INCREASING MULTIFAMILY HOUSING UNITS IN MIDCOAST MAINE

Making Housing More Affordable in a Post-Pandemic Society

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UNIVERSITY of VIRGINIA

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Acknowledgements

I never set out to be an affordable housing policy practitioner. In the spring of 2021 I reached out to Hannah Pingree, Director of the Governor's Office Policy, Innovation and the Future (GOPIF) to explore potential policy concentrations for this project. She gave me two options: climate change mitigation policy or housing policy. I chose housing policy and alas this project was born. Thank you, Hannah, for giving me the opportunity to discover a previously unknown interest. I would also like to thank Hannah's GOPIF colleague, Ana Hicks, for her support and contributions to this project. Ana and I worked together in the Summer of 2021 researching ways to effectively leverage the $50 million Maine was allocated for affordable housing through the American Rescue Plan (ARP).

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Front Matter

Dedication

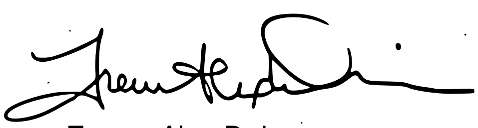
I would like to dedicate this project to two mentors whom I attribute credit for much of my professional success. Governor Janet Mills and Dr. Michelle D. Young both were strong proponents of my pursuit of graduate-level studies. While working under both of them I learned first-hand the value of ethical leadership, firm persistence, and citizenship. It is hard to image me at this point in my career had neither of them so graciously taken me under their wings at different points in my career.

Disclaimer

The author conducted this study as part of the program of professional education at the Frank Batten School of Leadership and Public at the University of Virginia. This paper is submitted in partial fulfillment of the course requirements for the Master of Public Policy degree. The judgements and conclusions are solely those of the author, and are not necessarily endorsed by the Batten School, University of Virginia, or by any other individual or organization.

Honor Statement

On my honor as a student I have neither given nor received unauthorized aid on this assignment.



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April 8, 2022

Executive Summary

The City of Bath, Maine is experiencing an affordable housing crisis (Planning Decisions Inc., 2014). One in six households are extremely cost-burdened spending more than 50% of their disposable income on housing costs. Among low-income renters, nearly three-quarters are cost-burdened (Planning Decisions Inc., 2014).

Cost-burdened residents are much more likely to move frequently than those who are not cost-burdened (Desmond, 2012). Increased residential mobility is correlated with a long list of negative social outcomes. These include higher rates of adolescent violence, poor school performance, health risks, psychological costs, and the loss of neighborhood ties (Sharkey & Sampson, 2010; Pribesh & Downey, 1999; Dong et. al., 2005; Oishi, 2010; Sampson, Morenoff & Earls, 1999). Collectively, these negative outcomes cost cities, states, and nations hundreds of millions of dollars every year (Desmond, 2012). Stable housing is the foundation for a healthy, prosperous, and fulfilling life.

Increasing the number of market-rate multi-family housing units has been proven to moderate housing prices across a market (Been et al., 2018; Phillips, Manville & Lens, 2021). The moderation effect in return makes housing more accessible and affordable to low and moderate-income individuals.

This research paper provides analysis and recommendations for the City of Bath to expand its stock of multi-family units in order to make housing more affordable. Three policy alternatives are proposed that could address the problem:

- **Up-zone Parcels:** Up-zone all parcels currently zoned R-3 for denser multi-use development.
- **Adopt an Accessory Dwelling Unit Ordinance:** Amend the land use code to allow by-right an attached accessory dwelling unit to on all residential parcels along with the C-1 and C-2 zones.
- **Institute an Inclusionary Zoning Ordinance:** Require as part of the planning and permitting process that each new development with more than ten total units designate 10% of its units for low-income individuals or pay a fee in-lieu.

In order to access the relative merit of each policy alternative, each option is scored for: (a) cost-effectiveness, (b) time, and (c) political feasibility.

This research paper argues that an accessory dwelling unit ordinance has the greatest potential–when weighted against the evaluation criteria–to increase the number of multi-family housing units and reduce the overall costs of housing.

Introduction

This section introduces the policy problem this research paper addresses. It defines the policy problem, cost to society, the research questions explored, and provides a general overview of housing policy in Bath, Maine, and the United States.

Problem Definition

One in six households of Bath, Maine spend more than 50% of disposable income on housing costs (Bath Housing Authority, 2014). These severely cost burdened residents are more likely to be low-income, elderly, and/or disabled citizens (NLIHC, 2021). Safe, decent, and affordable housing has long been correlated with better health outcomes, stronger school performances for children, and increased job stability (Vale et. al, 2014; Lerman, 2006). The expansion of commercial activity at Brunswick Landing and Bath Iron Works along with the increasing interest in exurban housing markets in a post-pandemic society have only further underscored that ***there are too few affordable places to live in Bath*** (Swinconeck, 2014; Piper 2021).

Scope of the Research

The unit of analysis for this research paper is the city of Bath, Maine. The policy alternatives enumerated in the following sections pertain uniquely to the *supply* of housing units. Demand-side housing programs like Housing Choice Vouchers (HCV) or Emergency Rental Assistance (ERA) grants are beyond the scope of this analysis. The reason for focusing on housing supply rather than demand is two-fold. Undoubtedly, HCV and ERA have provided housing stability to millions of seniors, disabled, and low-income families over the past five decades (Turner, 2005). However, numerous analyses have determined that even if every voucher-seeker received a subsidy there are simply not enough available units to house them (Bernstein et. al., 2021; NLIHC, 2021; Parrot & Zandi, 2021). In other words, increasing the number of HCVs alone cannot solve the affordability crisis if there are no affordable units where a voucher-holder could use them. Furthermore, land use policies that can spur or restrict housing development are largely enacted at the local level as opposed to rent-subsidy programs that are mostly administered in Washington DC.[1] The City of Bath has much more short-term latitude to increase its supply of housing than try to lobby for federal changes to demand-side programs.

It should be underscored that the usage of the term “multi-family housing units” as opposed to “affordable housing units” throughout this report is deliberate. I made this decision principally because “affordable” is a very subjective and complex term. What is affordable to one household might be outrageously expensive to another. Officially, the U.S. Department of Housing and Urban Development defines affordable housing as costing the tenant less than 30% of household

[1] Maine’s General Assistance program provides municipalities with public dollars to assist low-income residents with obtaining “basic necessities,” one of which is rent. The program is administered locally, but rules are set by the Maine Department of Health and Human Services. Many churches and local nonprofits also assist residents with rent, but these programs are not regulated nor funded with taxpayer dollars.

income (HUD, 2021). This metric, however, is imperfect.[2] In reality there are many low-income individuals whose housing costs are under this threshold, yet are still struggling to pay rent. On the other hand, many upper-income individuals–especially those with second homes/vacation properties–spend more than 30% of their income on housing, but clearly are not housing insecure. Being cost-burdened also looks very different for the average homeowner versus the average renter. While a homeowner with a mortgage is building equity, renters paying rent are not. Further, the Internal Revenue Service uses additional complex metrics and to define a development as "affordable" or "low-income" for purposes of obtaining tax credits (IRS, n.d.). Thus, using multi-family units as the unit of observation is more objective and transparent.

I would also like to justify my usage of the subtitle "Making Housing More Affordable in a Post-Pandemic Society." As is laid out in the pages ahead, the COVID-19 pandemic did not create the affordable housing shortage in the United States. However, it vastly accelerated its pervasiveness and in so doing put it on the legislative agenda. Arguably, now more than at any other time in the past forty years politicians and everyday citizens are talking about solutions to make our nation's housing stock more affordable.[3] My usage of the term "post-pandemic society" is not a premature declaration that the pandemic is over. It is not. As of this writing, the United States is in the midst of a fifth wave fueled by the highly contagious Omicron variant. Eventually, though, the COVID-19 pandemic will end and my hope is that we as a society we will continue to regard safe, decent, and affordable housing as a human right.

