



Low Density Development in Williamstown, MA

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ENVI 302 Environmental Planning Workshop
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Fall 2021

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¹ Photo courtesy of Burr and McCallum Architects:
[http://www.burrandmccallum.com/projects#/berkshires house fourteen](http://www.burrandmccallum.com/projects#/berkshires%20house%20fourteen)

TABLE OF CONTENTS

Land Acknowledgement

Executive Summary

Introduction

- I. Project Goals
- II. Site Description
- III. Problem: Rural Sprawl and Large Houses

Literature Review

- IV. Impacts of Large Houses on Low Income Housing
 - A. 1999 Build Out Analysis
 - B. 2016 Build Out Analysis
 - C. Strategies for Economic Growth
 - D. Housing Needs Assessment of Williamstown
 - E. 2002 Master Plan
 - F. Community Resilience Building Workshop Report
- V. Impacts of Large Houses on Farmland
 - A. Farms Under Threat: New England
 - B. Mass Audubon Losing Land
 - C. Farms for the Future
- VI. Impacts of Large Houses on Municipal Budget
 - A. A Cost of Community Services for Williamstown, MA
 - B. Cost of Community Services Study by the American Farmland Trust

Interviews

- VII. Hank Art, *Williams Professor Emeritus of Biology*
- VIII. Brian Cole, *local farmer*
- IX. Ann McCallum, *local architect*
- X. Chris Winters, *Williamstown Planning Board*
- XI. Don Dubendorf, *local lawyer*
- XII. Leslie Reed-Evans, *Rural Lands*
- XIII. David McGowan, *Rural Lands*
- XIV. Christine Rasmussen, *Stockbridge Planning Board*
- XV. Jeanne Knight, *Needham Planning Board*
- XVI. Don McCauley, *Wellesley Planning Director*

Solutions and Mitigating Impacts

- XVII. Zoning and Subdivision Code
 - A. House Size
 - B. Siting
 - C. Multifamily Housing
 - D. Tiny House/Mobile Home Cluster Zoning
 - E. Maintain Current Rural Residence Density

- XVIII. Environmental Protection Bylaws
 - A. Strengthening the Wetlands Protection Act
 - B. Tree Removal Bylaws
 - C. Mandating Solar Energy on New Homes
 - D. BTU on Heating
 - E. Low Impact Development Ordinances
 - F. Resource Protection Overlay District Ordinances
 - G. Driveway Bylaws
 - H. Wildflower/Lawn Reduction Bylaw
 - I. Pesticide Use Reduction Bylaw
 - J. Encouraging Environmental Uses on Large Lots
 - K. Committing to Net Zero
- XIX. Design Review Processes
- XX. Economic (Dis)incentives
 - A. Residential Tax Exemption
 - B. Development Impact Fees
 - C. Deed Restricted Housing
- XXI. Historic Preservation and Anti-teardown Laws
- XXII. Working with Local Builders and Architects
- XXIII. Prioritize Farmland Preservation and Utilizing Chapter 61B
- XXIV. Encouraging Downtown Development

Evaluation Matrix

Conclusion

Acknowledgements

Appendix

Works Cited

Land Acknowledgement

It is with gratitude and humility that we acknowledge that we are working and gathering on the ancestral homelands of the Mohican people, who are the indigenous peoples of this land.

Despite tremendous hardship in being forced from here, today their community resides in Wisconsin, and is known as the Stockbridge-Munsee Community.

We pay honor and respect to their ancestors past and present as we commit to building a more inclusive and equitable space for all.

Executive Summary

Rural sprawl and the construction of larger houses have devastating impacts on agriculture, the environment, and the social and civic fabrics of the Williamstown community. Large, sprawling houses in rural areas fragment natural lands, diminish habitat quality, and destroy natural resources and ecosystem services. They similarly fragment potential farmlands and drive up land prices, forcing farmers out of the area and making farming even less economically viable than it already is. Houses in the countryside also require more infrastructure (such as roads and electric lines) and increase the cost of community services. The upcoming Williamstown Master Plan Revision offers an opportunity to address some of these issues. We hope to mitigate the aforementioned impacts of rural sprawl and large houses by offering several potential bylaw suggestions and other creative solutions to create housing that is more affordable, sustainable, and cognizant of agriculture in the town. Altering zoning rules to limit house sizes, reduce setbacks, allow

multi-family development, and permit Open Space Residential Design and tiny house clustering is the most direct way to control house locations, sizes, and impacts. Stricter environmental laws similarly limit the location of houses and the amount of land and resource degradation that construction can cause. Economic (dis)incentives such as increasing taxes for second houses, instating development fees, allowing tax breaks for sustainable measures, and offering density bonuses to developers can motivate smarter and healthier development. Other creative solutions entail historic demolition delay bylaws, large house review committees, tiny house/mobile home communities, increased downtown development, and working with builders to make houses more environmental and suited to Williamstown's needs. Even though rural sprawl and increasingly large houses will have unavoidable consequences, this report outlines ways to mitigate some of the issues they cause and make these trends more sustainable for the community.

INTRODUCTION

Project Goals

The goal of this project is to inform the upcoming Master Plan committee on how to both improve and mitigate the impacts (environmental, agricultural, and social) of low density residential development and the construction of large houses. We hope to outline the previously unaddressed externalities of large mansion development in the rural areas of Williamstown, especially its impact on land price and availability for the farming community. We have found creative methods as well as potential bylaws that could decrease the detrimental environmental, socioeconomic, and civic impacts of low density development in Williamstown. We define a large house as a house over 3,000 square feet, as recommended by the Environmental Design Research Association.²

Site Description

For the past 12,000 years, indigenous communities have lived and gathered in the Berkshire region. In 1765, Williamstown was incorporated into the Massachusetts colony. For the next 200 years, farmers cleared the land extensively for agriculture, eventually deforesting 80% of the landscape in Williamstown (Freedgood). Throughout the 1800s, the dairy industry became a large part of the economy (Bingham, 2020). Nowadays, both farmland and farming as a practice are decreasing; between 2012 and 2017, Berkshire County lost 52 of its 527 farms and over 3,000

² EDRA37: beyond conflict : proceedings of the 37th Annual Conference of the Environmental Design Research Association, May 3–7, 2006, Atlanta, Georgia. Page 254.

acres of farmland to Low Density Residential (LDR) development and other pressures (USDA, 2017).

Williamstown has a rural character, as it is far from urban centers, highways, hospitals, and industrial activity. This character is partially responsible for its population decline, although this trend may reverse due to COVID-19, which influenced people to flee more densely packed cities. According to David McGowan from the Rural Lands Foundation, this trend could be further reversed by climate refugees moving to rural areas in search of respite from the displacement effects of global warming.

