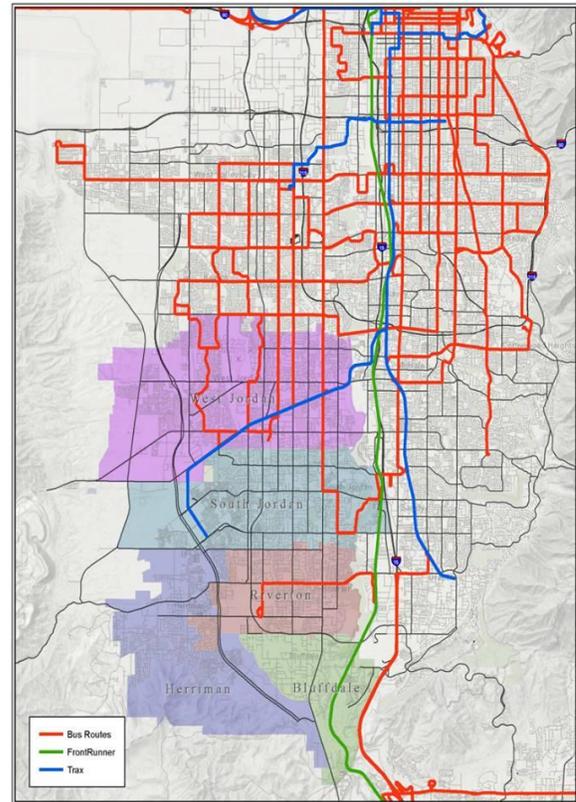
The South West corner of the valley has been an extremely popular target for the high-density proponents. Even though the majority of supporters do not live near the proposed areas for increased density, it would seem logical that they look towards this area because of open land. However, beyond that single qualifier, this location has no other matching characteristics that are necessary for a site proposed for a high-density development.

Though it has been clearly established that high-density is not a solution to affordability, some higher density, multi-family units and apartment complexes are a necessary component of an affordable housing market. As previously discussed, the McKinsey Global institute has found that high density built in the wrong location can actually cement poverty rather than alleviate it. Any such developments should be built around transportation corridors and near job centers. They should also have easy access to effective public transportation. The Institute also concludes that they should not be built along the outskirts of town.

Southwest SLCo Public Transportation

Public transportation is enormously important for the success of a high-density development. As made clear by the UTA public transit map (figure 17), the Southwest corner of Salt Lake County has poorer access to public transportation than anywhere else in the valley. Considering that statistically, those who gravitate towards multi-family units have a lower rate of vehicle ownership, effective public transportation is a necessary component of selected locations. With the growing job market

Figure 17
UTA Public Transit Routes



Source: UTA

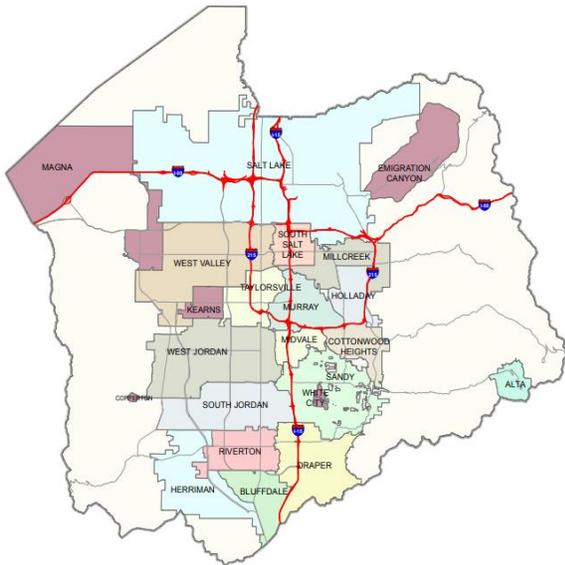
in Utah County, the current transit routes become even less effective. The closest light rail station, 3 to 6 miles from current open space, takes south valley and Utah County commuters nearly 10 miles in the wrong direction. This significantly decreases the attractiveness of an already poorly accessible public transit system.

Southwest SLCo Commuter Access

Another key element of high-density development locations is direct proximity to transportation corridors. Building HDH units close to freeways is key to reducing traffic problems. It is also imperative for improved access to employment opportunities for lower income households. As visible in the current Salt Lake Valley Interstate map (figure 18), the southwest corner of the valley has the least access to transportation corridors, especially the primary artery of I-15, than any other location in the valley. East to West commuting has been an

especially large problem for west and southwest Salt Lake County cities for quite some time. While the slow freeway conversion of Bangerter Highway will eventually help alleviate some issues, it still does not provide a viable east to west solution for daily commuters. High-density developments in the southwest valley will significantly exacerbate an already enormous traffic problem.

