



Housing in Wyoming: Constraints and Solutions

Pathways to Prosperity Project

April 2023

Executive Summary

Quantitative evidence supports the contention that Wyoming's housing market is constrained, to a greater degree than many other parts of the US. Prices are persistently above expectations given economic fundamentals in most parts of the state, and the supply of new housing in Wyoming is on average less responsive to price increases than in other US counties. This has undermined natural population growth and contributed to a low amount of population density close to city centers in Wyoming, as compared to other US cities with comparable population levels. Importantly, this phenomenon is not simply the result of pandemic-era economic frictions. The evidence shows that these constraints have durably persisted in Wyoming.

This housing constraint weighs heavily on the broader Wyoming's economy, and chokes off growth in new industries that could add to the Wyoming economy beyond its natural resource base. Businesses consistently report a lack of access to workforce as a leading problem that ultimately results from a lack of housing. Some businesses have even tried to create their own housing for employees, and news reports abound of teachers and nurses who secure jobs in Wyoming communities but then have to leave because they cannot find housing.

Key problems behind Wyoming's housing constraints include excessive regulations concerning housing density and insufficient investment in arterial infrastructure. For example, there is evidence that over-regulated minimum lot sizes in Wyoming are blocking the creation of supply to match free-market demand for houses with smaller amounts of land. Other areas of over-regulation include those concerning allowable housing types, building height, parking spaces per dwelling, and the housing approval process itself. This may be seen as surprising given Wyoming's reputation as a low-regulation state, but Wyoming maintains restrictions that other states and countries have discarded as outdated and highly counterproductive. Besides outright restrictions on housing development, we find that the most common cost driver undermining the housing development has to do with low public investment in needed arterial infrastructure, especially water systems. Land supply as well as material and construction costs are not primary constraints to housing development across the state, but may matter for select communities.

We suggest a portfolio of policy changes for the state of Wyoming to explore in order to solve its housing constraints. One category of changes is regulatory, and focuses on deregulation, reducing bureaucratic overhead, and shifting from veto-cratic to democratic housing approval procedures. Another category is focused on investment on infrastructure to support housing, and exploration of state-local funding structures to facilitate continuous infrastructure improvement. If implemented, these changes will not only help to solve Wyoming's housing constraints but also facilitate housing development in a way that combats urban sprawl, and in doing so protects open spaces outside of cities that Wyomingites value.

Housing and Wyoming's Growth Problem

Wyoming's economic growth is weak at the state-level and growth varies significantly across its local and regional economies (see "[A Growth Perspective on Wyoming](#)"). Sustaining high levels of wellbeing in the state requires that local economies continue to develop and grow tradable sources of income through existing and new economic drivers. Growth from new economic sources is already occurring in several larger population centers in the state, but is lacking in many more rural and remote parts of the state. People are "voting with their feet" by migrating out of more rural areas and into larger population centers in the state, and out of the state altogether. It is critical to understand what constraints are limiting stronger growth in parts of the state that are already growing and to understand pathways to growth for other parts of the state where economic activity and population are declining.

Low workforce availability is a ubiquitous problem found across the state. Across most areas of the state (with the notable exception of the Wind River Indian Reservation), labor markets are very tight (unemployment at or below the low US-average of 3.5%). Business managers, entrepreneurs, and public officials consistently identify a shortage of workers — across skill levels and types — as their primary constraint to expanding in Wyoming. State and local development agencies report a recurring problem where businesses interested in moving to Wyoming ultimately decide not to due to concerns about being able to hire workers that they will need. This is a major problem undermining the state's ability to diversify sources of tradable income and increase economic resilience. It is a good problem to have in a sense — much better than a widespread surplus of workers and high unemployment — but a problem still, especially given the state's long-term pattern of low population growth and low agglomeration.

Availability of workers is closely tied to availability of housing, and housing shortages are a commonly reported challenge across Wyoming. Among growing labor markets across the state, a core problem that is raised is an inability to expand the workforce due to limited housing supply. In the case of shrinking labor markets across the state, housing is also raised as a problem. Although one would expect a declining population to lead to surplus housing supply, communities point to low availability and poor quality housing stock as one of several constraints to attracting new businesses and residents. Results of a [housing survey](#) by the Wyoming Association of Municipalities show that communities as diverse as Lander, Douglas, Pinedale, and Cheyenne are concerned about housing shortages. In many places, workers travel significant distances, including from out of state, and many would prefer to live closer to work if they could find and afford housing. Interviews with businesses reveal that they too are in search of housing solutions for their workers, in some cases providing their own housing.

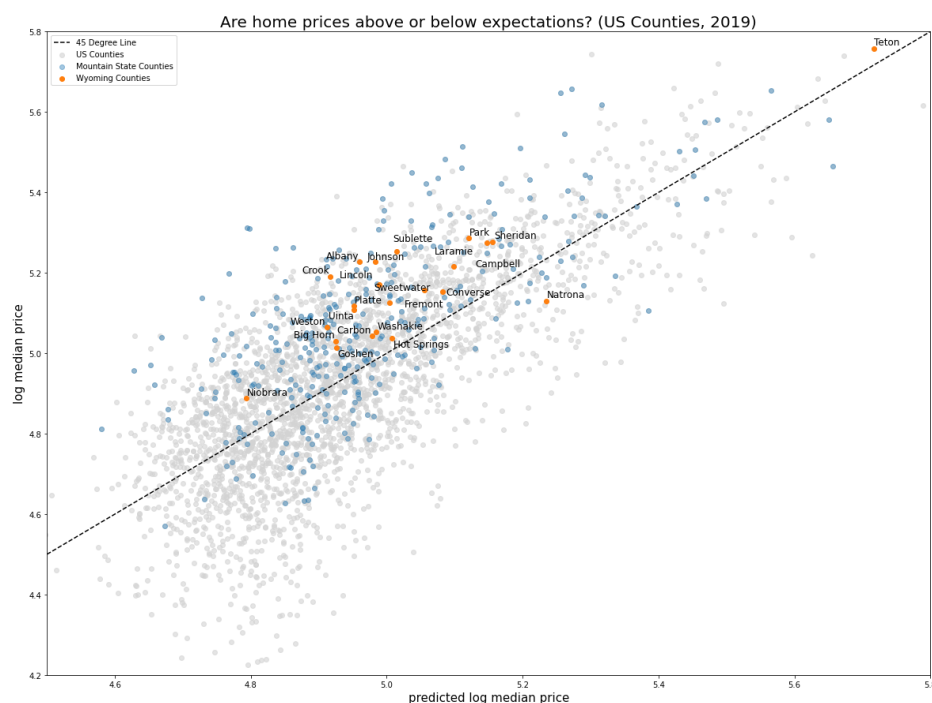
This note summarizes analytical observations on housing shortages and introduces relevant policy solutions. First, we check for quantitative indications of housing supply shortages across the state and identify where (in which labor markets) housing appears to be most constrained. We then explore potential causes of constrained housing across the state and develop a simple typology of problems that can be further assessed at the local level. We find

several common causes across most housing markets in the state. Finally, we assess implications for housing-related policy.

Is Housing Supply Constrained?

When looking across all counties in the country, Wyoming's home prices are persistently above expectations for all counties except Natrona (Figure 1).¹ Higher than expected median prices are a strong indication that housing supply is constrained. Because of high income levels (for example in Teton county), home prices would be expected to be high in many Wyoming counties, but they are above expectations statewide. This pattern is especially striking since housing supply is considered constrained across much of the country and this is considered by economists to be one of the most, if not the most, [pressing constraints on US economic growth](#). This pattern also holds for most counties across mountain states (blue dots in the figure), in some cases far above expectation, suggesting that this is partially a regional issue. The higher-than-expected prices appear to be persistent over the last two decades (Figure 2). This means that housing prices were structurally high in Wyoming during national crises such as the Global Financial Crisis and the coronavirus pandemic, and also during relatively slow growth in Wyoming over the last decade. Although a common pattern emerges across Wyoming, regional variation is important. Notably, Casper has enjoyed a significantly less constrained housing market during periods of high (pre-2008) and lower (post-2008) growth.