In 2021, Williamstown had 862 single-family homes, 191 condominium units, 93 two-family homes, 26 three-family homes, and 23 four-family or greater homes.³ According to the 2013 Housing Needs Assessment Report by the Williamstown Affordable Housing Committee, 62% of Williamstown's employed residents work in the community, and Williams College accounts for roughly 30% of all local jobs. Of the ~3,000 occupied housing units, 648 are renter households, 21% are subsidized for low-income residents, and 11% use Section 8 vouchers to subsidize market rate units. The rental prices are 30-60% higher than those of the surrounding communities. Additionally, the median single-family home price more than doubles those of North Adams and Adams and is 55% higher than median for the county. The median household income for renters is \$31,808, while the median income for owners is \$79,500. Despite containing over 30,000 acres of land, the 1999 Williamstown Build Out Analysis showed that only 2,046 acres are free of any possible constraints – like sloped surfaces or conservation – and can be developed for

³ Additionally, the town has 29 miscellaneous residential properties such as a parcel of land with more than one house on it and 26 mixed use properties with varying percentages of residential and commercial occupancy associated with the building use. Data from Williamstown Town Assessor Chris Lamarre.

residential homes.

Williamstown is also home to a large number of second houses owned by non-domiciled property owners. For the purposes of property taxes, non-domiciled owners are defined in Massachusetts as not carrying out “the majority of their life activities in Williamstown such as work, religious worship, banking, income tax filing, voting, vehicle registration and general family activities” (Lamarre). Presently, the town has 158 non-domiciled property owners. The town assessor expects this number will continue to increase.

The Problem: Rural Sprawl and Larger Houses

While walking down Spring Street, a passerby may notice a sign posted outside of Burnham Gold real estate advertising an 18-acre plot going for \$850,000 on Northwest Hill Road that boasts “ample frontage for a subdivision into separate parcels, 5 in fact, or just one!!” (see Appendix 1 Figure 1). While this lot size may seem large, it is quite common in Williamstown due to its rural zoning laws. The sign provides a brief history of the location — “the Mason family have been sugaring for 70 years” — but also timidly mentions that “this is the last piece of the Purple Kings Farm.” Realtors market the sugar shack on the property as a nice aesthetic piece of historical farming for the new owners to enjoy — but now without the noises and smells that would result from farming on the property.

Williamstown is experiencing a phenomenon known as *rural sprawl*. Rural sprawl entails low density residential development distanced from more developed regions. It also includes “commercial strip development along arterial highways leading into and out of villages, suburbs,

and smaller cities” (Thomas, 1). Every day in Massachusetts, 22 acres of forest and farmland are destroyed, largely because of low density residential sprawl (Curtatone and Leroux). People move away from cities and suburbs for many reasons: scenic views, space to garden or raise animals, less traffic, lower crime rates, lower land taxes, and more relaxed environmental rules (Marshall).

Despite the benefits of rural life, however, rural sprawl causes numerous economic, social, agricultural, and environmental issues. Rural sprawl increases the needs for infrastructural services, such as roads, sewage systems, and electrical lines in remote areas. It also places increased stress on fire and police departments, who must now use winding dirt roads and driveways. These expenses frequently outweigh the revenue and benefits brought in by property taxes, which are not sufficient to cover these services. Rural sprawl also jacks up land prices, as rising home value leads to rising property taxes. Higher land prices have both economic and social repercussions, as it becomes harder for farmers to afford farmland and for developers to create affordable housing. Due to systemic racism, lack of low-income housing has racial implications in addition to class implications. Density restrictive zoning and its low density outcome, according to Massachusetts’ 2019 Analysis of Impediments to Fair Housing, tend to disproportionately exclude Black and Hispanic residents, whereas multifamily rental options promote the inclusion of traditionally excluded minority households (Shupin). Social fabrics of towns face further detriment when private landowners with large, sprawling houses seek more privacy, refusing to allow access to their lands for hiking, trail riding, and hunting (Marshall).

Rural sprawl also poses a threat to agriculture and the environment. Wealthy landowners discourage adjacent farming by complaining about noise and smell, sometimes employing legal measures to deter “disruptive” farming. Farmers also become more likely to sell to real estate

developers when land parcels become too expensive for other farmers. Selling land to developers, in turn, increases land fragmentation, which makes it harder for farmers to rent land for growing crops or grazing purposes (Thomas). Additionally, wealthy people tend to consider land a “financial investment in future development,” but holding onto land instead of using it productively prevents investment in agricultural production, as “hobby farms” do not contribute to economic viability of the agricultural community (Marshall). Fragmentation harms the environment as well, as species struggle to survive in smaller, separated habitat areas. Large, rural estates frequently require the clearing of trees, which has numerous other environmental impacts. Clearing trees for low density residences contributes directly to climate change, as trees are the most effective sequestrators of carbon. Trees and other native plants also provide important food to birds and insects. Despite the importance of trees, many developers prefer to site homes among forests because sale prices will be higher. They also turn woodlands into sprawling lawns. These lawns require more water, fertilizers, chemicals, and carbon-guzzling lawn mowers to maintain than naturally-occurring fields and forests. Replacing native plants with non-native grasses and shrubs can lead to invasive species crowding out native species.

Ecological impacts of rural sprawl include the loss of major ecosystem services, such as: water management, microclimate regulation, biodiversity, nutrient retention, pollution mitigation, and human access to restorative nature. Soils developed for large houses with sprawling lawns lose a natural ecosystem’s ability to efficiently retain water, nutrients, and carbon.⁴ The loss of carbon storage combined with the loss of biodiversity due to ecosystem fragmentation vastly decreases Williamstown’s resilience against climate change. Moreover, natural systems mitigate the effects

⁴ The Cary Institute for Ecosystem Services outlines many of these impacts: <https://www.caryinstitute.org/>.

of pollution according to the UNEP. Additionally, habitat fragmentation increases the amount of edge space in an ecosystem. An ecosystem edge has distinct physical and biogeochemical characteristics from the rest of the ecosystem, including increased wind speed, tree mortality, temperatures, and light availability. As a result, edge habitats are more sensitive to climate warming, providing further incentives to protect contiguous ecosystems (Reinmann and Hutyra, 2017).

In addition to becoming more sprawling, houses in Williamstown are also becoming larger, adding to their environmental, social, and economic impacts (Figure A1). Our data analysis demonstrated an average increase of ~ 24 square feet per decade (p value ~ 0.0 and R^2 of .97). Houses are growing in size on a national level as well. Over the last 42 years, the average new house has increased by more than 1,000 square feet, from an average size of 1,660 square feet in 1973 to 2,687 square feet in 2015 (American Enterprise Institute). Simultaneously, the average amount of living space per person in a new house has nearly doubled. A median single-family house in 2020 had a floor area of 2,261 square feet, 4.2% larger than the median in 2010 and 9.9% larger than the median in 2000 (Hoff). This might be due to the fact that after the recession, younger first-time buyers were pushed out of the market by tight mortgage loans. As a result, buyers are now wealthier and have more equity in their current homes to trade up. Our data demonstrated an increase in variability in mean square footage of new house sizes in Williamstown post-2008, correlating with this national change after the recession.