Bath's Land Use Code, Bath Housing Authority reports, local newspaper articles, American Community Survey data, as well as subject matter expert and relevant stakeholder interviews are the principal informants of the research project.[4] This paper seeks to answer the following research questions:

- What is the cost to society of the housing affordability crisis currently facing Bath?
- What policy alternatives exist to reduce the cost of housing in Bath?
- What are the trade-offs of each policy alternative?
- How could stakeholders implement each policy alternative?

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[2] There is no social science justification for the 30% threshold. The Brooke Amendment of the 1969 National Housing Act mandated residents of public housing projects pay rents no more than 25% of their income. By the 1980s, Congress raised this threshold to 30% where it remains today.
[3] In Maine, the issue of affordable housing has equally garnered strong bipartisan support. From Auburn's conservative mayor to Portland's progressive city council, elected officials of both parties recognize the status quo is not working (Rice, 2022).
[4] The American Community Survey is administered by the US Census and collects demographic data that was previously asked on the decennial census long form which was discontinued in 2000. The most recent data available is from 2019 which does not take into account effects of the COVID-19 pandemic.

Costs to Society

Direct Costs

The average median rent price in Bath is $862/month (American Community Survey, 2019). Three-quarters of all renter households–about 1,240 of them–are cost-burdened (Planning Decisions Inc., 2014). More than half of these cost-burdened renters earn 30% or less of the AMI, roughly equal to $14,476/year or less (Planning Decisions Inc., 2014). Among all cost-burdened renter households the median annual income is $15,590/year. Assuming 30% of disposable monthly income is "affordable" this amounts to $390/month in housing costs. The difference between the affordable median for low-income renters and the market median rent price is equal to $472/month extra–on average–being spent on housing costs that is above what should be reasonably expected. At a magnitude of 1,240 renter households across twelve months this amounts to a direct cost of about $7 million per year.

Indirect Costs

Bath is a major employment hub in the mid-coast Maine region. In fact, 65%–roughly 6,150 people–who are employed in Bath live in a different community (Planning Decisions Inc., 2014). An indirect cost of the lack of affordable housing is transportation from lesser expensive communities to employment hubs that are often more expensive. The average commute distance for Bath works is 15 miles/day one-way (Levine Planning Strategies, 2021). The average price of gas in Bath is $3.40/gallon (Gas Buddy). Assuming 261 workings per year and an average vehicle fuel efficiency of 22 miles per gallon, that equates to $5/day per worker being spent on gas.[5] On a yearly average that adds up to $1,305/year per worker. Among all Bath non-resident workers, the average cost per year spent on gas would be about $8 million/year.[6]

Opportunity Costs

The largest cost of the affordable housing crisis is lost time. Whether that is extra time spent working to pay the rent or extra time community from afar to get to work. This is time that could be spent studying for a university degree, taking care of children, or spending money on recreation activities which enrich life and benefit the local economy.

The average round-trip commute for Bath workers is 42 minutes. Assuming 261 working days, Bath region workers collectively lose 1.1 million hours per year to commuting from afar.[7]

Total Costs

The total cost to society could be summarized as: $7 million annually in direct costs, $8 million annually in indirect/externality costs, and 1.1 million hours annually in opportunity costs.

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[5] During the COVID-19 pandemic work-from-home became common in some jobs in order promote social distancing. Some readers might wonder how many Bath workers are still commuting during the pandemic. While a precise figure is not known, I would estimate most still do commute since a vast majority of jobs at BIW require the worker to be in person.

[6] A key assumption of this calculation is that Bath non-resident workers commute because they cannot afford to live in Bath. This is not true for all workers because some would still choose to live a different community in order to be close to family, be in a larger metro area, or enjoy the privacy afforded by rural communities.

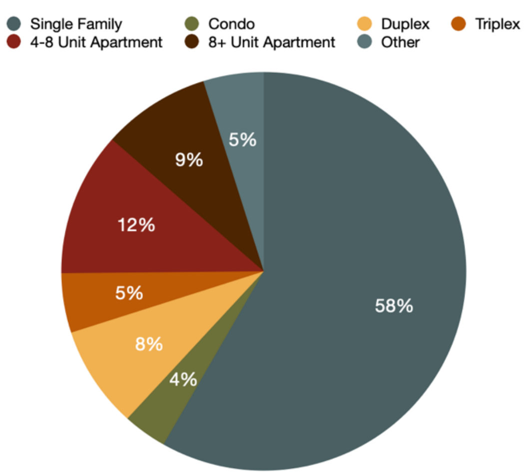
[7] Once again, this assumes these workers are commuting because they cannot afford to live in Bath which is not true in every case.

Background

Bath's Demographics and Current Housing Stock

Bath is situated in Sagadahoc County, a part of Maine's scenic mid-coast region. It was officially founded in 1781, but was inhabited by the Abnaki and Algonquian tribes before the area was settled by European explorers in 1640 (City of Bath, 2020). Bath is home to Bath Iron Works, Maine's fourth largest employer and the sixth-largest defense contractor in the world[8] (Maine Department of Labor, 2020; Fleurant et. al., 2018). BIW employs 6,000 people, many of them residents of Bath and surrounding communities (Maine Department of Labor, 2020). Its shipbuilding legacy has earned the city the nickname, "City of Ships" (City of Bath, 2020). Bath has a population of 8,766 spread out across thirteen square miles (US Census, 2020). Demographically, Bath is 97% white/Caucasian, has a median household income of $48,252, and poverty rate of 13.8%. The median household income is slightly lower than the statewide median of $57, 918 whereas the poverty rate is three percentage-points higher than the state rate of 10.6% (American Community Survey, 2019).

Figure 1: Breakdown of Bath's Housing Stock by Housing Type



According to the Bath City Assessor's Database, there are 4,368 housing units in the city. The median value of a home is $175,700 and the median monthly rent is $862 (American Community Survey, 2019). Homes are somewhat less expensive than the state average, but rents are actually slightly more expensive than most other municipalities in Maine (American Community Survey, 2019). As evidenced by the graphic to the left Bath's housing stock is overwhelming comprised of single-family homes (Levine Planning Strategies, 2021). Duplexes and multi-unit apartment buildings only comprise about a quarter of the housing stock. The remainder of the housing stock is made up of a handful of condominiums, triplexes, mobiles homes, apartment buildings with more than eight units, and mixed-use commercial/residential structures.

Recent Housing Policy Developments in Maine

In November 2019 the Administration of Governor Janet T. Mills released a ten-year state economic development plan. The plan calls for the expansion of workforce housing in order to retain and recruit workers (DECD, 2019). To achieve this goal the plan urges the Maine State Housing Authority to expand the Affordable Housing Tax Increment Financing Tool which provides low-interest loans for moderate-income earners seeking housing.

The Governor has equally called on local governments to reform land use codes and zoning ordinances to allow for more development of multi-family units (DECD, 2019). In June 2021, she signed into law LD 609 which established the Commission to Increase Housing Opportunities in

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[8] My grandfather worked at Bath Iron Works in the late 1980s. A former shipbuilder, he helped to construct the USS Arleigh Burke which was commissioned by the US Navy in 1991.

Maine by Studying Zoning and Land Use Restrictions. In December 2021 the Commission released its final report and made the following recommendations (Commission, 2021):

- Allow accessory dwelling units by right in all zoning districts currently zoned for single-family homes.
- Eliminate single-family zoning in all zone types by allowing up to four residential units on all lots so long as environmental and safety conditions allow.
- Prohibit municipal growth caps on the production of new housing.
- Provide technical and financial support to all communities seeking changes to zoning codes or increasing its affordable housing stock.
- Create density bonuses in all areas of the state.
- Create a three-year statewide incentive program for municipalities to make changes to this zoning codes.
- Create a statewide system of priority development areas.
- Eliminate terms like “character,” “overcrowding of land,” and “undue concentration of population” as legal bases for zoning regulations as currently allowed under Maine’s Fair Housing Act.
- Create a state-level housing appeals board to review denials of affordable housing projects made at the local level.