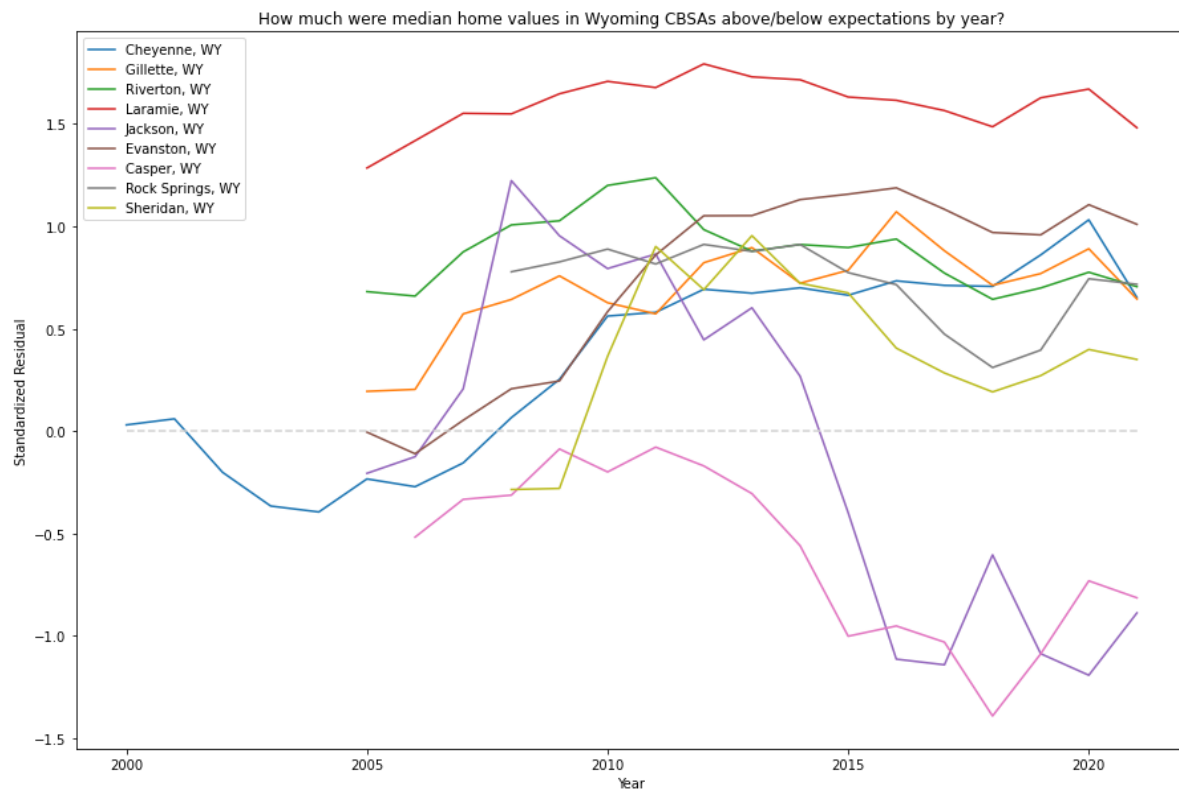
Figure 1: County Median Home Prices vs. Predicted Median Home Prices



Source: Own calculation using Zillow price data, BEA population data, driving times from Open Street Maps

¹ Predictions are based on income, population size, population, density, and remoteness.

Figure 2: CBSA Median Home Price Residuals over Time



Source: Own calculation using Zillow price data, BEA population data, driving times from Open Street Maps

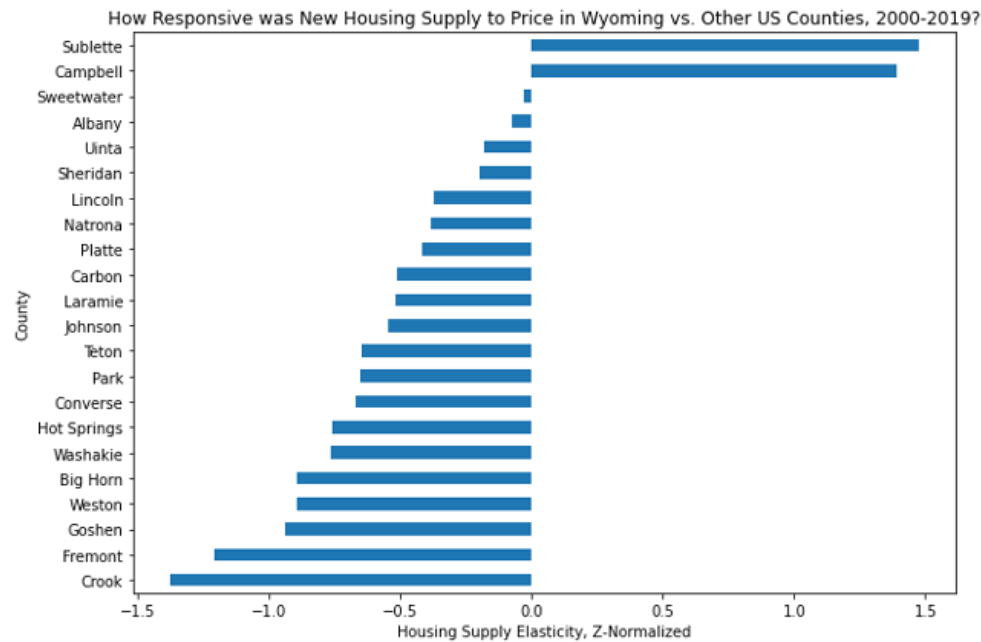
Note: This graph uses Core-Based Statistical Areas (CBSAs), which are likely more reflective of labor markets than counties, but limits data availability to larger markets.

Housing supply across Wyoming appears relatively unresponsive to housing prices.

Typically, high housing prices would stimulate a supply response as developers take advantage of a hot housing market. However, Wyoming has not seen a strong supply response across all of its larger markets; most counties have weaker supply responses than on average across the US (Figure 3). In other words, when prices rise there is little indication of developers expanding housing construction and when prices fall there is little indication of a slowdown. This is an indication of a market failure in housing markets that undermines the adjustment of labor markets. Workers will move to strong labor markets with available employment opportunities. An influx of workers will either lead to new home construction, or, when construction is blocked, will bid up the price on existing homes. For the most part, Wyoming is seeing a bidding up of scarce housing.² This problem is made more intense in markets where those moving in have higher incomes than the existing residents. This is the case in several Wyoming counties, especially Teton, Lincoln, and Park (Figure 4). These markets are seeing major upward pressure on housing prices as wealthy individuals are attracted to the natural beauty of the Yellowstone region, and this makes housing affordability an acute challenge for middle- and low-income individuals and families.

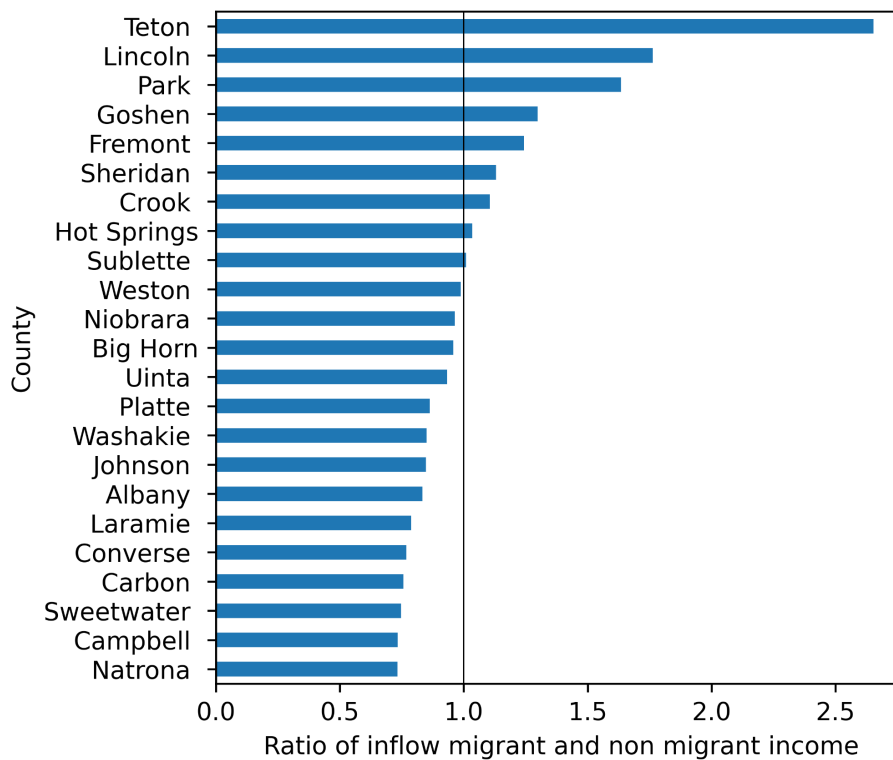
² Sublette and Campbell benefit from the growth in temporary housing around mining sites which may skew their supply “responsiveness” results

Figure 3: Elasticity of New Housing Supply to Housing Prices



Source: Own calculation using FHFA and U.S. Census Bureau

Figure 4: Ratio of Incomes of New In-Migrants vs. Existing Residents, 2019



Source: IRS ([SQL Tax Stats - Migration Data](#))

Persistently high prices with a low supply response is indicative of important constraints to housing development across the state. These quantitative signals confirm qualitative reports of constrained housing across the state. They suggest that common issues may drive the problem across the state. Price signals show particularly tight housing markets in several places that have seen relatively diversified economic growth and population growth over the last decade, including Laramie, Sheridan, Cody, and Jackson. But housing also appears notably constrained in counties where population centers have seen a decline in population over the last decade, including Crook, Johnson, and Sublette counties. A key question is what can explain this pattern across this state. As local, state, regional, and national response actions are considered, it is essential to understand what issues cause the problem. Otherwise, response actions can easily fail to address housing problems across the state, or even deepen problems.