Berkshire real estate brokers have capitalized on this wealthier market and now encourage potential residents to build their “dream house” at whatever size (Edge Staff). They care mostly about upping the exchange value of a property, overlooking the use value of undeveloped land,

whether that be aesthetic, ecological, or community building. This has allowed municipalities to disregard the economic, social, and environmental impacts of large houses and consider only the benefits of an increased tax base in the town.

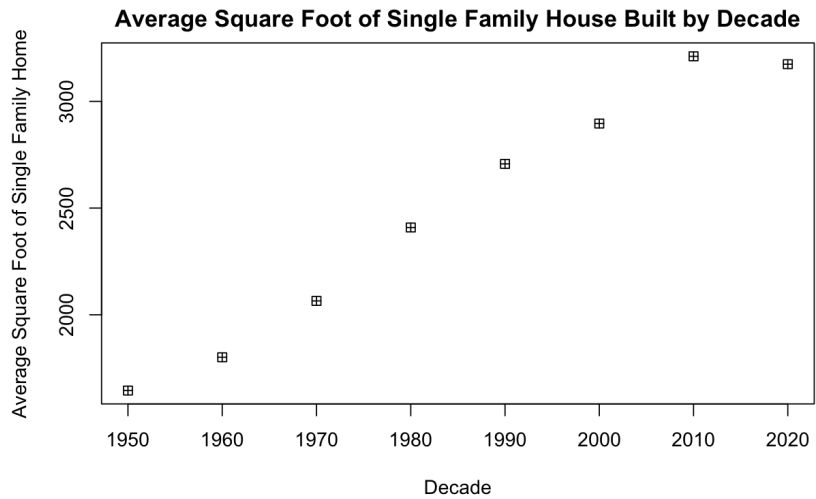


Figure 1: Graph displaying the increase in average square footage of single-family homes (LUC 101) from the Williamstown Tax Database. Data provided by Andrew Groff.

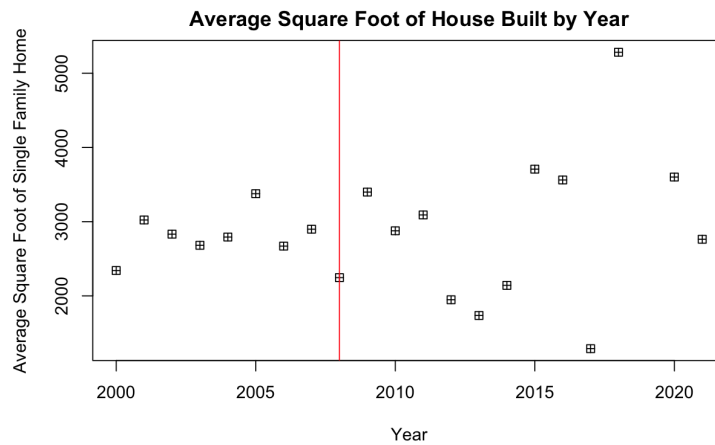


Figure 2: Graph displayed the increased variability in square footage of single-family homes (LUC 101) from the Williamstown Tax Database. Data provided by Andrew Groff. The red line at year 2008 demonstrates the increased variability in average square footage in new homes, possibly correlated with the increased disparity in income after the financial crisis. See Figure 3A in our Appendix for the residual plot demonstrating this increased variability.

A 2007 survey of 103 cities published in the *Journal of Urban Design* showed that 73 cities and towns across the country are successfully adopting or considering regulations (such as limiting floor area or implementing a design review process) to control the development of low density larger houses (Nasar, 339). The majority implemented these regulations through adjusting existing zoning regulations; 31.5% controlled house size, 17.3% controlled lot coverage, and 11% (all in Connecticut) required a special permit. Other controls included a design review process (6.9%), height controls (5.5%), a moratorium (5.5%), lot size, daylight plane, building regulations, demolition limit and an overlay zone (Nasar, 343). This report details our further research into regulations explored by towns in the *Solutions* sections.

LITERATURE REVIEW

Social Impact of Large Houses: Low-income Housing

Almost all these reports touch on the lack of affordable housing options in Williamstown, which low density development exacerbates by raising property taxes and land costs to a prohibitively expensive degree.

Williamstown Build-Out Analysis, Center for Economic Development at the University
Massachusetts at Amherst, 2009

This report by the Masters of Regional Planning Program, the Office of Geographic Information and Analysis, and the Center for Economic Development at the University of Massachusetts at Amherst quantified Williamstown land available for development. It demonstrated that at the time, the town had only 2,046 acres free of any possible constraints, which breaks down to only 15 acres of non-residential land and 2,032 of residential land. This was largely due to the town's sloped areas (16,436 acres) and protected open space areas (2,297). The report most importantly recommended rezoning residential acreage into commercial acreage as the primary strategy to alleviate the shortage of commercial land. Moreover, it encouraged home-based business through the issuance of special permits that would allow for increased business activity and a more balanced tax base (2).

Williamstown, MA Build-Out Analysis, Erica Chang, Maggie Peard, and Jamie Ruggiero,
2016

This report demonstrated how only 26% of houses in Williamstown cost less than \$200,000, with the median price of homes in September 2015 valued at \$504,500 (Chang et al., 28). It states that higher-density housing within walking distance of the town center could have positive effects on the town, despite fears that densification will ruin local character (Chang et al., 30). Leslie Reed-Evans, interviewed for the report, stated that concentrated development reduces sprawl and prevents the disruption of the town's bucolic charm, allowing for protection of natural resources in larger parcels on the outskirts of town. The report also discussed how the Agricultural Overlay District could help protect the forests and farmlands that residents value as well as help farms stay in business by allowing commercial activity on farmlands (Chang et al., 30).

Strategies for Economic Growth in Williamstown to the Selectboard, Williamstown Economic Development Committee, 2015

This report recommended more housing be created for low and middle-income families by changing zoning statutes and subdivision regulations to accommodate smaller and more affordable buildings, as current zoning statutes limit opportunities to create such housing. Town Hall staff, Town Boards, and Town Committees were asked to update policies and procedures to facilitate business growth (2). The report details how the housing stock in Williamstown at the time was only half the standard amount of affordable housing set by the state, but by the time of this report, this number had reached its "fair share," or 10%. The report included multiple recommendations that we believe should be explored as a part of limiting rural sprawl. Firstly, the Affordable Housing Committee should update the housing needs assessment. Secondly, the Planning Board

should review the current zoning bylaws as well as subdivision rules and regulations, and explore whether the regulations inhibit the development of diverse housing types (40).

Housing Needs Assessment of Williamstown, Williamstown Affordable Housing Committee, 2013

This report provided important demographic information about Williamstown. For example, 62% of Williamstown's employed residents work in the community, and Williamstown's major employer, Williams College, provides roughly 30% of all local jobs (7). Williamstown has roughly 3,000 occupied housing units. Eighty percent of these units are owner-occupied, compared to 69% for the county (35). It attributes the decline in rental occupancy to the conversion of previously rented single-family and condominiums to owner-occupancy or seasonal use (9). Of single-family homes, 25% are rented and 84% are owned. Owners have a median income of \$79,500 (9). Of the 648 renter households, 21% are subsidized for low-income residents, and 11% use Section 8 vouchers to subsidize market rate units. The median household income is \$31,808. Rental prices are 30-60% higher than surrounding communities (12). The cost of local apartments and homes increased in value at one of the fastest rates in the Commonwealth. Yet, the current inventory of homes for sale or apartments for rent is low. This may be contributing to the fact that Williamstown has been steadily losing its young, low-income, and moderate-income families (37).