Following the passage of the Jobs and Recovery Plan by the US Congress in March 2021 Maine received more than $1 billion in federal stimulus funds (GO, 2021). In July 2021, the Maine Legislature authorized $60 million of those funds to be spent on affordable workforce housing (GO, 2021). $50 million will be allocated towards expanding housing options. The remaining $10 million will go towards assisting emergency homeless shelters help clients attain stable housing and other support services.

In March 2022, Maine Speaker of the House Ryan Fecteau introduced LD 2003 to codify many of the Commission’s recommendations (Rogers, 2022). As of this writing the bill has not been voted out of committee, but has received bipartisan sponsorship.

Unaffordable Housing: An Issue of Supply and Demand

Foundational microeconomic theory states that a market becomes inefficient when consumer demand outpaces producer supply. As a result, prices rise. Few would argue the housing market in Maine or the United States is at equilibrium. As evidenced by the graphic below production of new housing units before the 2008 financial crisis either outpaced household growth or was roughly equal (JSHS, 2019). However, since 2008 household growth has actually slightly outpaced new production. Furthermore, the available supply of homes in the United States remains at historic lows and new production is outputting at half the rate it was in the mid-2000s (Potter, 2021). High costs of lumber, difficulty recruiting a skilled construction workforce, and the lack of available developable land remains the principal hindrances for the housing market to recover from the Great Recession (Parrot & Zandi, 2021). The recent economic downturn caused by the COVID-19 pandemic has made these barriers even more profound.

Figure 2: Household Growth Compared to Completion of New Units 1974-2019

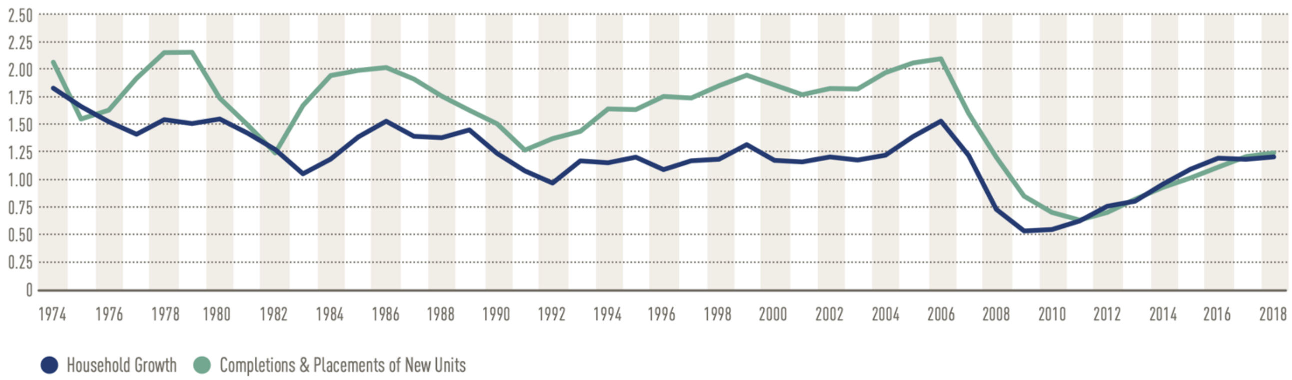

Image Courtesy: Harvard Joint Center for Housing Studies (2019)

There also exists a large mismatch in the type of housing available and that demanded by American consumers. Between 1973 and 2015 the average size of a new home grew more than 60% or more than 1,000 square feet (Sparshott 2016). Concurrently, the number of occupants per household has shrunk. In 1970, single-person households comprised just 17% of American households, but by 2015 their share has doubled to more than a third (HUD, 2015). Similarly, there are half the number of five-person households today than in 1970. Many smaller one and two-person households are cost-burdened by virtue of having no other option but to live in housing that is simply too large.

Figure 3: Household Size in the United States 1970-2015

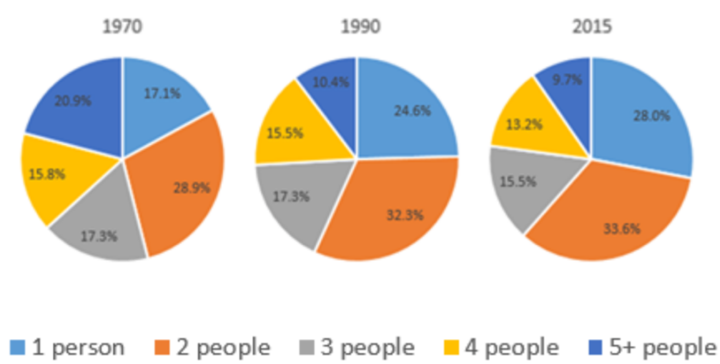

Image Courtesy: United States Department of Housing and Urban Development

History of Affordable Housing Finance and Administration

Housing first became a public policy concern in the United States during the Great Depression of the 1930s. As a part of his New Deal agenda President Roosevelt wanted to bolster home ownership rates and improve living conditions for the working poor (FDR Presidential Library, 2012). The US Housing Act of 1934 was the first piece of federal housing legislation. This law created the Federal Housing Administration and the Federal Savings and Loan Insurance Corporation which both sought to subsidize and insure private-lender backed mortgages (Monroe, 2001). The US Housing Act of 1937 built on the 1934 law by providing federal subsidies to localities to improve living conditions for low-income families through public housing projects (HUD, n.d.). More than 100,000 public housing units were constructed thanks to funding obtained through the 1937 Housing Act (von Hoffman, 2000).

Following the end of World War II, the country was facing a housing shortage and deteriorating living conditions in inner-cities (Orlebeke, 2000). The 1949 Housing Act set an ambitious goal of constructing 810,000 new public housing units by 1955. Despite strong bipartisan support of the measure fewer than 250,000 new units were constructed by 1959 (Orlebeke, 2000). In 1968, Congress reaffirmed the 1949 Housing Act by pledging to construct six million new housing units within the next decade. The 1968 law was only marginally more successful, leading to the construction of 600,000 new units in its first two years–600,000 units behind its goal.

Several major failures under the public housing projects model–most notably the Pruitt-Igoe development in Saint Louis–led President Nixon to abruptly issue a moratorium on all public housing construction in 1973 (Bristol, 1991). Essentially, vacancy rates, violent crime, and vandalism in many housing projects across the nation were skyrocketing (Dunworth & Saiger, 1994). Congressional conservatives were frustrated by the sheer cost of public housing projects whereas liberals were outraged by the subpar living conditions (Orlebeke, 2000). Facing criticism from all sides, Nixon essentially ended the public housing model that had been used for almost four decades.

The next decade saw the devolution of authority to states and localities through the creation of federal housing block grants. In 1974, Congress created the Community Development Block Grant (CDBG) which subsidizes the private development or rehabilitation of affordable housing units (HUD, n.d.). The same year Congress also created the Section 8 Voucher program (now known as the Housing Choice Voucher Program) which subsidizes the cost of rent for low-income residents for up to twenty years (von Hoffman, 2016). These programs still exist today. To administer these new programs states and localities established their own housing financing authorities. Indeed, the Bath Housing Authority was founded in 1969 (BHA, n.d.).

The 1986 Tax Reform Act solidified the private sector's role of developing, leasing, and managing affordable housing projects. The law created the monumental Low-Income Housing Tax Credit which has been responsible for the creation of millions of affordable units in the last 35 years (Cummings & DiPasquale, 1999). The tax credit is funded with federal dollars and then awarded to private developers by state and local housing authorities who administer competitive grant programs in accordance with their own goals and needs (HUD, n.d.).

The last major action on federal housing policy occurred in 2008 when Congress established the National Housing Trust Fund as a part of the Housing and Economic Recovery Act (HERA) (Soroka, 2008). The Trust Fund is funded by a fee leveraged on new mortgages created by Fannie Mae and Freddie Mac. HUD then disperses grants to states based on a funding formula that accounts for the states' low-income housing shortage, poverty rate, and local cost of construction (HUD, n.d.). States must use the funds for new construction, rehabilitation, or preservation of low-income housing for those earning less than 75% AMI (Soroka, 2008). In 2021, HUD disbursed nearly $700 million of HTF funds to the 57 states, territories, and recognized native tribes (Lawrence, 2021).