The next section of this note summarizes findings on potential causes of an undersupply of private housing development in the state. To end up with undersupplied housing means that there must be constraints that prevent housing developers from building new housing or otherwise expanding housing supply. Wyoming not only has low housing development but also a low presence of housing developers. In fact, of the [fifty largest home builders](#) that operate in the region, only one operates in Wyoming as of 2022 and that is a non-profit. The next section of the housing note analyzes several possible constraints that residential home builders face in the state. Developers ultimately build housing where they expect high returns. Although Wyoming could be seen as a risky place to build given low population and a history of boom-and-bust cycles, recent home price trends suggest there should be returns. Several constraints could however create structurally high costs or limitations on the type of housing that developers build. We test the following broad constraints to narrow down which costs or limitations are most relevant to explaining low developer entry and expansion in Wyoming: (1) regulations, (2) infrastructure, (3) land supply, and (4) material and construction costs.

Several statewide patterns emerge, though individual cities and towns will have more unique issues and specific manifestations of constraints. As the next section will show, regulations and infrastructure-related constraints appear to be most binding. Particular regulations and infrastructure issues will vary by locality. Broadly speaking, there are two ways that developers can expand housing supply — either by building upwards or by building out. Neither process seems to be happening at a significant scale in relation to demand. Figures A.1 through A.3 in the Appendix show that dense, multi-family housing is low in key municipalities — Casper, Sheridan, Riverton, and Jackson — and that population density is often lower in the core of cities (including Cheyenne) than in comparator cities with similar population levels across the country. One exception to this trend may be Laramie, which has unique aspects as a college town. Regulations appear to be relatively more important in explaining the lack of building up. Meanwhile, contrary to what one might expect, Wyoming's low population and abundant open space does not lend itself to the rapid outward expansion of housing development in much of the state. Many population centers of Wyoming face constraints in building outward due to land ownership (including federal ownership). This is reflected in relatively high land prices, including for Laramie, Cody, Rock Springs, and Riverton based on

available data. Infrastructure challenges appear more important for building out, with some locations more physically constrained in their expansion in terms of land supply.

Testing Possible Constraints to Housing Development

(1) Regulations

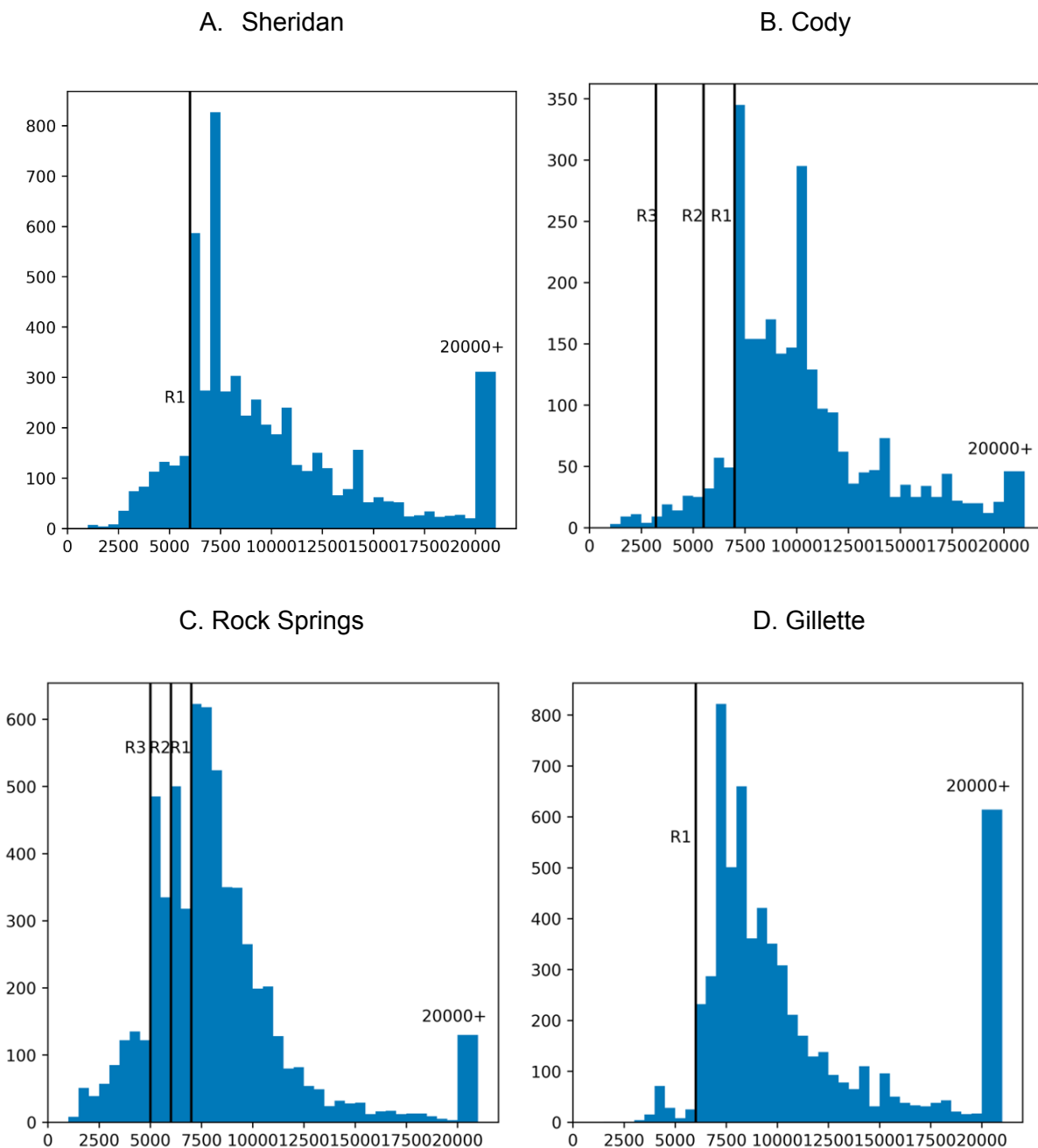
Regulations on housing development come in various types and appear to constrain housing growth in Wyoming. Across much of the United States, local regulations are seen as a major barrier to increasing housing supply, particularly within cities. Relevant regulations include zoning laws, not only on land use (i.e., agriculture, industrial, commercial, residential) but also more detailed residential zoning rules including minimum lot size, height regulations, parking regulations, etc. In a 2018 study, the Wyoming Planning Association (WYOPASS) found that local zoning laws limited housing supply, by prohibiting smaller and denser homes. In addition, [a 2017 CATO Institute study](#) analyzed how often land use or zoning laws are challenged in state appellate courts. The results give a clear signal for how much homeowners and residential builders are constrained by their regulatory environment. Wyoming ranks in roughly the top third amongst US states in both land use and zoning regulation challenges (19th and 16th respectively). Our further quantitative analysis confirms that local housing developments are hitting up against local regulations and relaxing these regulations can allow for more affordable housing.

Minimum lot sizes and restrictions on multi-family housing appear binding in many cities. These are common regulations that can increase housing scarcity and housing costs by prohibiting the development of housing that developers would be willing to build and residents would be willing to live in. Such regulations often allow for only single family homes on large lots or set other limits on what type of housing can be built. Although common, these can be highly problematic if the market demands more dense housing than regulations allow. Using Wyoming housing data, we find an unusually large amount of housing “bunching” at the minimum lot sizes and housing type regulations for several cities, signaling that the market would demand smaller lot sizes and more multi-family if they were allowed. Municipalities where we find this problem particularly problematic are Sheridan, Cody, Gillette, and Rock Springs (Figure 5).