Figure 18
Salt Lake County Interstate Map

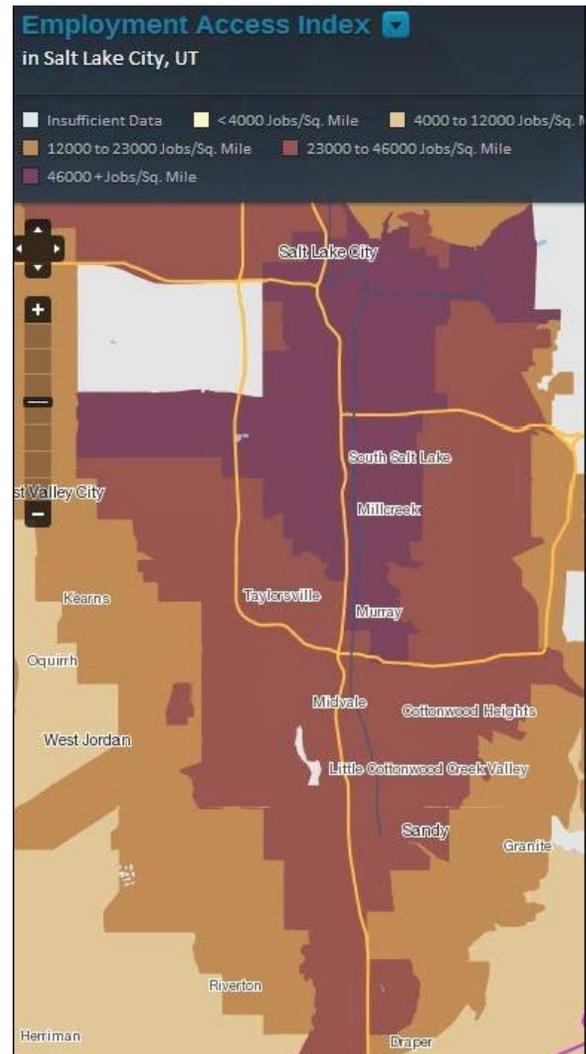


Source: Salt Lake County

Access to Employment Opportunities

Especially crucial to high-density developments is access to employment. Much like many of the other key elements necessary for HDH communities, the southwest valley is also lacking in job density. This area of the Wasatch Front is quite far from anything resembling a job center. While stores and other retail provide some level of employment, the primary concentration of providers is located along the center of the valley. While there is a great deal of growth into Utah County from an employment perspective, the majority is still concentrated along the I-15 corridor. The location of the southwest corner

Figure 19
Jobs Per Square Mile



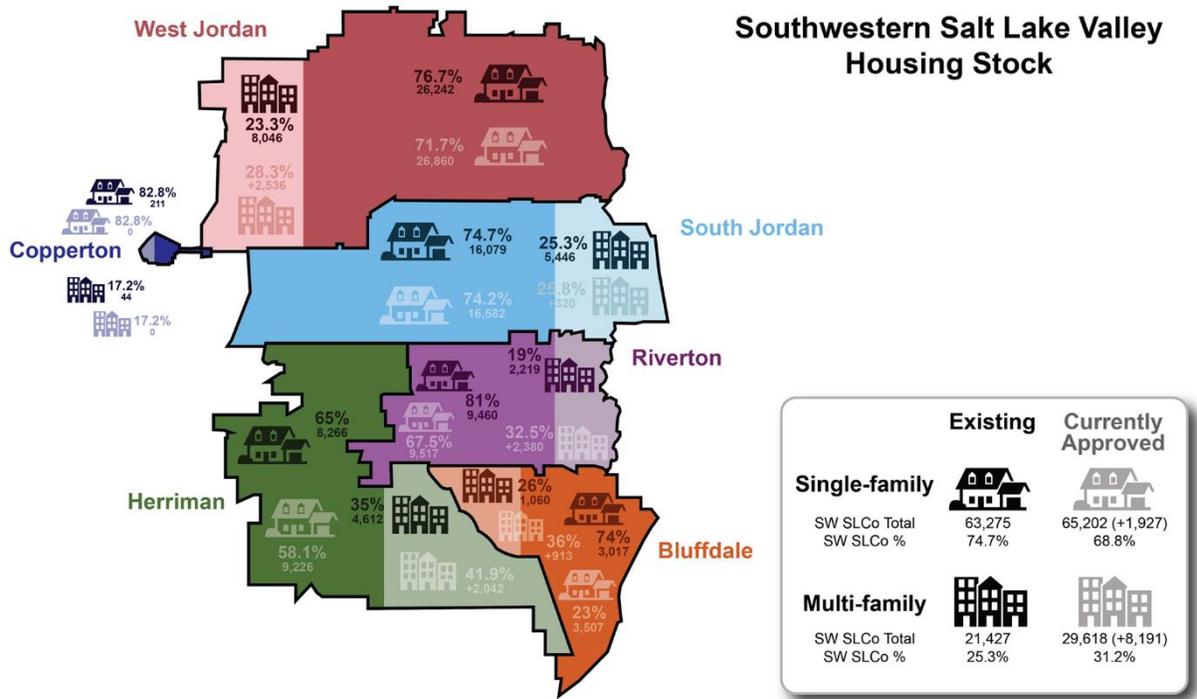
Source: Center for Neighborhood Technology