Land-Use Regulations

The 1926 US Supreme Court Case *Euclid v. Ambler Realty* established the legal basis for zoning codes and land use regulations (Korngold, 2000). Ever since then zoning and land use regulation policies have traditionally been controlled at the municipal level (National League of Cities, n.d.).

This has been especially true in Home-Rule states like Maine where local control over many policy domains are guaranteed by the state constitution (Garbrecht Law Lirbrary, n.d.). Zoning policies themselves do not develop housing, but they do dictate what type of structures can be built on certain parcels of land. Most municipalities delineate commercial and residential zones as well as regulate parking requirements, height restrictions, and maximum lot coverages depending on the unique characteristics of certain streets and neighborhoods (Davidoff & Davidoff, 1971).

Extent of the Housing Affordability Crisis

The United States is facing a national affordable housing crisis. According to the National Low-Income Housing Coalition (n.d.) no state has enough affordable units to meet the demand of low-income renters. Nationally, there are only about 42 available affordable units for every 100 low-income renters (NLIHC, n.d.). On one extreme, only one in five low-income Nevadans can find an affordable place to live. Even in the best scenario just three in five residents in Wyoming are able to find affordable housing. Maine is slightly better than the national average having 54 affordable housing units per 100 low-income renters. Further, eleven million households nationwide are severely cost-burdened (JCHS, 2019).

The affordable housing crisis in Maine, however, is not being equally felt across the state. Larger urban areas like Lewiston, Portland, and Bangor have the highest housing costs in the state (Valigra, 2021). Even smaller coastal communities like Cape Elizabeth, Topsham, and Ellsworth have a large number of severely cost-burdened residents (Levine Planning Strategies, 2021). On the other hand, more rural inland communities are currently having difficulty filling service sector jobs despite much lower rental and housing costs (Swiedom, 2021).

Globally, the United States remains one of the least affordable OECD countries to buy or rent (Crawford, 2021).[9] Only Germany, Japan, South Korea, and Portugal are more expensive.

Figure 4: Number of Affordable Housing Units Per 100 Low-Income Renters

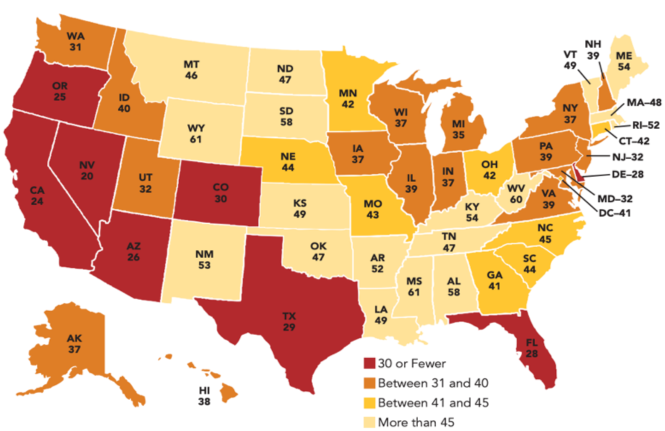

Image Courtesy: National Low-Income Housing Coalition

[9] The 1966 United Nations International Covenant on Economic, Social and Cultural Rights recognizes housing as a human right. Since then, many countries such as Portugal, the Netherlands, and Spain have amended their national constitutions to include a housing clause. While the United States signed the agreement, it was never officially ratified nor has there been any serious push to include a housing clause in the US Constitution.

Effects of the COVID-19 Pandemic on the Housing Market

Following the announcement of stay-at-home orders in most states in March 2020 the housing market came to an immediate halt. Realtors stopped showing homes, construction slowed dramatically, and many homebuyers decided it was best to stay put and wait out the virus. However, by May 2020 when it became clear the virus would not be going away on its own most states allowed home shows to resume under safety requirements like masking, distancing, and sanitation (NAR, 2021). The market immediately took off. Between May and December 2020 alone home sales rose an unprecedented 40% (Dowell, 2021). However, as Figure 5 shows the number of home listings has dropped significantly while sales remain high. This scenario has led to a sharp increase in the price of buying a home. The increased demand in housing has been fueled by a desire to move to less dense areas, take advantage of record low mortgage rates, and the fact that many Americans were preparing to buy a home even before the start of the pandemic (Demsas, 2021).

Figure 5: Home Sales Compared to Home Listings February 2020-February 2021

Source: Zillow Home Value Index.

The national figures also match what has happened to the housing market in Maine during the pandemic. The median home price statewide jumped 13% from August 2020 to August 2021 Murphy, 2021). However, the number of new listings has slowed. In October 2021, sales were down 11% from the previous October (Murphy, 2021). The main driver pushing prices up is the sheer lack of inventory. The lack of available homes has compelled some homebuyers to purchase homes without even touring them (Bever, 2021). Experts predict a homebuyer looking for new construction will have to wait about two years to see the project completed due to the low supply of homebuilders and high cost of construction materials (Murphy, 2021). Interestingly, the increased demand in Maine home is largely being led by out-of-state buyers looking to relocate to less dense areas and/or take advantage of work-from-home flexibilities (Bever, 2021).

The instable market-rate housing market has two major negative implications for the affordable housing market. First, since market-rate developments typically generate higher profit margins there is less incentive for developers to construct units for low-income individuals (Healy & Willmsen, 2021). Second, when home values in a certain area begin to rise, rents typically follow suit which has a gentrification effect on many low-income households (NLIHC, 2019).

The volatile state of the housing market has posed some experts to ponder whether real estate will ever be normal again (Mari, 2021)? As of this writing there is no clear answer. It will largely depend on how the economy adjusts to post-pandemic expectations and what any future variants of the virus could do to consumer prices.

Literature Review

A growing body of literature has sought to identify practices and programs that could bolster the number of affordable housing units. This section seeks to highlight three policy alternatives that contemporary academic literature deems effective at increasing the number of multi-family housing units.

Up-zoning

One of the most significant barriers to the development of multi-unit housing remains that an overwhelming portion of land in many municipalities is zoned uniquely for single-family housing. This reality restricts the supply of developable land and therefore artificially raises the cost of housing beyond attainment for many low-income individuals (Serkin & Wellington, 2013; Chakraborty et. al., 2010; Glaeser & Gyourko, 2002). In light of this circumstance some localities have experimented with zoning reforms like up-zoning. Up-zoning occurs when a municipality changes the zoning code to allow for more dense development (Freemark, 2019). Proponents of up-zoning contend that it will accelerate construction and lower the cost of housing (Gabbe, 2017). Others caution that increased speculation actually increases home values which makes housing less affordable (Angotti, 2016).

Empirical Evidence on Effects to Demand, Supply, and Price

Between 2013-2015, Chicago up-zoned several parcels of land with hopes that it would boost the number of affordable units. Freemark (2019) used a difference-in-differences method of parcel-level transaction to see if the zoning changes actually made a difference in price. He found a marginal, but not statistically significant increase, in home values following the zoning changes. He also did not observe a statistically significant increase in development on the up-zoned parcels.

Pendall (2000) conducted a micro-analysis of land use restrictions is the 25 largest metropolitan areas in the United States. He found that exclusionary zoning leads to slower development growth, disincentivizes investment in multi-unit properties and pushes prices up for both renters and homeowners. To combat rising prices and low supply, Pendall argues in favor of up-zoning to allow developers to build more multi-family units. A similar study in Boston by Glaser et al. (2002) revealed that between 1980 and 2000 for each one-quarter acre minimum lot size increase 10% fewer houses were built. These restrictive zoning policies in return increased the median cost of living in Boston by 23% during this period.

Issues of Ethics

Gabbe (2017) used a regression model on Los Angeles up-zoning reforms to find that parcels most likely to be up-zoned were those with high development opportunity and low political resistance. However, she notes, that this is not the most economically effective nor ethical justification for up-zoning. Above all, homeowners in the Los Angeles appear to be extremely influential in squashing up-zoning proposals. In fact, Gabbe (2017) discovered parcels in a majority single family zone area were 82 percent less like likely to be up-zoned than a parcel where most parcels were non-single family.