Low density city centers may also be the result of building height and parking regulations. Other prohibitive zoning regulations can include height regulations and minimum parking spaces. These are problems that will tend to more intensively affect the center of cities. Height regulations can limit denser multifamily housing development through multi-story apartment buildings and parking requirements can significantly impact the design of buildings and therefore developer profitability. The low density of the core of cities in Wyoming (see Appendix) suggests that some cities may be bumping up these constraints in central areas, though locally-focused analysis would be required to understand causes. This pattern not only affects the center of cities but puts pressure on housing prices throughout the city as people who would choose to live in the center are forced to buy housing elsewhere (if they choose to live in the city at all). WYOPASS identified parking regulations as problematic, requiring more

parking spaces per family than the amount of cars that each family owned. Excessive parking requirements also increase need for land and consequently decrease housing supply.

Figure 5: Distribution of Housing Lot Sizes with Local Regulatory Thresholds



Source: Wyoming Statewide Parcel Viewer

These regulations vary by city and planners typically have significant discretion to change them, but they often face vocal local opposition. This is true not only for visible regulatory changes (for example, loosening height limits) but also for the process of individual parcel rezoning. Current state statute (protest petition laws) allows for owners of only 20% of neighboring lands to prevent rezoning by raising the city council voting requirements from a simple majority to a super majority. While this law allows local landowners to raise concerns, the current specification allows a small number of landowners to derail housing development for the larger public. For example, Cheyenne recently failed to zone land at Ridge Road and Holland Court to allow for a high density apartment as requested by the developer. This is a clear example of zoning binding a particular housing project that would have otherwise moved forward.

(2) Infrastructure

Arterial infrastructure appears to be a relevant constraint to developing housing on new land, while upgrading urban infrastructure may also constrain densification. Discussions with developers and other stakeholders across the state indicated that developer-borne costs of connecting land to existing infrastructure can be significant. Road infrastructure, water, sewer and electricity connections are necessary inputs into housing development, particularly for new subdivisions. Whether they are available or who covers the cost to provide them are crucial in determining whether it is viable to upgrade available land for residential construction. Such costs in Wyoming are usually paid by developers, which is not unique, but this does limit margins and may undermine housing supply expansion in some markets. Moreover, due to Wyoming's harsh climate and need for resilient water and electricity service, the costs of some infrastructure can be more expensive than in other states. In addition, as a city grows and potentially densifies the requirements for the existing public infrastructure increase. These upgrades (for example, water and sewer) are often relatively low cost in relation to their benefits, but developers cannot upgrade bulk infrastructure of the city for individual projects and are thus reliant on upgrades by the local government.

Water infrastructure is the most commonly raised constraint from widespread interviews. Connections to the city water system limit how much housing can be supplied in new developments within city agglomerations. While many homeowners in Wyoming rely on well water and/or truck their own water from city-provided filling stations (for example, in Lander), denser residential housing tends to require city water. Water connections require not only infrastructure buildout but also water planning and allocation decisions. The public cost of connections can run into jurisdictional issues that limit expansion as cities may bear the cost of construction but not collect revenues through water use. This reportedly binds some housing expansion, for example in Cheyenne. Additionally, water supply itself is limited in many parts of the state or could become limited in the future. Residential expansion can significantly alter water consumption, requiring updated water planning (for example, in Buffalo). Wyoming ranks 7th out of all US states in the water risk index of the World Resources Institute (2023), which is mostly driven by low renewable surface and groundwater supplies. Though many cities in

Wyoming do not use their allotted water rights, water stress in the larger region and allocations of the Colorado River water system could have far reaching implications in Wyoming.

There is a widespread need for improved water and sewer infrastructure in Wyoming.

This is evidenced by the 113 applications worth more than \$225 million that municipalities across Wyoming submitted for a water and sewer program of the American Rescue Plan Act (ARPA).³ While this is a very imperfect signal, it does show that there is a large need across the state for improving water and sewage systems as 95 applications worth a total of \$175 million did not receive funding initially. These projects, which among others included sewer and water pipeline projects, would improve the ability of places to absorb a larger housing supply. Locally, cities and towns are organized around water districts, and within this system it is challenging to plan, finance and execute larger water system upgrades and expansions. Some areas of Wyoming have a notable advantage in their water systems and provide some indication of how important the constraint is for others. The water system of Casper extends beyond its city limits and thus facilitates a more cohesive and large labor market. This allowed for a more natural expansion of housing that has contributed positively to lower housing and land prices in the commuting zone of Casper (see Figures 1 and 2). This contrasts with the systems of Cheyenne and other parts of the state.

Overall, infrastructure connectivity is an important cost contributor to housing expansion and reduces Wyoming's attractiveness to housing developers. Beyond water infrastructure, developers also report problematic delays and costs in establishing electricity and gas connections. Likewise road and telecommunications connectivity have important implications for the purchase price of homes and thus developer returns. While water is likely the most binding infrastructure challenge in most markets, other infrastructure disadvantages also add up across the largely rural state. The extent to which the state or a municipality provides these public goods or effectively subsidizes them therefore has significant implications for the decision of residential real estate developers.

(3) Land Supply

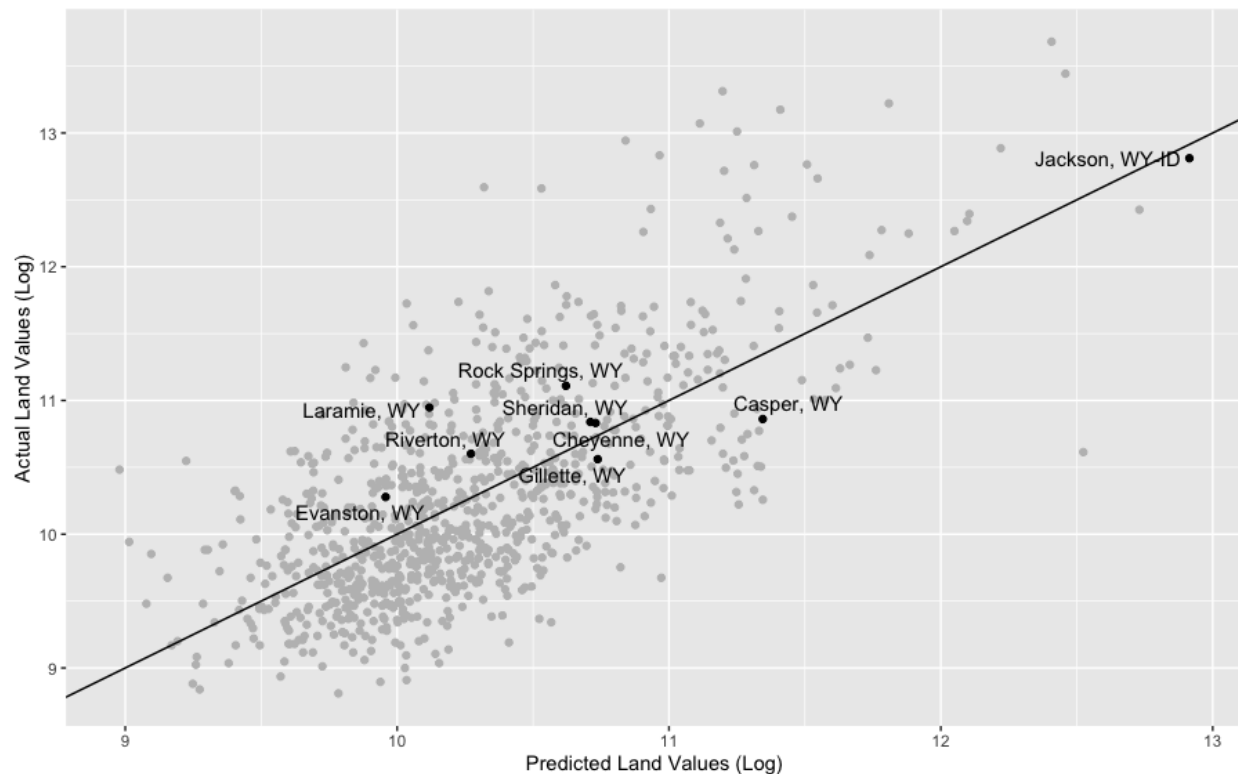
Land availability itself is a relevant issue for housing supply in a few places. In addition to the type of infrastructure buildout challenges discussed above, land supply itself can be constrained. Land can be completely unavailable for housing expansion in practice due to federal, state, and tribal land ownership. This is an obvious contributor to the housing challenges of Jackson since 97% of the land area of Teton County is owned and managed by the Federal Government, preventing the emergence of population centers in the county outside of Jackson. It also is relevant to spatial planning in the presence of military bases, as in Cheyenne. Land can also be constrained through the concentrated ownership of private interests, whether these are railroad companies or wealthy individuals. The land market is far from freely operating in Wyoming. Moreover, low property taxes disincentivize the sale of idle land by private landowners. Finally, geographic features including mountains and rivers can also dictate the spatial availability of land, costs, and exposure of areas to natural hazards.