of the valley for a high-density, master planned community would be a failure in accordance with the principles outlined by the McKinsey Global Institute. It is simply void of any qualifications required to sustain a successful outcome of high-density development.

Current Share of Multi-Family

Many individuals that support high-density development in the southwest corner of the valley are siloed when it comes to a realistic sense of life in this corner of Salt Lake County. There is a perception that we are all sprawling

Figure 20



acreage with huge residential lots and large dry farms in between. The reality is that this location has at least equal to, if not a higher ratio of multi-family to single family-homes than anywhere else does in the County (Figure 20). Herriman especially has a higher population density than most areas when looking at developed land. This will only grow with the percentage of currently planned construction sitting at nearly 42 percent for multi-family homes.

Take into consideration that this high share of multi-family homes exists without the inclusion of the massively dense Olympia Hills proposal. In its original state, the Olympia Hills community sits at a higher count of people per square mile than Queens Borough in New York City. Going back to the false narrative of the selfish southwest valley residents, the current highest population density in the entire state of Utah is Kearns Township, which has 12 persons per acre. The Olympia Hills development max unit count would put the density at nearly 3 times that 35 persons per acre. So for any individual that felt the “NIMBYs” of southwest Salt Lake County are

selfish for objecting to 35 persons per acre in their backyards, recognize that the most any one else has is 12. Proponents and many media pieces about the development improperly referred to it as a "Daybreak like" community. Daybreak is a well thought out, master planned, mixed-use development that makes sense for a number of reasons. For the record, the density of Daybreak is 11 persons per acre or less than 1/3 that of the Olympia Hills proposal. This is the type of mass, poorly planned high-density that concerns so many residents.

The southwest part of Salt Lake County has about one-third of the entire county population. With the bulk of undeveloped property left in the county, we could see that grow to over 40% of the total population within the next 30 years. Looking at the combination of current and planned developments, 30% of the housing in this area is multifamily. Herriman itself is over 40%, which is easily at, if not significantly higher, than the composition of housing in other cities in the county. What this area of the county also has when compared to other cities is a lack of a

proportionate or fair share of county and state resources to support critical infrastructure, transportation, and cultural/recreational options. “One need only look at the east-west connectivity problems we have, or the fact that critical overpass projects on Bangerter Highway remain unfinished and aren’t planned for years into the future in some cases,” points out Trent Staggs, Mayor of Riverton City. “Public transportation options are woefully inadequate for our area, with only two core bus routes available south of South Jordan.” He goes on to point out that, even though we represent one-third of county population, our share of ZAP and TRCC funding is around 7% of all county spending.

This is simply not the right location for any kind of density beyond what currently exists. There is no public transit, no job centers and no transportation corridors. The share of multi-family to single-family will soon be higher, if it is not already, than any other residential based location in the county. It goes against all principles that should be taken into consideration when attempting to build a community of this density. This area is also being unfairly expected to withstand the worst of the perceived housing gap, while receiving a completely disproportionate amount of state and county resources. It is time that state leaders listen to those who elected them and remove themselves from local planning decisions. This community level development is most efficient when handled by community leaders and organizations that actually feel the effects of said planning.