Angotti (2017) argues that up-zoning in New York's minority-majority Williamsburg neighborhood lead to a massive wave of displacement. Specifically, he notes that between 2005 and 2015 the white population in the up-zoned areas increased by 44% compared to just 2% city-wide. At the same time, the city-wide Latino population increased 10%, but was cut by a quarter in up-zoned Williamsburg.

Summary

One of the major limitations of the up-zoning literature is the fact that scholars have very few municipalities to study effects. Large scale up-zoning is rare and is mainly focused in large metropolitan areas. There also exists an issue of causality. For example, do high costs of housing create burdensome zoning regulations or vice versa?

Inclusionary Zoning

Inclusionary zoning is broadly defined as governmental actions that either mandate or encourage developers to create affordable housing units as part of any new development (Lerman 2006). This is usually achieved through one of two actions: either with a certain percentage of affordable units set aside--usually 10 to 15%--for low-income tenants or by means of a fee in-lieu of the set-aside (Mukhija et. al., 2015). Proponents of inclusionary zoning argue that it places the financial burden of constructing housing on the developer as opposed to the community and promote social well-being (Powell, 2003; Porter, 2004). Those against the practice contend the cost burden is simply shifted to the developer who in return has less incentive to develop (Lerman, 2006). Calavita & Mallach (2010) estimate that 500 local governments in half of the states have some form of inclusionary zoning.

Brief History of Inclusionary Zoning

Inclusionary zoning first entered public policy discussions in the late 1960s (Porter, 2004). This was around the same time the federal government was beginning to devolve housing policy authority to states and localities (Orlebeke, 2000). Activists saw this practice as the best way to continue to secure affordable housing units at the local level absent federal intervention that had been present for the prior four decades (Porter, 2004). Interest in inclusionary zoning further widened following the housing market boom of the early 2000s (Mukhija et. al., 2015).

Local zoning policies and land use regulations deemed "exclusionary" proliferated after the Supreme Court established the legal basis for such policies in 1926 (Morgan, 1995). The courts have continuously upheld challenges to exclusionary zoning policies on the grounds they are in favor of the "public interest." For example, setback requirements have been upheld since the Court believes they allow for installation of sidewalks, street lights, fire hydrants, and other public goods. Similarly, minimum lot size requirements have been validated as protecting the health and safety of residents. Absent a constitutional amendment establishing a right to affordable housing, inclusionary zoning provisions will only be feasible legislatively.

Two Typologies: Mandatory and Voluntary

Generally speaking, there are two types of inclusionary zoning frameworks: mandatory and voluntary (Lerman, 2006; Kautz, 2001; Porter 2004). As the name suggests mandatory inclusionary zoning is legally binding and requires new developments to comply with set-aside and fee requirements. Voluntary inclusionary zoning, on the other hand, merely recommends-usually through incentives like density bonuses-to include affordable options as a part of the new development (Talbert & Costa, 2004; Lerman, 2006).

Lerman (2006) argues that mandatory zoning most effectively creates affordable units, reduces crime and unemployment, and decentralizes poverty. Schuetz (2011) found a strong positive correlation in Los Angeles between density bonuses and affordable unit development. Similarly, Talbert & Costa (2004) point out that it is possible to undo exclusionary zoning voluntarily, but this rarely leads to the creation of more affordable units. The authors say if anything voluntary programs without any incentives for affordable development typically benefit wealthier individuals since they usually generate the most net income for developers. Basically, voluntary programs only work if the incentives are deemed sufficient by the developer.

A sub-typology of mandatory inclusionary zoning also exists in many municipalities. In exchange for the construction of affordable units, developers can instead pay a fee to the locality that can be used to fund affordable housing initiatives as the public sees fit (Mukhija et. al., 2015).

Who Bears the Cost?

One of the key questions of inclusionary zoning remains who bears the cost of the regulations? Ellickson (1981) theorizes that cities are either *unique* or *perfect substitutes*, contending that elasticity of demand and willingness to pay largely determines who bears the burden. In cities that are considered “unique” consumers are willing to pay more for housing and thus they absorb most of the cost of regulation. In cities that have “perfect substitutes” developers would simply exit the market and go elsewhere. In both scenarios, homebuyers and tenants bear a vast majority of the cost of regulation.

Empirical evidence is more nuanced. Powell & Stringham (2004) agree with Ellickson (1981) that inclusionary zoning regulations make housing more expensive. They analyzed programs in San Francisco and Los Angeles in the early 2000s. In both markets they found inclusionary zoning requirements reduced the number of new development permits and thus make housing and rents more expensive. However, other scholars note that Powell & Stringham failed to include a control group in their study and did not examine exogenous effects (Basolo & Calavita, 2004). An analysis in Boston revealed that inclusionary zoning actually marginally increased rents and housing prices (Schuetz, Meltzer & Been, 2010). The authors note that the regulatory environment in Massachusetts is quite onerous. In other words, despite the increased access to land other regulatory requirements discourage investment in Massachusetts (Schuetz, Meltzer & Been, 2010).

On the other hand, Mukhija et. al. (2010) also examined development permits in the Los Angeles area and found no major adverse effects on housing supply. In fact, the authors actually noted a correlation between housing permits and regional housing market performance. The authors cite generous cost-offsets like tax breaks and density bonuses as contributing to the success of the program. Bento (2009) also noticed a sizeable shift from single-family permits to multi-family permits as a result of San Francisco's inclusionary zoning policies.

Evidence of Effects on Affordable Housing Stock

A study of Massachusetts exclusionary zoning policies concluded that for each new municipal zoning regulation the price of housing in that community increased by 10% and development decreased by 10% (Green, Malpezzi & Mayo, 2005). Another study by Glaeser & Ward (2006) found that for each one extra acre of minimum lot size added to the land use code housing prices also increased by about 10%.

Brown (2001) calculated that 11,362 affordable units were created in the Washington, DC metro area as a result of inclusionary zoning policies. This analysis also found that a majority of those new units were leased to tenants earning between 30-70% AMI. Another analysis of the Washington, DC area by Fox & Rose (2003) place the number of affordable units created at 15,252.

A comprehensive study of California inclusionary zoning polices found that municipalities who adopted inclusionary zoning policies saw a 36% increase multi-unit developments between 1985-2005 (Green & Mayo, 2006). The authors concede, however, that inclusionary zoning in this review did not significantly decrease mean prices of homes nor effect development of single-unit properties (Green & Mayo, 2006). One reason for the null effect, though, might be that demand continued to rise significantly during the study period. Indeed, California's population grew by 40% between 1985-2005 (American Community Survey, 2019).

On the other hand, Schuetz, Meltzer & Been (2010) found no statistically significant difference in housing prices or production in the San Francisco Bay Area as a result of inclusionary zoning policies. A 2007 report from the Non-Profit Housing Association of Northern California estimates that 4,469 affordable units were produced as a result of San Francisco's inclusionary zoning.

Summary

There is ample evidence that the most effective inclusionary zoning programs are mandatory, well-established, and offer generous density bonuses. If cost-offsets are generous enough some of downsides of inclusionary zoning like shifting cost burdens can be mitigated.

A general limitation of the inclusionary zoning literature is that despite its presence in many American cities there have been few comprehensive case studies on its overall impact in different markets. Another major gap in the literature is the lack of analysis on the different types of programs, specifically in-lieu fees. There has also been few stratified studies on how inclusionary zoning has affected citizens of different income brackets, races, and other socioeconomic indicators.

Accessory Dwelling Units

The American Planning Association (n.d.) defines an accessory dwelling unit as: "a smaller, independent residential dwelling unit located on the same lot as a stand-alone (i.e., detached) single-family home." ADUs are also known colloquially as granny flats, in-law apartments, and accessory apartments. They can take form as an attached structure (i.e. a dwelling above the garage, an upper floor unit, a basement unit, or a converted garage) or as a detached structure (i.e. stand-alone structure on the same lot).