³ Applications came from cities, counties, special districts, and tribal governments.

Higher than predicted land prices may signal land itself as a constraint for some markets.

Land supply constraints will vary by location and cost signals can be useful indications of where such constraints may be binding. One way to measure the supply of land available for residential construction is through its market price, which demonstrates the supply of land relative to the demand for land. Figure 6 captures land prices in Wyoming relative to what would be predicted based on population and income levels based on available data. This data comes with some caveats: for example, it does not cover parcels greater than two acres in size, which are very common in Wyoming. This provides an imperfect signal that land supply could be a relevant constraint for some parts of the state such as Laramie, Rock Springs, Sheridan and Riverton. However, land prices alone do not indicate that this is the defining problem for these places, they are merely an initial signal and the data does not allow for assessment for many other places.

Figure 6: City Land Values vs. Predicted Land Values



Source: Federal Housing Financing Agency

Prevalence of vacant land is another check on this constraint. An analysis from Wyoming's parcel data reveals that the share of vacant residential land varies significantly across the state. On one extreme is the City of Kemmerer, where 23% of its total area is vacant residential land based on the data. On another extreme is Green River where only 0.3% of its total area is vacant residential land. Most other cities do not exhibit such extreme patterns, but there are still

large differences. For example, the same share is 3.5% for Cheyenne and 14.2% for Casper. The larger supply of vacant residential housing in Casper reflects a less constrained housing market. This also interacts with previously discussed infrastructure aspects, in that arterial infrastructure that extends beyond the city center allows land that was not viable for residential construction to become available for new subdivisions and home construction. Other areas that show low vacancy rates are Powell (4.8%), Rawlins (5.8%), Sheridan (6.4%), Riverton (7.6%), and Cody (8.2%).

Ultimately, physical land availability will be an issue for some places in Wyoming due to specific local features, but this is not as widespread a challenge as regulations and infrastructure. Jackson, Cody, and Rock Springs each may face land supply constraints that are influenced by federal land as each have more than a third of their surrounding land within one kilometer under federal ownership. Since each of these areas are experiencing growth, this makes their other constraints that are more easily addressed, such as regulations in building in and building up even more important. Meanwhile, high land prices for Laramie and Sheridan cannot be explained by federal land, which is very limited in their surrounding areas. Therefore, other issues that may be more addressable must affect building out as well as building in and up. These may be regulatory or infrastructure-related or both.

(4) Material and Construction Costs

Despite a common contention that material and construction costs are a driver of the housing problem across the state, these costs are a recent global problem rather than a durable local problem for most of the state. An important component of housing development costs is materials and labor. In qualitative interviews, costs of construction are a commonly raised issue. The argument is that Wyoming's remoteness makes it more costly for developers to source materials and run their operations in Wyoming. However, a quantitative analysis of these factors indicates that although material and labor costs have been globally elevated since the pandemic, they have not proven more severe than expected in most parts of Wyoming. Overall construction costs seem to be significantly below the U.S. average, and residential construction wages were only above expectations in very few places in Wyoming over the longer term, as we will show below.

Overall housing construction cost indices show relatively low costs across Wyoming compared to the U.S. as a whole. While material and labor costs are very visible and have increased amidst U.S. inflation, average costs of construction are below the U.S. average across all places for which data is available from the RSMeans database. This database provides a city cost index which compares the national average cost of a standardized construction project to the cost of the same project in a specific location.⁴ The overall cost comparison of places in Wyoming ranges between 86.2% of the national average in Wheatland and 89.9% in Rock Springs (Table 1). The detailed nature of this data allows for a breakup of

⁴ The RSMeans data is constructed by surveying manufacturers, dealers, distributors and contractors all across the US to gather material and equipment costs. Labor costs are then based on trade-specific wages.

these costs into material and installation costs. Material costs are indeed slightly (but not egregiously) above the U.S. average across most of Wyoming. This supports the hypothesis that Wyoming's remoteness may make it more costly for developers to source materials to construct houses, though some of the highest indices in Wyoming are for cities on the I-80 corridor. Meanwhile, material costs are offset by installation costs that are significantly below the U.S. average. Installation costs include both labor and equipment rental costs. These installation costs are at about 70% of the US average for most places in Wyoming. These indicators signal that construction costs are not durably driving the housing problem in Wyoming.

Table 1: Housing Construction Cost Index, 2020

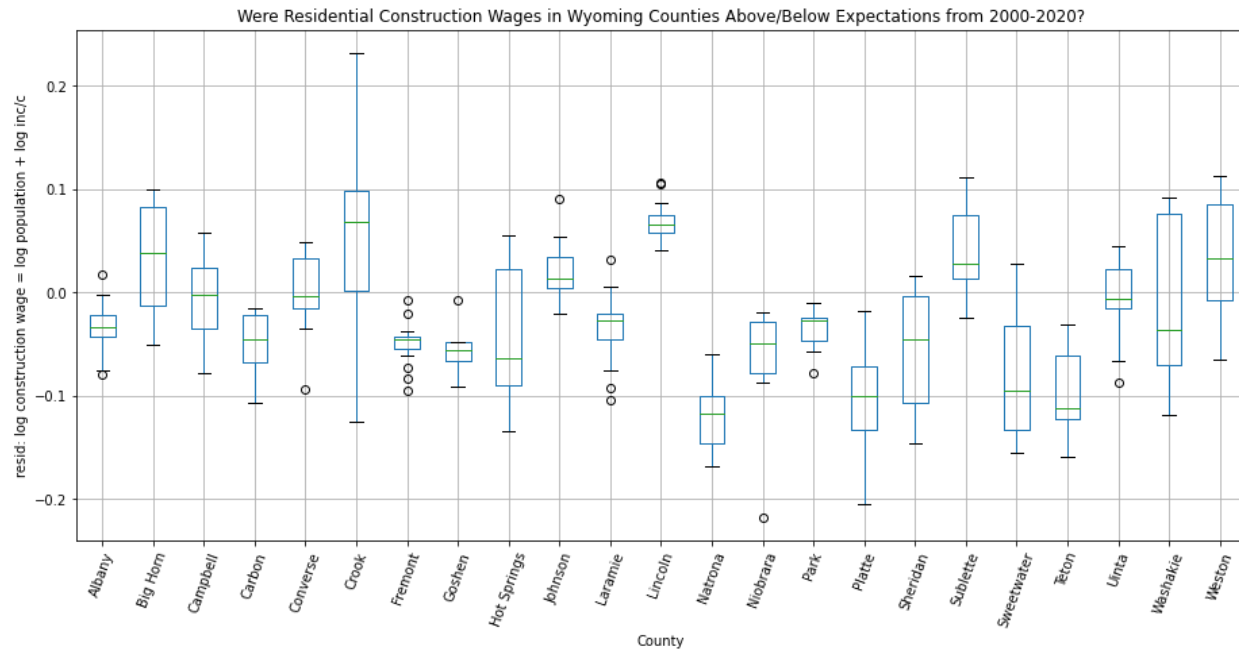
City	Materials	Installation	Overall
Casper	101.5	68.9	87.7
Cheyenne	101.1	72.7	89.1
Newcastle	99.6	71.1	87.5
Rawlins	102.0	71.5	89.1
Riverton	101.0	68.6	87.3
Rock Springs	103.4	71.4	89.9
Sheridan	102.5	70.2	88.8
Wheatland	100.3	67.1	86.2
Worland	99.7	70.7	87.5

Source: Gordian (2020)

A closer check confirms low relative installation costs across nearly all of the state over the medium term, but with some exceptions. Figure 7 provides an additional check of wages in the residential construction industry. The figure reflects residential construction wage levels for each county after controlling for population and local income levels. Controlling for income levels outside the industry is important because this reflects the purchasing power of home buyers. The box plot reflects the range for all the years analyzed. For most counties, wages in the industry tended to be lower than expected across years. The counties that saw higher wages than expected were Big Horn, Crook, Johnson, Lincoln, Sublette, and Weston. Interestingly, these are more rural parts of the state without larger population centers and many of these counties do have higher than expected housing prices (see Figure 1). For these places

construction costs may be a more relevant constraint, and local actions may be important.⁵ However for most of the state, and for all larger population centers, the fact that labor costs are consistently below expectations in Wyoming indicates that this cannot be the factor explaining why developers have not supplied housing in the state for which the demand seems to exist.