The Housing Needs Assessment showed that 77% of Williams College faculty lives in town, while 48% of administrative staff and only 27% of its support staff reside where they work (39). The local perspectives section stated that local housing professionals were split in their opinion of whether the perceived "gentrification" of Williamstown was a good or bad

development, though most acknowledged it was occurring (43). The assessment also encouraged addressing the needs of Spruces residents that were displaced by Hurricane Irene, as only 10% found alternative housing in Williamstown. It also identified a need for non-elderly renter households since the share of renters is lower than county or statewide levels and elderly rental housing. The need highlighted as the most urgent in this report was for affordable first-time homeownership in Williamstown (44-51). Protecting affordable renting options and affordable homes for young people moving to Williamstown provide important reasoning to regulate low density development and larger houses.

Master Plan, Master Plan Steering Committee, 2002

This report stressed the importance of new affordable housing in town, as well as protecting agricultural lands through limiting future consumption of land while increasing residential units in the town center. The increasing income disparity between the upper- and lower-income ranges was identified as a reason to consider this development. Recommendations included expanding the business district and utilizing the old town garage for retail development. Other action steps included reviewing zoning bylaws, providing for mixed use throughout the village center, including commercial agriculture as a part of an economic development plan, and reviewing existing bylaws to determine if desired land uses are not being advanced.

The plan identified a need for affordable starter housing and moderately priced houses, specifically for first time buyers, young families, moderate income families, single people, people with disabilities, retirees, and the elderly (12). It demonstrated how Williamstown cannot rely on the surrounding region to satisfy housing demands because other communities are facing similar

difficulties in expanding housing. Recommendations for these problems included creating 100 units of new housing over the next ten years, encouraging Williams College to meet future faculty-staff housing needs through new construction and adaptive reuse (14). It also recommended preserving farmland through limiting consumption of land, promoting building renovation and conversion, and promoting high-density development in the town center (14-16).

The Master Plan Action Plan (2004) created steps to address these recommendations. First off, the commercial agriculture-related businesses (bee keeping, energy generation, farm stands) should be included as part of the economic development plan by reviewing zoning and other regulations of ancillary manufacturing or retail uses that may be associated with on-going agricultural regulations (2). Additionally, the Planning Board should create an Agricultural/Commercial/Select Industry Overlay District as a way to support working farms while encouraging appropriately scaled commercial/select industry development (3). Finally, future development can be concentrated in existing developments by creating a growth boundary determined by the existing public sewer system plus approximately 500 ft (3).

Community Resilience Building Workshop Report, Williamstown Hazard Mitigation Committee/MVP Committee, 2018

This report showed how the town-supplied water system is limited to areas in and around the downtown. This means that all other residents and community buildings are reliant on on-site wells. Some of the private wells are shallow wells located in flood hazard areas, north of the downtown and in the farming areas abutting residential areas (10). Additionally, it showed how gravel roads can be hazardous to residents when culverts are inundated with stones, debris, and

silt. Moreover, freezing and thawing leaves muddy and rutted roads that are inaccessible to emergency vehicles (10). The report recommended that the town study the expansion of the public water and sewer systems to serve those areas currently using private wells and septic systems in identified flood hazard zones. The limitations of town-supplied water and the hazards of gravel roads provide justification to curtail the development of large houses that are “off the grid” in Williamstown, as they strain emergency systems and increase the risk of contaminated well water.

Social Impact of Large Houses: Farmland

Farms Under Threat: New England, American Farmland Trust, 2020

This report detailed some of the challenges facing New England farms and outlined potential solutions. New England is home to many diverse geographies and agricultural practices, but Low Density Residential (LDR) development poses one of the biggest threats to New England agriculture and is responsible for 65% of the farmland loss in New England from 2001-2016. LDR fragments farmlands, making them less stable and thus less productive. However, parceled lands that are not completely lost are cheaper and could pose opportunities for new farmers seeking access to smaller parcels more suitable for their operations. The report recommended using Productivity, Versatility, Resilience (PVR) values (calculated by analyzing yield, crop diversity, and responses to challenging climate conditions) to prioritize lands that most need protection. Moreover, land trusts can and should play a bigger role in purchasing and protecting these lands, but they need government support and funding to do so. The report discussed the upcoming “farm transition gap,” in which current farmers age out of the industry, leaving behind a need for a new generation of younger farmers. At least 40% of New England’s farmland (1.26 million acres)

reported no succession or estate planning of any kind. In order to prepare for this transition, which is at risk due to the rising costs of farmland, the government should support farm-link programs and land leasing programs. There are many parallels between the challenges facing New England mentioned in the report and the challenges facing Williamstown we have found in our research.

Losing Ground: Nature's Value in a Changing Climate, Mass Audubon, 2020

This report described how not only is protecting land critical for addressing climate change and the biodiversity crisis, but that land use planning can help communities address socio-economic priorities as well. While 13.5 acres of land are developed every day in Massachusetts, there has also been a 37% increase in land protection rate. Chapter 4, “Tools for Resilient Communities,” was the most relevant to problems facing Williamstown. One way to mitigate environmental impacts of development is to emphasize Low Impact Development (LID) and integrate nature into development. Natural Resource Protection Zoning keeps new development out of areas such as wetlands that provide critical ecosystem services and can also prevent habitat fragmentation and rural sprawl. Restricting impervious surface cover preserves water quality and reduces both flooding and costs of stormwater treatments. The study found that 7% impervious surface cover led to a 35% decline in fish populations and that 12% impervious surface cover caused most streams to fail to meet water quality standards for aquatic life. Trees can be used to reduce energy expenditures, naturally purify air, and provide shade. Walkable towns have lower carbon emissions, a tighter knit community, and less rural sprawl.

Chapter 5 explained how to build these resilient communities. Mapping tools (such as Mass Audubon’s Mapping and Prioritizing Parcels for Resilience, The Nature Conservancy’s Resilient

Landscapes datalayer, and MassWildlife's BioMap2) can be used to identify areas that are best for conservation, farmland, or development. Local land use controls and programs can incentivize protection of priority lands. Open Space Design or Natural Resource Protection Zoning protects important natural resources. Land disturbance and tree removal bylaws minimize land clearing and grading within development, both deterring low density housing and making it more environmental. Transfers of Development Rights concentrate development in preferred locations in exchange for protection in priority conservation areas. Mass Audubon's LID bylaw review tool helps communities identify and prioritize improvements to local zoning and regulations. The Community Preservation Act (CPA) is a tax program that generates funds for municipal open space, historical and cultural preservation, affordable housing, and outdoor recreation. Landowner incentive programs can also contribute to the solution. Chapter 61 is a program that reduces local property taxes in exchange for landowners agreeing to keep land in forest, agriculture, or open space uses. The Working Lands Initiative provides funding for private land conservation and stewardship. All of these tools, programs, and bylaws could help assess the best development land in Williamstown and make LDR development more environmentally friendly.