ADUs have become attractive to affordable housing practitioners since they are relatively inexpensive and have potential social benefits such as allowing elderly residents to age near family (Rudel 1984; Krohn 1977; Chapple & Dontle-Post 2011). However, critics of ADUs argue they can be difficult to finance, sometimes face neighborhood opposition, and are not always desirable for homeowners to set up (Sloan 2014; Antoninetti 2008; Gratton 2011).

Presence in the Housing Market

The extent to which ADUs are present in the housing market is difficult to calculate. Hare (1989) generalizes that assuming municipal zones allow for ADU rentals, one could expect one ADU unit per 1,500 single detached dwellings.

Hare (1991) estimated that 90,000 secondary units exist in Suffolk and Nassau Counties on Long Island, New York. Lyotton (1991) found that secondary units comprised 10% to 50% of Vancouver's housing stock depending on the neighborhood. Most municipal zoning codes in the United States do not allow their construction (Hare 1989; Antoninetti 2008). Additionally, there is wide variation between the types of ADUs that are allowed in permissive localities. For example, the city of Edmonton, Alberta for several years only allowed attached (e.g. above garage apartments) under its ADU ordinance. Other like those in Santa Rosa, California allow for both attached and detached secondary dwellings (Antoninetti 2008). Lastly, there exists many illegal secondary units that are difficult to track as a part of municipal record keeping. A 1989 census of Dale City, California–which did not allow secondary units at the time–revealed that illegal accessory dwelling units were present on almost 25% of the city's plots (Hare). A similar analysis by SPUR in 2001 revealed that around 8% of the city's housing stock was comprised of illegal secondary units. The authors of the 2001 study base their estimate on visual inspections of building exteriors.

Uptake in the Private Market

Contemporary scholars generally agree that amending municipal zoning codes is merely a first step in the process of creating more affordable housing. Several case studies have documented that uptake of accessory dwelling units does not immediately proliferate following the liberalization of zoning codes (Retsinas & Retsinas 1991; Gratton 2011). Nordvik & Ruud (1999) theorize that above all lack of sufficient economic resources is more important than available space when it comes to deciding whether or not someone will let a secondary unit. A 2000 analysis on ADUs in Norway found that those with lower incomes are most likely to rent out extra space in their household or on their property (Nordvik). Those with higher incomes will only enter the market if the price is "right." Specifically, when the median rent of an ADU raises from 30,000 NOK to 65,000 NOK[10] those in the highest income bracket become 30 percentage points more likely to let out extra space as opposed to those in the lowest income bracket who only become 10 percentage points more like to do so.

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[10] One NOK is roughly equal to 7.5 USD.

In the late 1980s a handful of state housing agencies designed programs that would provide financing and technical assistance to low-income homeowners with extra space to let out to elderly residents looking to downsize. The programs were initially billed as a win-win for both the homeowners seeking extra income and the elderly resident looking to give up traditional household responsibilities. However, a 1991 report found that uptake was so low by the time the report was released two states had completed ended their programs (Retsinas & Retsinas). The authors cite as reasons for failure: overburdensome program requirements like a five-year commitment, burnout of homeowners not really fit to be a landlord, and bureaucratic complexity.

One way to boost uptake is to offer education services, establish a low-barrier application process and provide financing services. The City of Santa Cruz, California changed it zoning code in 2003 to allow for more ADU construction. The number of permit applications increased threefold the very next year and has seen steady growth each year ever since (HUD, n.d.). Santa Cruz provides its citizens with free workshops on how to construct, lease up, and maintain an ADU (City of Santa Cruz, n.d.). The city's willingness to engage potential homeowners and teach them best practices has led to the city being recognized as a gold standard for ADUs (HUD, n.d.). After experiencing low uptake rates following zoning code reforms the city of Edmonton, Alberta established a competitive grant program for ADU letters that paid up to 75% of the costs of bringing a space up to code. After the program went live in 2008, applications for ADUs increased by 500% over the previous year (Gratton 2011).

Affordable for Whom?

Those most likely to find ADUs desirable and affordable are the elderly, college students, and young couples (Sloan 2014; Nelson 2013). These populations are more willing to sacrifice more space for the cheaper rents afforded for secondary dwellings. Infraca (2016) argues that cultural shifts like the creation of the "sharing economy" make the younger generation an ideal demographic for ADUs. Basically, the younger generation has grown up with ride-sharing apps like Uber and Lyft, home-sharing services like AirBnb and VRBO, and city bike share programs. The ability to share possessions on an almost daily basis has drastically reduced the desire to own a lot of belongings which would require space to store.

Krohn (1977) theorizes that the "amateur economy" makes the ADU market generally affordable. In other words, the homeowner is able to attend to the unit on their own time with no direct labor costs or high capital costs that large developers of buildings face. These savings translate into lower rents for potential tenants. Hare (1989) estimates that an ADU costs 1/3 of a convention unit. A census of Babylon, New York by Rudel (1984) revealed that ADU units let for 35% the price of non-ADU units. The author cautions, however, that approximately 30% of the ADU units surveyed were occupied by family members of the homeowner and may not be paying market rents or any rent at all. Indeed, while researching ADU rental rates in Portland, Oregon Brown (2014) found 13% of Portland ADUs were being leased for free. More contemporary work by Wegmann & Chapple (2012) concluded that ADUs in San Francisco were affordable to residents earning 60% AMI compared to non-ADU units which were only affordable to those at 70% AMI or above.

Financing Remains a Key Challenge

The lack of financial resources to fund ADU construction or rehabilitation arguably remains the largest barrier to ADU proliferation. Many financial institutions are simply just not familiar with the

ADU model (Been, Gross & Infranca 2014). Due to the lack of market data demonstrating how property values are affected by ADUs, appraisers tend to underestimate their value. Brown & Witkins (2012) also contend that ADU construction can cost 1.5-2 times that of traditional units due fixed amenities like bathrooms and kitchens that are spread out over less square footage. Lastly, Wegmann (2015) points out that whereas investors buying an apartment building can borrow against expected income from the building, ADU borrowers are rarely, if ever, afforded this benefit.

Summary

ADUs are a relatively inexpensive mean of diversifying a municipality's affordable housing stock. Communities with large elderly, university student, or single-resident populations would benefit most from further development. There is potential benefit for both the tenant who enjoy a cheaper rent and the leaser/homeowner who earns the extra income. However, challenges remain in convincing the community to bring zoning codes into conformity and providing willing leasers with financial and technical assistance.

Evaluative Criteria

The three policy alternatives discussed in the next section are evaluated on the following criteria: (1) cost-effectiveness, (2) political feasibility, and (3) time. Conceptual definitions and justifications for these criteria are described below.

Cost-Effectiveness: The per-unit cost of all new housing units created following successful implementation of the given policy alternative. To be calculated by dividing the total monetary cost of the policy by gross estimated new units created by the policy.

Governor Mills' Economic Development Strategy, the City of Bath's *2020 Housing Vision Report*, and the National Low-Income Housing Coalition all underscore the same point: Maine--and the mid-coast region in particular--needs more housing units. However, funding for housing initiatives are not unlimited. Indeed, the cost-cap is the most heavily weighted item in Maine's Qualified Action Plan (QAP). The QAP determines who gets awarded tax credits and other funds for affordable housing development. Some future developments that could be made possible by policy changes recommended in this paper might benefit from the LIHTC and need to demonstrate cost-effectiveness in the QAP. Cost is conceptualized as the total development cost as defined in the Maine QAP. Furthermore, the entire purpose of this project to increase the number multi-family housing units. The chosen policy alternative should therefore prioritize cost-effectiveness above all else and is weighted at 50%.