Figure 7: Residential Construction Wages in Wyoming's Counties 2000 - 2020



Source: Quarterly Census of Employment and Wages

Implications for Policy and Response Actions

This note confirms that housing shortages are a significant and widespread economic problem that warrants attention at the state and local level. The housing market in Wyoming is undersupplying housing across the state, resulting in higher than necessary housing costs to Wyomingites and undermining the state's growth and diversification. Even though housing shortages are widespread across the country, the problem appears even more acute in Wyoming. This is occurring in Wyoming even though the state has low-density population centers and lots of physical space. The lack of an adequate housing supply response to persistently high housing prices indicates a market failure, which is intensified by Wyoming having a small overall population and virtually no presence of leading national housing developers. State-level policy and state and local response actions must target the main constraints that undermine the entry of these developers and the expansion of Wyoming-based housing developers.

⁵ For example, in places where the cost of constructing a house locally is high, public or private procurement of modern manufactured housing may be helpful. This is a way that other remote, high-cost towns in Colorado and elsewhere have addressed their needs.

We find that regulatory restrictions on housing and arterial infrastructure hurdles are the primary constraints and are common across the state. Thus, these are logical areas to focus state-level policy changes and response actions. Despite Wyoming's reputation as a business-friendly and low-regulation state, there are intensive restrictions on what housing can be built and where. These restrictions vary across cities and towns but appear to be outdated versus market demand for housing. The immediate consequence of restrictions are higher housing prices and fewer options for everyone. The longer-term consequences are forgone job opportunities for generations of Wyomingites as businesses struggle to grow in the state due to widespread worker shortages. Reducing building and zoning restrictions that do not serve public health and safety needs would be an effectively cost-free policy response that would go a long way to address housing challenges in many parts of the state. These actions must be taken at the local level in many cases, but can be supported through state actions. Meanwhile, housing development in Wyoming is also constrained by shortages in infrastructure to support private housing development — particularly water infrastructure. This limits viable housing projects for private developers. While this is a widespread problem, issues vary across the state. Casper provides an example of how housing can expand more rapidly when infrastructure constraints are less binding, given how its water system more readily services outlying areas than some other Wyoming cities. Addressing infrastructure problems also requires local action, but unlike regulatory action, this entails real costs. State-level actions and resources are thus especially important in addressing these constraints.

Local regulations and infrastructure issues vary, and other local constraints may be relevant. While this section elaborates on state-level implications, local details matter. The regulatory space of various cities will differ and restrictions that are binding the densification of the center of Cheyenne or Sheridan or Rock Springs will likely be different than restrictions that matter for smaller population centers. Likewise, key infrastructure gaps will not only vary across cities but within cities. For some parts of the state, there are especially difficult challenges to building housing outward. In most cases, this implies that more attention is needed in building within the existing city, densifying parts of the city, and allowing for a natural evolution of housing options. However, some cities, for example Laramie may be able to identify solutions to building out and building up through addressing not just density regulations but the process of how zoning decisions are reviewed and decided. Although the cost of constructing houses themselves is not binding for much of Wyoming, labor and total costs might be a key obstacle for some of Wyoming's most rural counties. Manufactured housing may be a promising opportunity for these communities because it offers lower building costs. State-level actions can help to enable local problem solving on housing across all of these areas.

Relevant Actions for Regulatory Problems

State Level Actions

- **Revisit Protest Petition laws.** Current state laws specify that proposed zoning changes can be blocked if at least 20% of residents within a few hundred feet of the site in question respond to a mailed notification of re-zoning by indicating their disapproval.

Following this denial, a supermajority of the local council is required to pass the zoning changes in question. This is a clear and significant barrier to housing development in Wyoming. There is also an argument that these laws are veto-cratic rather than democratic, as they only respond to the desires of a slim share of citizens (20%) within an already slim share of an overall community (just those within a few hundred feet); especially so when the entire community already democratically votes in councilors who make re-zoning decisions in many capacities. Several states with protest petition laws have outright removed them for these reasons. We suggest revisiting these laws.

- **Revisit extraterritorial jurisdiction for Wyoming cities.** State statute used to give Wyoming cities a significant degree of jurisdiction beyond their formal boundaries (for example with regard to zoning, infrastructure, and health laws) to facilitate expansion as the city grows by annexing the land around it. These laws were repealed and weakened over time due to concerns about city over-reach and a lack of democratic representation of those living just beyond the city boundaries with regard to the city's decisions. However, these changes hobble the ability of cities to grow outwards, and particularly make development around a city's boundaries contentious and difficult. Wyoming should consider revisiting extraterritorial jurisdiction in a way that allows city expansion and also democratic representation.
- **Consider Front-Loading Public Hearings.** Having public hearings at multiple stages of the approval process for individual housing projects contributes to bureaucratic delays, high costs and low efficiency in housing construction. It also increases elements of veto-cracy rather than democracy in the housing construction process, as having many different public hearings for individual housing projects encourages responses from individuals who are narrowly concerned about specific projects rather than the public as a whole. Wyoming should consider inviting significantly more public commentary all at once earlier in the planning process, namely when communities design their forward-looking growth plans and zoning laws; and have this serve as a replacement for the many public hearings later in the approval processes for individual projects.
- **Consider incentivizing local governments to deregulate housing density restrictions.** While Wyoming is a low-regulation state in most respects, its regulations concerning housing density are relatively strict. Regulations of minimum lot sizes, for example, are creating blockages in the housing market throughout many parts of the state. In contrast, France — hardly a country known for low regulatory burdens — in fact deregulated in 2013 to remove minimum lot sizes nationwide. The state government should consider providing incentives to local governments to remove regulatory barriers concerning minimum lot sizes, building heights, minimum parking spaces, and more. This could be executed by creating a template of deregulated zoning laws, and providing fiscal support toward infrastructure cost upgrades that come with densifying for communities that adopt such changes. These changes would allow for market forces to work more freely in Wyoming's housing development. By allowing housing construction upwards rather than only outwards, this would also combat urban sprawl and protect surrounding open spaces.

Local Level Actions

- **Deregulation of housing density restrictions targeted at local issues.** Local decision-makers should review existing regulations on zoning and restrictions related to lot size, housing type, parking regulations, floor area ratios, etc. Local leaders must also conduct public outreach to make clear the costs of maintaining restrictions on everyone through lesser lower choice, higher costs, pressures to build the city outward into surrounding lands, and ultimately lost opportunities for future growth, jobs and economic resilience.

Relevant Actions for Infrastructure Problems and Other Costs

State Level Actions

- **Facilitate local access to and/or create state infrastructure funds.** Inadequate water and sewage infrastructure is a particular constraint to housing development in Wyoming, and many requests to fund upgrades to water infrastructure go unapproved. Wyoming may want to consider creating a state fund dedicated to municipal infrastructure, and as part of efforts to facilitate grant applications throughout the state ensure that local communities obtain better access to water infrastructure grants in particular. There are various ways to design state-level funds and some designs and architectures could directly support local funds with the flexibility to respond to local needs.
- **Provide technical support for local governments to identify housing infrastructure gaps.** Before infrastructure projects themselves can be funded, gaps must be identified. The state can play a role funding technical teams to help to identify infrastructure gaps and plan solutions. This can help to address backlogs in long-term infrastructure planning and also help to align regional infrastructure planning and strategies.

Local Level Actions

- **Local planners must continuously identify key infrastructure needs to enable private development.** Water planning is a key need for many regions, but cities may also have other particular infrastructure gaps. Some improvements can be locally funded through local revenues, but cities and regions can also create more forward-looking financial tools to subsidize the infrastructural costs of more housing. One approach that is being used in Wyoming and beyond is the development of a trust fund for housing. This fund can be initially capitalized through various means, including land sales or returns on property holdings. It can then subsidize or fully cover the cost of infrastructure. Where possible, it can be structured to effectively take an equity stake in its investments. For example, when investing in an arterial road, which will increase the property values of newly connected properties, it can collect returns on that increased

property value. The fund could also partner in mixed use urban development projects with private developers and recycle returns into the fund.

- **Purchase of manufactured housing.** Where appropriate, local governments can purchase manufactured housing to meet local housing needs and supply affordable low-income housing. This is most relevant for the most rural parts of the state, where the cost of housing construction on site can be problematically high, but this is not a systemic solution in larger and growing labor markets.