Farms for the Future, Dave Simmonds, 2021

This video documents the impacts of lost agricultural land on Williamstown. In the 1950s, there were around 50 farms in Williamstown. Today, there are only a dozen left, including 4 vegetable farms; 3 dairy farms; 2 wholesale milk shippers; smaller cheese, beef, chicken, pork, cow-calf, and maple syrup producers; and 2 horse stables. Nationally, 11 million acres of agricultural land was lost from 2001-2016, largely because farms are some of the most developable

spaces. The participants in the video argue that every single parcel of land available for farming needs to be retained as agricultural land in order to create a resilient, local food system in the face of climate change. About 90% of the food Williamstown consumes comes from other parts of the country, and only around 3% of fruits and vegetables are local. They argue for an Agricultural Preservation Restriction (APR) on farmland that buys development rights of farmland to reduce the property value for farmers, allowing them to keep farming it and to sell it as farmland when they retire.

Economic Impact of Large Houses

A Cost of Community Services for Williamstown, MA

There is a common misbelief that (second) homeowners of large houses are an economic boon to the community. Seasonal residents do not enroll their children in the public school system, but they still pay property taxes that contribute to educational services. Additionally, second homeowners tend to be wealthier; some townspeople we spoke to believe they thus spend more on local goods and services and are philanthropic towards the local arts, hospitals, and nonprofits. But this raises the question of whether we should let wealthier residents steer the focus of our economy and decide what services to support in Williamstown. However, our research showed that larger houses are not the boon they are made out to be.

Firstly, COCS is a case study approach to determine both the public costs incurred and the revenues generated by different types of land-use; it is useful to communities that rely heavily on property taxes to generate revenue (Leduc, 2). The students' survey showed that the perceived

supply of estate homes and second homes exceeds perceived demand. They believed that respondents did not want to see Williamstown become a vacation town or retirement community (Figure A2). It also showed that townspeople want more starter housing, elderly housing, moderately priced housing, multi-family housing, and housing within walking distance to Spring Street (Leduc, 6). Using the 2004 Williamstown Tax Assessment, the students revealed that residential development costs the town \$1.115 for every \$1 it generates, commercial/industrial development costs the town \$0.424 for every \$1 it generates, and open space costs the town \$0.248 for every \$1 it generates (Leduc, 25). It is important to note that a COCS Study is merely a snapshot of the town's finances for a one-year period. It does not take into account indirect costs and benefits of different land-uses (such as commercial development providing jobs) and non-monetary benefits (such as affordable housing supporting socioeconomic diversity or open space providing habitat for endangered species). Due to these results, the authors recommended supporting infill development and preventing sprawl. They additionally debunked "one of the land-use debate's central misconceptions" that open space does not benefit the town financially, while providing evidence of its aesthetic, environmental, and financial benefits (Leduc, 26).

Cost of Community Service Study, American Farmland Association, 2013

Secondly, this study showed that communities pay a high price for unplanned growth, primarily in the forms of scattered development cases that cause traffic congestion, air and water pollution, and loss of open space (Freedgood, 6). Most notably, growth increases the demand for costly public services. The report debunks three "misperceptions about rural communities facing growth pressures." First, working lands generate more public revenue than they receive back in

public services, disproving the myth that open land – including productive farms and forests – are an interim land use that should be developed to their “highest and best use.” Second, in nearly every community studied, farmland has generated a fiscal surplus to help offset the shortfall created by residential demand for public services. Agricultural land does not “get an unfair tax break when it is assessed at its current use value for farming or ranching instead of at its potential use value for residential or commercial development” (Freedgood, 6). Despite the myths that residential development leads to paying lower taxes they showed that higher home values, despite the possible decrease in property tax rates, usually translates to *higher* tax bills for everyone as their property values have gone up (Freedgood, 6). Evidence of this phenomenon can be seen in Pittsfield.⁵

Ecological Impact of Large Houses

Rural By Design

In his book *Rural by Design*, Randall Arendt points out how over 70% of the forests along the eastern seaboard have disappeared and cannot regenerate into woodland (Chapter 16). He believes that planners can now recognize the “inherent shortcomings of reactive, haphazard conservation and appreciate the need for a holistic approach to protecting ecological systems and

⁵ According to Andrew Groff, most towns in Berkshire County this year have seen a massive increase in property value. This has allowed most towns to correspondingly reduce their tax rate significantly. However, because residential value has gone up so much, nearly everyone will see a much higher overall bill. For evidence: Pittsfield’s increase in tax bills has come up significantly:
<https://www.iberkshires.com/story/66586/Pittsfield-City-Council-Approves-FY22-Tax-Rate.html>.

open space networks.” He proposes a unique conservation approach that combines conservation and development: “Conservation Subdivision Design.” This approach to laying out subdivisions requires that a significant percentage of buildable uplands be permanently protected to create interconnected networks of conservation lands. Conservation subdivisions are specifically designed around each site's most significant natural and cultural resources, with their open space networks being the first element to be "green-lined" in the design process. This approach allows “Green Infrastructure” to be considered in the same way as “grey” or traditional infrastructure (Chapter 16). He provides multiple examples of communities that use this approach, including Larrabee Farm in Brunswick, Maine, in which fifteen lots framed a 15-acre field of blueberries. A permanent conservation easement held by the Brunswick-Topsham Land Trust (BTLT), as required by the town’s subdivision regulations, stipulates that the homeowner association leaves the fields open for three decades (Chapter 16). He also posits that zoning ordinances work best when established directly (such as by designating density as three units per acre in sewered areas, or two acres per dwelling in unsewered areas) instead of indirectly (such as through minimum lot sizes) in order to preserve open space (Chapter 16).

Multi-Hazard Mitigation Plan Update, Williamstown Hazard Mitigation Committee/MVP Committee, 2018

Flooding, along with snow and ice, were consistently the top hazards at each of the breakout tables at the MVP Workshop (7). Concerns about these dangers provide justification for stricter driveway bylaws to prevent runoff.

INTERVIEWS

The next phase of our project included interviewing relevant stakeholders. Every interviewee had a different area of expertise and different opinions on the trend of LDR development and was thus able to offer us unique information and advice.

Hank Art

Williams College Professor Emeritus Hank Art is the interim director of Williamstown Rural Lands. He talked about Williams' history of developing land for housing in the area, specifically mentioning problems like the steepness of Pine Cobble development. This led to a discussion of the dangers of large houses with long driveways and extensive lawns, as well as potential ways to make larger houses more sustainable. Long, sloped driveways create runoff that freezes on municipality roads, as well as increased sedimentation in waterways. This problem can be addressed by creating bylaws on driveway steepness, length, and permeability. Large lawns require excessive water, fertilization, and mowing. He proposed "mowing" large lawns with cows and goats instead of lawn mowers to reduce their carbon footprints.