Low Cost-Effectiveness (per unit)		Medium Cost Effectiveness (per unit)		High Cost-Effectiveness (per unit)	
$200,000-$224,999	15pts.	$100,000-$124,999	35pts.	< $50,000	50pts.
$225,000-$249,999	10pts.	$125,000-$149,999	30pts.	$50,000-$74,999	45pts.
$250,000-$274,999	5pts.	$150,000-$174,999	25pts.	$75,000-$99,999	40pts.
> $275,000	0pts.	$175,000-$199,999	20pts.		

Political Feasibility: The estimated likelihood that the given policy alternative would be supported by a majority of community stakeholders. To be measured by relative amount of net monetary and social benefits and net costs posed to community stakeholders.

Changes to local zoning codes cannot be enacted unilaterally. In the City of Bath, approval for these changes are granted by the local planning board and then by the City Council (City of Bath, n.d.). These political bodies are highly cognizant to the opinions of the voters who elect them. Homeowners in particular are highly supportive of zoning regulations (Fischel, 2005). Homeowners in particular in more likely than renters to vote, donate to political causes, run for office, and show up to local planning board meetings (Salviati, 2018). Across the country changes to zoning codes have been met with protest movements and even led to the creation of political coalitions running on anti-development platforms (Perigo, 2020). A national protest known as the "Not in My Backyard" (NIMBY) movement oppose efforts to change zoning codes out of fear doing so could damage the character of (largely affluent and white) neighborhoods through an influx of low-income people or racial minorities (Gerrard, 1994). Support for any of the proposed policy alternatives should not be considered a given. If local homeowners-and the community more broadly-see cost in a given policy alternative they are much more likely to actively lobby in opposition. As such, political feasibility is weighted at 30%.

Low Political Feasibility		Medium Political Feasibility		High Political Feasibility	
Marginal Costs	10 pts.	No Net Benefits or Costs	15 pts.	Significant Benefits	30 pts.
Significant Costs	0 pts.			Marginal Benefits	20 pts.

Time: The estimated amount of time for new multi-family housing units to appear in the rental market as a result of the successful implementation of the given policy alternative.

Throughout this research paper I have referred the lack of multi-family housing units as a "crisis." This crisis has been persisting for more than a decade, but has been vastly accelerated by the COVID-19 pandemic. The City of Bath needs short-term solutions. In light of this, each policy alternative should evaluate the amount of time it would take for the city to see new housing units appear in the rental market. Time considered would include bureaucratic implementation, permitting, and construction/rehabilitation. Time estimates are obtained using the Survey of Construction published by the U.S. Census Bureau. The Survey of Construction reports the average amount of time it takes to complete a structure depending on its type (residential or commercial), size, and location. Time is weighted at 20%.

Long Timeline (months)		Average Timeline (months)		Quick Timeline (months)	
24-29	4 pts.	12-17	12 pts.	< 6	20 pts.
> 30	0 pts.	18-23	8 pts.	6-11	16 pts.

Policy Alternatives

Up-zoning

The City of Bath currently has six residential zones: R-1 though R-6. The R-1 zone allows for the densest housing structures (e.g. apartment buildings) to be built. R-3 on the other hand only allows for single and double family residential.[11]

The City Council should eliminate the R-3 zone and rezone all parcels currently designed R-3 to R-1. This would allow for more dense construction throughout the city without drastically restricting the commercial-residential divide. On the other hand, up-zoning does not necessarily guarantee investment or development.

Cost-Effectiveness
According to estimates by the UVA Foundation the rezoning itself would cost approximately $150,000. This would be labor and fees associated with engineering and architectural consultants. The actual per-unit cost is estimated to be about $240,000 per one-bedroom unit as defined by the Maine State Housing Authority. Assuming that building permit requests remain equal, Bath would see 20 units within the next two years. This equates to a cost of about $251,500 per unit.

Political Feasibility
Major changes to the land use code and zoning ordinances have sparked staunch opposition from community groups across the country. Homeowners fear that more dense housing will lead to the significant alteration of community characteristics or overcrowding of neighborhoods. Evidence also exists, however, that a property becomes more valuable when it can be developed for more uses. A rezone could benefit homeowners through increased value of their home equity. Given it is not clear how the community would react to such a proposal, an up-zone presents no net benefits or costs to the broader community.

Time
The process of up-zoning parcels is multi-faceted. First, it would require the Bath Planning Board to recommend changes to the land use code. Second, the Bath City Council would need to adopt the recommended changes. Both of these steps would require public meetings which could receive pushback from community members. Legislative approval would take at least six to nine months. The Planning and Development Office would then need several weeks to implement the changes. Ideally, as a part of the implementation process the up-zone would provoke changes to Bath’s Comprehensive Plan which would take additional weeks to complete. Finally, it would take six months to a year for new housing units to be developed or redeveloped on the parcels that now allow for denser development. Collectively, it would take at least two years to see any new housing units on the market following successful implementation of this policy alternative.

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[11] The R4-R6 zones are located in the Shoreland Overlay Zone. Maine law forbids the development of properties within 25 feet of the shore of wetland including lakes, streams, and oceans. Therefore, this paper does not recommend changes to these zones.

Accessory Dwelling Unit Ordinance

The City of Bath does not currently have an ADU ordinance. According to Grow Smart Maine only twenty-three municipalities in Maine have such ordinances. This means that all homes built in residential zones (which comprise a vast majority of the city's land) are prohibited from renting a secondary dwelling on site. There exists great variation in the types of ADU ordinances that exists across the country. Municipalities usually dictate square footage caps, the types of structures allowed (i.e. attached versus detached), and whether the ADU is allowed by-right or by-permit.

The Bath City Council should amend the land use code to allow for a single attached ADU by-right in all residential zones as well as the C-1 and C-2 zones. A building permit would be required along with an inspection from the Code Enforcement Officer before the space could be rented. This new ordinance should require that the accessory dwelling unit abide by all building codes for residential homes including, but not limited to: setback requirements, parking requirements, and height restrictions. The maximum coverage of an ADU should be capped at 850 square feet. As best as possible the ADU should maintain the character and appearance of the main residential dwelling. Owner occupancy of the main unit should not be mandated. To ensure that the ordinance is targeted towards long-term rentals for residents, short-term rentals in ADU residences should be banned.

The Maine State Housing Authority already offers free educational resources for multifamily developers. As a part of the adoption of this ordinance the City of Bath should promote these workshops so that residents can learn more about financing and constructing an ADU.

An ADU is relatively easy to construct and offers many financial benefits for the owner. Indeed, some single-family homes might already have a secondary dwelling unit that just is not rented due to the current regulations. ADUs are most desired by single people, the elderly, and college students. These three groups make up large portions of Bath's population. On the other hand, for homeowners who would need to construct the ADU doing so requires high up-front costs. Some may even find it difficult to receive financing for the work since many banks are unable to confidently calculate return on investment.

Cost-Effectiveness
A meta-analysis of the cost of ADUs in Portland, Oregon revealed the average one bedroom attached ADU costs about $100,000 to construct (Palmeri, 2014). Some homeowners with better infrastructure will pay less. Those without much of a pre-existing infrastructure will pay more. The administrative costs of instituting this ordinance are so minimal it is effectively $0. The staff in the Office of Planning and Development would be able to manage this ordinance within existing resources.

Political Feasibility
Accessory dwelling units benefit renters, homeowners, and the general community. Renters are offered with more housing options at lower rents. Homeowners have the opportunity to generate a second income. The community benefits by overall lower rental prices and new tax revenue generated by the increased value of properties. Some characteristics of the neighborhood might change. Homeowners who do not already have the infrastructure for ADUs would also face high up-front costs. ADUs present marginal benefits to the community.

Time
Adopting an accessory dwelling unit ordinance would require the Bath Planning Board to recommend changes to the land use code. The Bath City Council would then need to approve the recommended change. These approvals would require public hearings. Since the inclusion of ADUs in the land use code is a much less significant change to the code it is likely not to face as much community pushback. Legislative approval would take three to six months to complete. Since some properties already have unleased ADUs on their property. Therefore, some ADUs may come online within the first month of policy implementation. On average it takes about six months for a contractor to make necessary conversions within a property. Collectively, ADUs would likely begin to have an effect on the market between six to eleven months following successful implementation.