Leveraging Regional and Federal Support

In December 2022, the Western Governors’ Association released [Policy Resolution 2023-04: “Housing is Foundational to the Success of the West”](#). The Resolution touches on common points of agreement with this note, namely the importance of workforce housing for economic growth. The solution set proposed covers a wide variety of solutions, ranging from the likely ineffective, to the useful but non-transformational, to the fundamental. The least effective programs for the nature of the problem in Wyoming are those that subsidize demand rather than support new construction, such as the Private Activity Bonds financing, since demand is already high. Other useful initiatives, although they do not necessarily address constraints to housing supply, include lessening the red tape around federal housing programs. The most useful initiatives suggested from the Resolution center around channeling federal funding needs to flexible spending options at the local and state level, notably increasing federal allocation for state-level housing trust funds as well as increasing flexibility in Community Development Block Grant funds. Using the findings of this note and ongoing work by various local and housing task forces across the state, Wyoming could lead a push to build on this regional call to action.

Table 2: State and Federal Funding Streams Relevant for Housing-Related Infrastructure

Name	Description/Summary	Sponsoring Agency or Organization	State or Federal
Single Family Housing Direct Home Loans or Section 502 Direct Loan Program	Assists low- and very-low-income applicants obtain decent, safe and sanitary housing in eligible rural areas by providing payment assistance to increase an applicant’s repayment ability. Payment assistance is a type of subsidy that reduces the mortgage payment for a short time.	USDA	Federal
Low Income Housing Tax Credit Program	Tax credit financing available for development of affordable multifamily units.	Wyoming Community Development Authority	

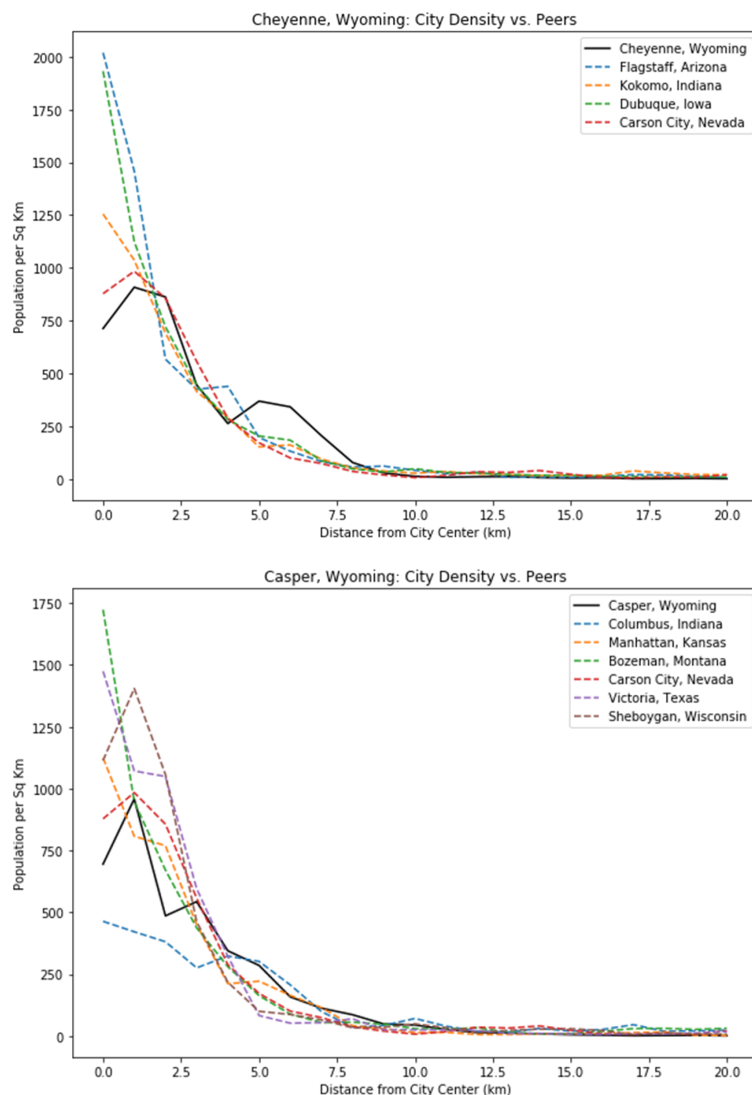
Community Development Block Grant	Grants available to local governments for housing and infrastructure development to benefit Low to Moderate Income persons, elimination of slum & blight areas and urgent need.	Wyoming Community Development Authority	Federal HUD
On-Farm Labor Housing Loans	The USDA offers loans at a 1% per annum interest rate to farming-related businesses to build new housing or rehabilitate previous housing developments that have become unlivable. The tenants must be farm laborers, meaning this grant aims to stimulate the agricultural industry by offering its workers an ideal housing situation, which is hard to come by for people in this trade.	USDA	Federal
Multifamily Housing Rental Assistance	The USDA offers funds to owners of multifamily housing developments so that they can help low-income tenants pay their rent and utilities. More specifically, the Rental Assistance Program ensures tenants will not have to pay more than 30% of their income for housing costs.	USDA - Rural Development	Federal
Mutual Self-Help Housing Technical Assistance Grants	The USDA's Rural Development department provides grants to non-profit organizations to fund residential construction projects where residents team up with construction professionals to build houses. This allows low-income families to help construct their own homes, all while taking pride in helping other families do the same, fostering a stronger sense of community in rural areas.	USDA - Rural Development	Federal
Single Family Housing Repair Loans & Grants	The Rural Development branch of the USDA offers loans and grants to low-income and elderly homeowners to make improvements or repairs on their property. Designated loans are for modernizing, restoring, enhancing, or removing safety/health hazards from a property. Awarded grants are for eliminating health and safety hazards.	USDA - Rural Development	Federal
Business Ready Communities (BRC)	Publicly-owned infrastructure program (also has planning grants available).	WBC	State
Mineral Royalty Grant (MRG)	To provide an essential public service.	SLIB	State
Clean Water State Revolving Fund	Sanitary sewer treatment and collection; storm water control; landfill water pollution	SLIB	State

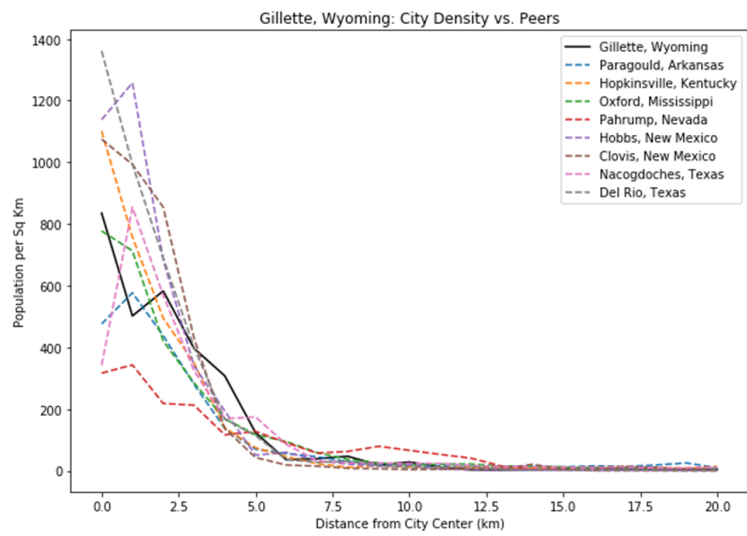
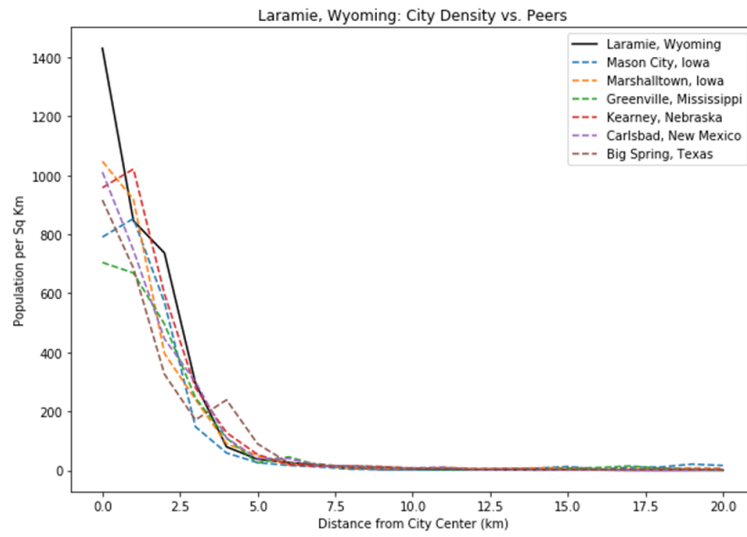
(CWSRF)	control; and other water pollution control projects.		
Drinking Water State Revolving Fund (DWSRF)	Drinking water systems, including source protection; treatment plants; storage tanks; transmission and distribution lines; and other drinking water related projects.	SLIB	State
Home Investment Partnerships Program (HOME)	The HOME Investment Partnerships Program (HOME) provides formula grants to states and localities that communities use - often in partnership with local nonprofit groups - to fund a wide range of activities including building, buying, and/or rehabilitating affordable housing for rent or homeownership or providing direct rental assistance to low-income people.	HUD	Federal
Housing Trust Fund	The Housing Trust Fund (HTF) provides grants to states to produce and preserve affordable housing for extremely low- and very low-income households.	HUD	Federal

Appendix

Figure A.1. Population Density vs Distance to City Center in Wyoming Towns vs. Comparators.