Brian Cole

Brian Cole '11 is a local farmer who owns Bigfoot Farm. Some of the trends we discussed in Williamstown were the increasing cost of living, increased average age, and the future of farming. He explained how Low Density Residential (LDR) development drives up property values, making Williamstown an expensive place to live. This trend in turn deters young people

and attracts older, wealthier residents; it also makes it more difficult for farmers to acquire land. Brian next brainstormed a few possible solutions with us regarding how to either improve or mitigate the impacts of LDR and its relationship with agriculture. First, some land parcels are better suited for agriculture or forestry than others – not every piece of land must be reserved for farming or conservation, and the town should be very intentional regarding which land to protect and use productively. Next, residential land can be made more accessible to farmers by encouraging residents to lease land, providing incentives for residents to lease land (such as free “mowing” or tax breaks), and minimizing the amount of intrusion farmers cause by carefully selecting the type of agriculture. Finally, LDR can be made more eco-friendly by requiring a certain percentage of land to be left in its natural state or turned into pollinator meadow during development. We finished our conversation by discussing ways to improve the agricultural situation in town through addressing the town’s social dynamics. Rather than just using economic incentives to help agriculture, the town can also offer “social rewards” through encouraging individuals to be active citizens (by leasing farmland, for example), which could make people feel like more active and appreciated members of the community. The town could also hold events that would foster community relationships and healthy farming.

Ann McCallum

Local architect Ann McCallum’s firm designs many of the new, larger houses in and around Williamstown. Ann told us about some of the building trends in the last few decades and how they have changed or stayed the same. Some of these trends are environmental: solar panels, air source heating, compost, on-site water retention, and pollinator meadows are frequent

additions. When we discussed solutions, Ann told us that she believes the problem is not lack of land, but rather lack of farmers able to afford land.⁶ In order to incentivize farming, the land has to be more accessible. Ann thought the Williamstown Agricultural Commission could help connect landowners and farmers looking for land. She also discussed mutual benefits for farmers and landowners of leasing programs (residents get tax cuts, free mowing, and personal satisfaction). One trend that concerned Ann, however, was pollinator meadows. When pollinator meadows are not seeded carefully or taken care of, they frequently become overrun by invasive species. Education and cooperation with landscaping companies can mitigate this problem.

Chris Winters

Chris Winters is the Associate Provost and Chair of the Planning Board. He mentioned the phrase “there is no zoning like owning,” honing in on the point that the best way to secure land for its desired use is to buy it; land trusts should invest in buying farmland to conserve it for future farmers. Additionally, he pointed out the inevitable tension between conserving land and keeping land affordable for residents.

Don Dubendorf

Don Dubendorf is a retired lawyer. Additionally, he was Williams’ land use attorney and Environmental Law professor a few decades ago. Much of this interview focused on how zoning

⁶ Our addition would be that there is a lack of *affordable* land because of the high property values, which means there is a lack of farmers who can afford this land, not necessarily a lack of interest in the work.

regulations cause LDR development but can also be used to prevent it. He explained how large-lot-zoning was originally used to accommodate septic systems, as they needed to be distanced from residential groundwater wells, a problem we no longer have due to modern technology. Additionally, he described how large zones were implicitly used to exclude low-income citizens and people of color from Williamstown and most rural areas.

He thinks that reducing the dimensions of lots, as well as frontage rules and setbacks, would reduce the area of impact that houses (especially large houses) have on the land. He also thinks density requirements need to be readdressed, as lots should be allowed to contain more than one family unit. Encouraging downtown development, which is naturally denser, is an important aspect to discouraging rural development as well. He next talked about sustainability and how environmental regulations can address LDR. Driveways, for example, could be shorter and less steep; this would create less runoff and make houses closer to the road, thereby decreasing land fragmentation. A shared energy source, such as common geothermal heating, would be more eco-friendly, less expensive, and require houses to be closer together.

Leslie Reed-Evans

During her tenure as the director of the Rural Lands Foundation, Leslie facilitated the preservation of Caretaker Farm through an Agricultural Preservation Restriction with a 99-year lease. Additionally, she helped preserve a tract of land along Oblong Road and Route 43. She believes that changing zoning to encourage the peripheral development of large land would mitigate the impacts of low density housing. She talked about the difficulties farmers face not only leasing land, but also renting or owning houses in expensive areas.

When asked about the pushbacks to limiting development, Leslie talked about how the goals of the Rural Lands Foundation have shifted with the changing demographics of its members. Historically, most members prioritized conservation; nowadays, members and townspeople want more amenities and recreation areas. This change has led to less focus on conservation restrictions and agricultural conservation. She recommended instituting the Minor Lane Subdivision bylaw, which would allow farmers or large landowners to build up to three houses on a lot without the required frontage in order to maximize farmland and allow for cluster zoning. Williamstown has not had a new subdivision application in over a decade, as the bylaw is voluntary.

David McGowan

David McGowan, the current director of the Rural Lands Foundation, talked about the history of the organization's role in preserving farmland as well as its future goals. He stressed the importance of providing affordable housing directly next to farmland for the next generation of farmers. On a property in Hudson Valley, NY, for example, a couple created a duplex so they could rent one half of their home to a farmer.⁷ This allowed the farmer more immediate access to and oversight over their land. Buying farmland is no longer an option for Rural Lands, as the organization does not have enough money. Instead, Rural Lands could use the APR process to preserve farmland, although it is a competitive process. David believes that leasing farmland should be encouraged, perhaps through advertising at farmers markets. When asked about ways to make houses more sustainable, David said that insulation is an often-overlooked piece and could bring new houses to net zero emissions. Additionally, new large houses should be required to have

⁷ This idea is further discussed in our *Solutions* section under "Prioritizing Farmland Preservation."

a certain number of sustainable elements, including solar panels, lease arrangements with farms, or affordable housing on the property. He thinks that unlike vegetable farming, hay farming protects the views but does not significantly improve the quality of life in town. He talked about the shallower community that results from a lack of year-round residents and established community. He also talked about how the problem of increased development will increase due to climate refugees moving to rural areas from cities because of the urban heat island effect, flooding in cities, and increased storm occurrence and severity. Moreover, Covid-19 and its impact on the supply chains have demonstrated the need to focus on local food.

One especially interesting idea was creating a program connecting farmers of color to land in Williamstown. Rural Lands could connect with Soul Fire Farm or the Northeast People of Color Land Trust. He believes this is a concrete way to envision racial justice and could interest landowners in farmland preservation and leasing. Lastly, he talked about the movement to include carbon sequestration in Chapter 61A. He believes this would incentivize lease agreements that would help young farmers lower entry costs of trying to acquire farmland. Through including organic farming's carbon sequestration abilities, tax breaks to property owners could include farming as a method for carbon sequestration, despite it traditionally not being seen as such.