Inclusionary Zoning

The City of Bath currently does not mandate inclusionary zoning. The City of Bath should adopt a mandatory inclusionary zoning policy with an in-lieu fee in order to ensure the benefits of real estate development are being more equitably distributed amongst residents of differing incomes. This policy could closely resemble Portland's Inclusionary Zoning ordinance.

In Maine, the City of Portland is the only municipality that mandates affordable units as part of any new development with more than ten units or hotel rooms. Rockland is considering a similar policy for all development with more than six units, but the proposal has not yet been voted on by the city council. Portland's ordinance requires 25% of units to be affordable for those making less than 80% AMI. The program allows for a $150,000 in-lieu per unit fee to opt-out of the affordable unit requirement. For hotel rooms, the in-lieu fee is $3,806 per room. Affordable units are required to remain affordable for thirty years.

Prior to a 2020 citizen's referendum the affordable unit requirement was 10% of all units and the in-lieu fee was $100,000 per unit. In return the developers receive a 1.1x density bonus. The City of Portland track of all affordable units created under this program and verifies eligibility of applicants. The maximum rent the owner is allowed to charge is calculated using the following formula:

$$0.3 \times (\text{annual income of minimum household size} / 12) - \text{costs of utilities}$$

Since development is less prevalent in Bath and the overall population is smaller, Bath should require 10% of units for new developments with more than ten overall units be set-aside for affordable housing for individuals making less than 75% AMI. The in-lieu fee should be set at $100,000 per unit. The units must remain affordable for at least thirty years. Developers meeting these requirements should be eligible for a density bonus of at least 1.1x.

Mandating inclusionary zoning would generate revenue for the town to work towards achieving its other planning and development goals. It also has the potential to create new units for residents. However, since Bath would be the only municipality in Maine to have such a policy it could disincentivize private investment. Developers looking to build in the market could avoid the in-lieu fees by moving the project to neighboring Brunswick or Topsham.

Cost-Effectiveness
The Maine Qualified Action Plan costs a housing unit at $248,000. The administrative costs of enforcing this policy alternative would be paid using already existing staff resources within the Office of Planning and Development.

Political Feasibility
Across the nation the development community has generally been opposed to inclusionary zoning policies. Some affordable housing advocates have also cautioned that inclusionary zoning shifts the costs of housing onto the municipality or low-income renters through other fees. Some renters would benefit from the new affordable units, but the city could bare costs in terms of lost development. Homeowners and the general community would not benefit nor incur costs from this policy alternative. In the aggregate, there marginal costs to the broader community.

Time
Mandating inclusionary zoning would require the Bath Planning Board to add language to the land use code. The Bath City Council would then need to approve the recommended change. These approvals would require public hearings. Legislative approval would take about six months. It would then take about one year for new units to appear in the market. Collectively, it would take about 18 months to begin to see new rental units in the market following successful implementation.

Conclusion

Outcomes Matrix

The matrix below summarizes the cost-effectiveness, political feasibility, and timeline of the policy alternatives discussed in the previous section.

	Up-Zone Parcels	ADU Ordinance	Inclusionary Zoning
Cost-Effectiveness (50%)	5 pts.	35 pts.	10 pts.
Political Feasibility (30%)	15 pts.	20 pts.	10 pts.
Time (20%)	4 pts.	16 pts.	8 pts.
TOTAL	**34 pts.**	**71 pts.**	**28 pts.**

Recommendation

The City of Bath should amend its land use code to allow by-right for a single attached accessory dwelling unit in all zones. While accessory dwelling units carry high up-front costs for property owners it is most cost-effective option. The benefits of this policy alternative are also spread more equally among a diverse array of stakeholders. Renters would benefit by having more housing options at lower costs. Homeowners have the potential to earn extra income. Local carpenters would also likely benefit from the business generated by the demand for the newly allowable dwellings. This option also presents the least amount of change in terms of neighborhood character, the functioning of the Office of Planning and Development, as well as the actual land use code itself. Above all, allowing ADUs in the city will bring new housing units into the market much faster than the other two explored alternatives.

Implementation

The City of Bath needs to take four steps to successfully implement the proposed ADU ordinance.

Draft an Ordinance

The Office of Planning and Development first must draft an ADU ordinance. The ordinance should add a new sub-section to Section 8 of the Land Use Code.

Seek Legislative Approval

Once the draft ordinance has been finalized it must be presented first to the Bath Planning Board for consideration. Once it has received approval from a majority of the seven members of the Planning Board it would move on to the Bath City Council. The City Council is required to conduct three readings and votes of the ordinance before it takes effect. These meetings would also give the public the opportunity to express input on the proposed changes.

Bath does not have any organized anti-development groups, but the Office of Planning and Development as well as the Bath Housing Authority should be prepared to defend the ordinance. Specifically, the cost-effectiveness argument along with the benefits awarded to many stakeholders would be most effective at undermining arguments against the ordinance.

Educate the Public

Allowing ADUs by-right eliminates regulatory barriers to development, but the public still needs to be made aware of the possibility of constructing and renting an ADU. Many homeowners do not know what an ADU is and would benefit from further education. The City of Bath should take advantage of its media connections and Annual Report to promote the new ordinance. The Office of Planning and Development should also be prepared to help provide technical assistance to citizens looking to develop an ADU on their property.

Monitor Implementation

The Office of Planning and Development should collect permitting data on ADUs. Limited data exists on the pervasiveness, costs, and location of ADUs. Bath could become a leader in Maine for helping other municipalities adopt a similar ordinance. This data would also prove to be extremely helpful for Bath if it decides to expand upon a the ADU Ordinance recommended in this research paper. For example, Bath could in the future decide to help finance the development of ADUs through a competition grant process. The cost data would be instrumental in successfully implementing such a program.

Back Matter

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Definitions

Accessory Dwelling Unit: A smaller, subordinate, and independent residential dwelling unit located on the same lot as a stand-alone single-family home.

Comprehensive Plan: Not legally-binding document which determines community goals and aspirations in terms of community development.

Cost-burdened: Households which spend more than 30% of disposable income on housing-related costs.

Density Bonus: A key component of inclusionary zoning, a density bonus provides an increase in allowed dwelling per acre, floor area ratio, or height restrictions that would otherwise be prohibited.

Gentrification: The process whereby the character of a poor urban area is changed by wealthier people moving in, improving housing, and attracting new businesses, typically displacing current (low-income/minority) inhabitants in the process.

Inclusionary Zoning: Local policies that tap the economic gains from rising real estate values to create affordable housing for lower income families. These policies usually require new developments to set aside a certain percentage of new units for low-income individuals or a pay a fee in-lieu of the set-aside.

Land Use Code: Legally binding local ordinance which classifies parcels based on what it can be used for and what can be built on it.

Low-income: An individual who earns less than 80% AMI.

Multi-Family Structure: A residential structure which houses three or more independent families.

Planning Board: A body of citizens appointed to prepare or administer growth and development plans for a municipality.

Public Housing Project: A publicly financed and administered housing development planned for low-income families.

R-1 Zone: Zone which only allows for single-family home construction.

Severely cost-burdened: Households which spend more than 50% of disposable income on housing-related costs

Up-zone: To reclassify (an area, property, etc.) to a higher zone, typically allowing for more intensive use, e.g. from residential to commercial or from single- to multiple-family use.

Zoning Code: A rule that defines how property or land in specific geographic areas can be used. It is one piece of the larger land use code.

Acronyms

ADU: Accessory Dwelling Unit

AMI: Area Median Income

BHA: Bath Housing Authority

BIW: Bath Iron Works

CDBG: Community Development Block Grant

ERA: Emergency Rental Assistance

HCV: Housing Choice Voucher

HTF: National Housing Trust Fund

HUD: United States Department of Housing and Urban Development

LIHTC: Low-Income Housing Tax Credit

MSHA: Maine State Housing Authority

NLIHC: National Low-Income Housing Coalition

OECD: Organization for Economic Cooperation and Development

UN: United Nations

List of Figures