The following graphs were constructed using high-resolution population density data covering 30 meter by 30 meter cells for the entire US, from Meta. City center locations were determined by finding the area with the greatest concentration of businesses, informed by microdata from Dun & Bradstreet.





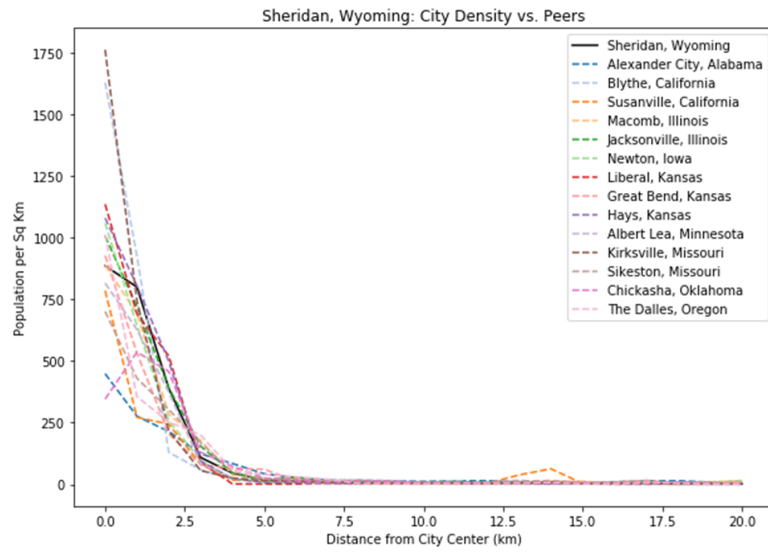
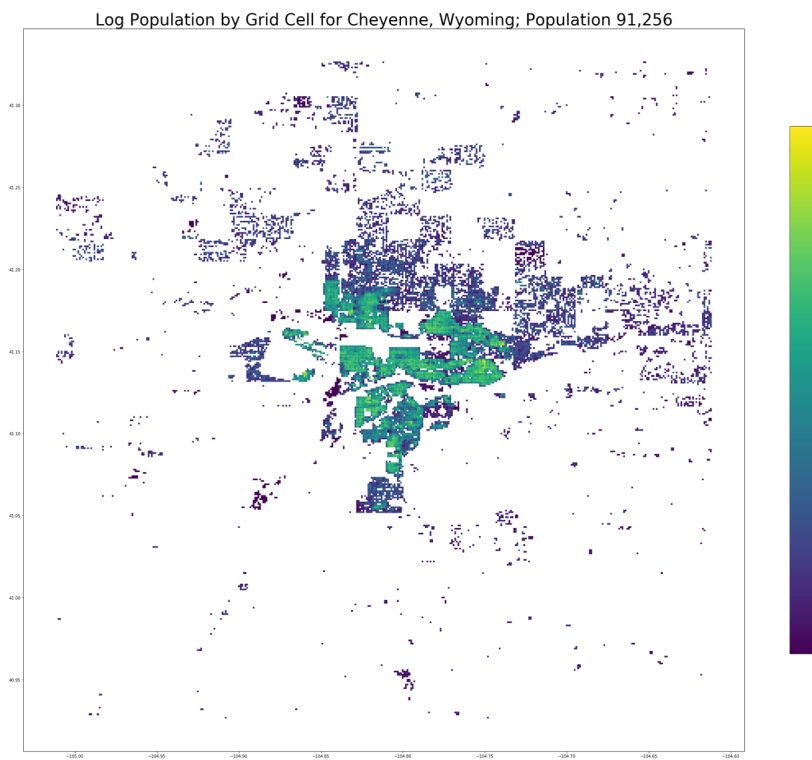
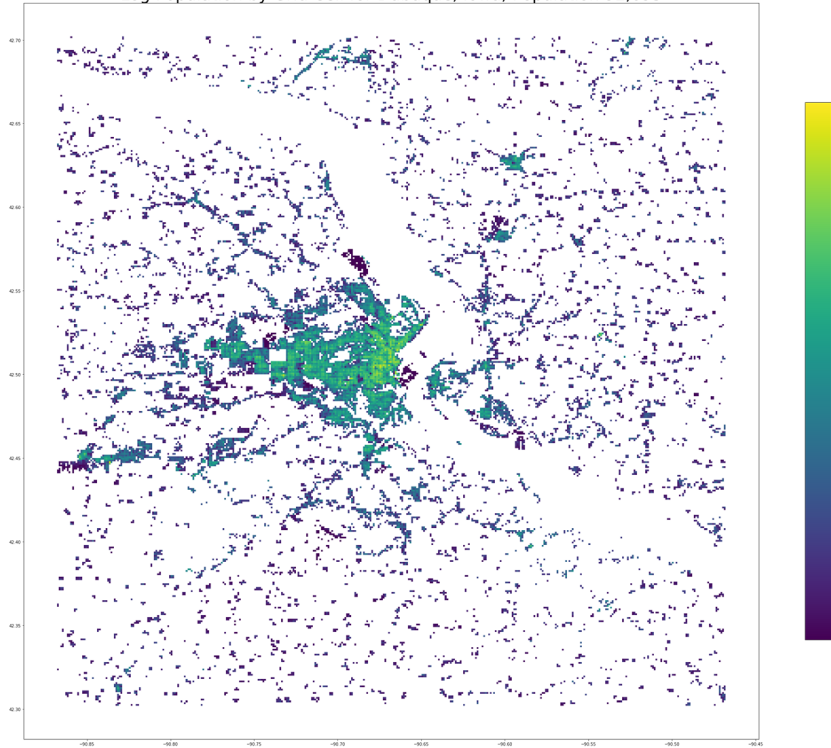


Figure A.2. Example Population Density Maps.



Log Population by Grid Cell for Dubuque, Iowa; Population 92,695



Log Population by Grid Cell for Flagstaff, Arizona; Population 92,663

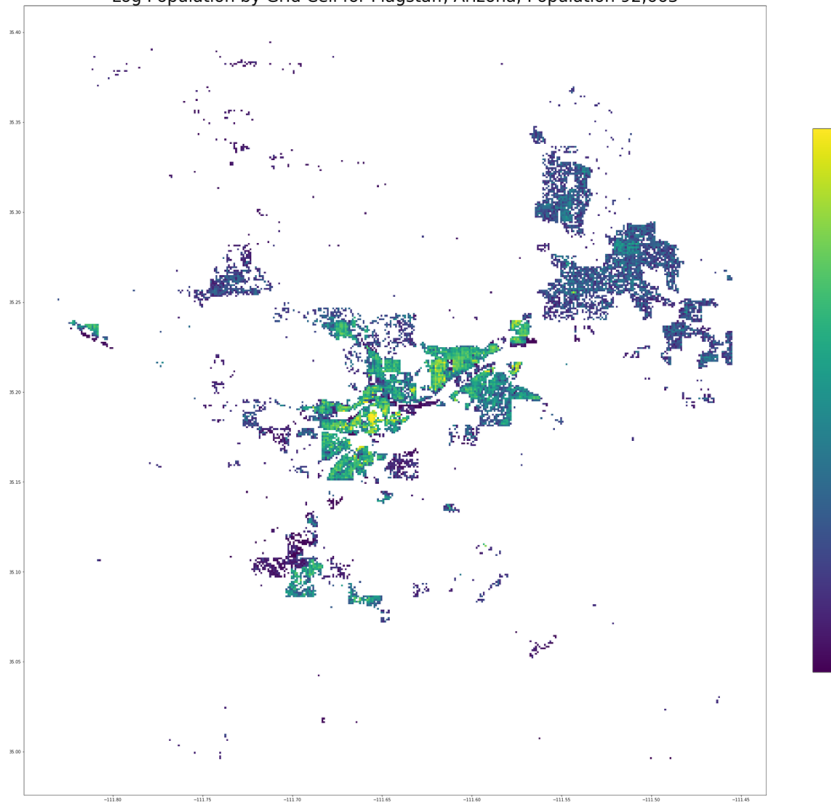


Figure A.3. Share of Housing Units in Multi-Family Structures.