Christine Rasmussen

Christine Rasmussen was a member of the Stockbridge Planning Board in Massachusetts, where she pushed for Hybrid Zoning subdivisions – a concept very similar to density zoning, cluster zoning, and lot-sized averaging. This zoning would mandate that a percentage of land in large lot residential zones be protected. If a homeowner were to purchase a 4-acre plot, for

example, they would be able to use one acre for development, and the other 3 acres would contribute to communal open space, which could be used for agriculture, conservation, recreational use, etc. This aspirational ideal could allow for the New England village concept, which entails houses being closer together and the creation of a more cohesive neighborhood. The legality of this idea is questionable, but it bears resemblance to other zoning proposals we have heard, such as cluster zoning or open space residential design. The main difference between hybrid zoning and these alternatives is the alternatives would not require people to share their private land; rather, they would simply make their private property smaller. Rasumussen explained that there are several benefits to this model: roads and sewer lines are shorter, infrastructure footprints are smaller, lots become more affordable, and development is less expensive. People can also sell off certain portions of this land for retirement money and use the remaining money to preserve more land. She calls it *hybrid* zoning because this strategy does not change the underlying population density that the town desires, but rather makes the division of the lots environmentally friendly; it is a hybrid of residential and environmental zoning. Rasmussen importantly noted that she has had trouble enacting this zoning. If Williamstown were to enact some sort of density or hybrid zoning, it would thus be important to include a newsletter with correct information emphasizing the benefits and addressing public concerns.

Jeanne Knight

Jeanne Knight is a current member of the Needham, MA planning board. Needham recently changed several of its bylaws to address the trend of houses increasing in size. However, while Williamstown is a rural town with a lot of open land, natural resources, and agriculture, Needham

is more suburban and does not have nearly as much undeveloped land. Needham's focus was thus on aesthetics over than land preservation. Needham changed its zoning to prevent oversized houses from crowding the lot and overshadowing nearby houses; it increased setbacks and strengthened height limitations, thereby forcing houses to become smaller. It also introduced Floor Area Ratios. However, the report also emphasized the need for "good and interesting architecture." As a result, constructions like bay windows do not count towards the setback requirement, as planners like Knight wanted houses that appear less "boxy." When asked if these bylaws were successful at deterring the construction of large houses, Knight provided spreadsheets detailing houses that were torn down and rebuilt from 2017-2019; every new house was substantially larger, sometimes doubling or tripling the size of the previous house. These results suggest that simply increasing ratios and setbacks do not make houses smaller, but they do not show what would have happened if the new zoning requirements were not in place.

Don McCauley, Wellesley, MA Planning Director

Don McCauley is the Planning Director of Wellesley MA as well as an alum of Williams College. We talked about Wellesley's Large House Review Bylaw and review process. He pointed out that the bylaw does not prevent single family buildings from being built, but instead finds means to mitigate the effects of large houses. The Large House Review Section 16 D of the Wellesley Zoning Bylaw lays out a house review process made by the Planning Board that quantifies the impacts of a house on 6 outlined criteria (Preservation of Landscape, Scale of Buildings, Lighting, Open Space, Drainage, and Circulation) and discusses how they have designed the dwelling and site to minimize the negative impacts on surroundings. Don shared how

the bylaw was “overwhelmingly approved” by the town, which he attributed to civic concerns about “mansionization” transforming neighborhoods. The town had been worried about this problem for years, especially because of the boom in new buildings before 2008, and was looking into a “magic dimensional fix.” Instead, they opted for a “soft approach” in the Site Plan review. He additionally believes that concerns about the “collateral damage” of these houses – such as stormwater runoff, impact on neighborhood character, and tree clearing – contributed to support of the bylaw. Wellesley also has a tree bylaw, which has not been effective on its own, but has helped preserve local canopy cover when used within the large house review process. He believes that while the bylaw has been successful, it was not as successful as many advocates hoped it would be. This is because the power of the Site Plan Review process is limited, as when it was adopted by the Attorney General, the process could be used to deny the construction of a home only in the most extreme cases. The Planning Board is trying to improve the site review process, especially because the process is very labor intensive. Previously, Wellesley failed to adopt bylaws limiting building size by dimensional requirements, as the town deemed them too complicated, but the town might be looking toward Floor Area Ratio (FAR) approaches in the future.

Don believes that the fundamental issue with large house reviews is the variability of lot size districts. Zoning districts are geared towards certain square foot lots, but within those districts in Wellesley, lot sizes vary tremendously. The large house review process views half acre lots and two acre lots as essentially the same. Something like a FAR standard would instead result in the size of the lot determining the size of house, but unlike a large house review process, this bylaw would not be concerned with keeping districts homogenous, possibly leading to unintended effects. He additionally mentioned that the town is hoping to get tougher on drainage, as permits on stormwater discharge have become tougher, and drainage bylaws must be improved to comply

with them. Tree removal is still a large concern in the town, as the review committee does not enforce the bylaw well enough. The most pressing issue that will come up in the next Town Meeting is greenhouse gas (GHG) emissions. The town is trying to find ways to have zoning bylaw help in reducing GHGs. One way of doing this would be to include GHG emissions in the Large House Review Process, although nothing would be strictly enforceable. He thinks that the town's focus in the future will be more on defining the impacts of GHG emissions and land disturbance, rather than limiting the size of buildings.

SOLUTIONS AND MITIGATING IMPACTS

Zoning and Subdivision Code

House Size

Smaller units require fewer materials to build and lower residents' consumption of resources like water, gas, and electricity. Smaller houses also produce fewer life cycle GHG emissions.

Multiple bylaws in MA towns attempt to limit the size of houses through changing zoning regulations. Floor Area Ratio (FAR) requirements limit the ratio of the gross floor area of a building to its lot size. Similarly, neighborhood average building scales regulate new buildings to ensure they are a similar size to nearby houses. Instead of using ratios, directly limiting gross floor area through a Floor Area Limit (FAL) establishes a maximum amount of square footage permitted to build on a property. This strategy could be more relevant to regulation in Williamstown because

FAR requirements might incentivize using larger lots to fit larger houses. It is important to include garages, balconies, and other unconditioned space into floor area calculations so developers cannot find loopholes in zoning codes. Building height limits also provide ways to limit the size of a home. Some examples from other towns include:

- A. In Newton, MA in 2009, the Zoning Board deleted a 50% demolition provision that made FAR limits applicable to all residential development, including expansions of existing dwellings. As a result of this change, completely new homes and renovations of or additions to existing homes both have to comply with FAR limits (Newton Ordinances On-Line Chapter 30, 1).

- B. Provincetown, MA uses neighborhood average building scales to regulate building sizes (found in section 2640 Building Scale). It is applicable to all new buildings and all additions in all zoning districts in Provincetown. Determination of existing and proposed building volume and neighborhood average is directed by the Zoning Enforcement Officer by calculating the volume in cubic feet of the building that is above grade, including roofs and porches. The neighborhood average is calculated after removing the largest and smallest structures and after removing stand-alone non-residential accessory structures of 2160 cubic feet or less. All new development may vary from the neighborhood average by an increase of no more than 15% within the designated Provincetown Historic District or by an increase of no more than 25% in other areas, unless a Special Permit is granted by the Board

of Appeals as specified in Article 5 Section 5230 in conformance with their requirements.

- C. In Prairie Village, Kansas, the city council lowered the maximum home height on small lots from 35 to 29 feet in an effort to regulate the amount of larger houses being built in the area (Tulp).

Siting

Regulating the siting of houses can help mitigate some of the harmful effects that LDR has on the environment and agricultural practices. House location within a subdivision can be regulated by the Minor Lane Subdivision Law, changes to setback rules, and alteration of zoning.

Leslie Reed-Evans described how the **Minor Lane Subdivision Bylaw** is an underutilized method that would allow more houses to be developed on one lot, possibly for affordable housing for farmers and other residents.⁸ This bylaw allows for the creation of more roads that would provide increased frontage and access for not more than three lots for single-family use and must be approved by the Planning Board.

Zoning rules should **mandate that houses be closer to the front edge of properties** rather than farther back and in the middle of lots. Current setback rules incentivize houses to be set far back into the property. Some people prefer this, as it permits for more privacy and better views. However, deep setbacks have numerous environmental consequences. First off, they require driveways to be longer. Longer driveways require more cement (if they are paved), which releases

⁸ Williamstown's Minor Lane Subdivision <https://ecode360.com/10817328>.

carbon and other chemicals into the environment. Longer driveways also create more impermeable surfaces, which in turn leads to more runoff and pollution. Even driveways with permeable surfaces that do not release as many chemicals or cause runoff require more plowing in the winter and more travel in cars, both of which release carbon dioxide. Setbacks also fragment land. If a house is in one corner of a 4-acre lot, it leaves most of the property relatively unaffected. When it is in the middle, the entire habitat becomes compromised. Similarly, a house in the corner of a lot allows for the rest of the lot to be used for agriculture, whereas a house in the middle disrupts agricultural practices, and its inhabitants are more likely to be irritated by the nearby farming sounds and smells. Finally, far setbacks frequently lead to large lawns. These lawns require more fertilizers, more chemicals, more mowing, and more water, and they do not provide benefits to wildlife.

Lot size averaging, also known as **density zoning or cluster zoning**, is another way to reduce the impacts of LDR without changing setback requirements. Lot size averaging is a zoning method where rather than requiring every lot meet a minimum lot size, the *average* of multiple lots must meet that minimum lot size. For example, if the minimum lot size is 4 acres, rather than divide up a 20-acre parcel into five 4-acre lots, it could divide into four 1-acre lots and one 16-acre lot. The 1-acre lots could be used for residential housing, and the 16-acre lot could be used for agriculture, wildlife preservation, or public use. Lot size averaging typically exists in subdivisions that cluster houses in one area and larger open space in other areas. This open space can be used much more productively when it is not dotted with houses and driveways.

- A. Newbury Open Space Residential Design Bylaw: This bylaw clusters development on a parcel in a way that conserves at least 50% of the land as open space.

Developers can apply for a Special Permit that allows them to design a development under the OSRD bylaw. The bylaw incentivizes developers by providing density bonuses for historic preservation, affordable housing, or protection of additional open space. This bylaw has been successful in Newbury, leading to the creation of Caldwell Farm, a 66-unit housing project on a 125-acre site where 80% of the land and a historic farmhouse are preserved. While this specific project does not include affordable housing, other developments very likely could because of the density bonuses that developers gain when they create affordable housing.⁹

- B. Dalton and Great Barrington are two Berkshire communities that have adopted open space residential design subdivision bylaws. These bylaws are important tools to maintain undeveloped open space and Land Use Element LU-24 associated natural resources while allowing new residential development (Sustainable Berkshires Plan).

Multifamily Housing

Williamstown could change zoning regulations to include multi-family homes in every zoning district. Williamstown currently allows two-family homes in rural residence areas but could change the zoning laws to also allow three and four-family houses. Old houses that were previously one-family can be renovated to provide privacy and space to two, three, or four families. This gives the option to make housing smaller and thus more affordable while still possessing the desirable

⁹ For more information on this concept, check out: <https://www.mass.gov/service-details/case-studies-open-space-design-osdnatural-resource-protection-zoning-nrpz>.

traits of a rural home. It also reduces the environmental impacts of four separate houses with separate electrical lines, driveways, sewage systems, etc. Multifamily housing is the easiest way to create denser housing in rural areas without significantly increasing the carbon and environmental footprint associated with more houses. Additionally, there is increasing excitement around multifamily housing as younger generations aspire to find more sustainable and communal living options.

A. Acton, MA permits the conversion of old structures into multifamily housing:

“3.3.4 Dwelling Conversions - A single family dwelling or other residential building in existence prior to April 1, 1971 with less than four dwelling units may be altered and used for not more than four dwelling units if the lot on which the building is located contains not less than 10,000 square feet per dwelling unit and if one of the units occupied by the owner of the property.” (Pioneer Institute).

B. Beverly, MA permits the conversion of public buildings into multifamily housing

with an emphasis on the need for affordable housing: “In any zoning district, the Board of Aldermen may permit by Special Permit the reuse of an existing public building, as hereinafter defined, for residential purposes, provided that twenty-five percent (25%) of such allowed units are set aside for low or moderate income tenants... In the case of units to be owned by low or moderate income individuals, such units shall contain deed restrictions indicating that units shall sell for 75% of the average fair market value of units in the Beverly area acceptable to the City of Beverly Planning Department to insure low or moderate income use in perpetuity.”

Tiny House/Mobile Home Cluster Zoning

Williamstown should consider cluster zoning that would encourage the construction of groups of tiny houses or mobile homes. These smaller units could be more densely packed than larger houses, and Williamstown's scenic views would contribute to the appeal of "tiny houses" or even mobile homes. Williamstown does not currently have a minimum house size, but the town's zoning does not permit more than one or two houses per lot. The town could recreate the smaller housing lots that existed in the Spruces before being destroyed by Hurricane Irene, or it could combine cluster zoning with tiny house development. Incentivizing a tiny house development could provide more affordable housing while maintaining scenic aspects of Williamstown that younger residents may desire. Tiny houses might also attract younger residents to town, as younger generations frequently desire new and creative types of sustainable housing. Tiny houses could also be built on farmland, providing farmers an option for affordable housing that locates them directly on their land. Williamstown should consider a special zoning designation just for a tiny house cluster.¹⁰

- A. Nantucket Tiny House bylaw 2016: This bylaw was made in response to a housing crisis on Nantucket in which residents were being priced out of their homes by summer residents with large houses (the median house price in Nantucket is \$1.2 million). Tiny houses provide a cheaper and more eco-friendly style of living that is appealing to many young residents. Nantucket defines a tiny house as "a dwelling unit with less than a total of 500 square feet constructed on a moveable trailer to be attached to a foundation." The bylaw also allows a tiny house to take the place of

¹⁰ Example of cluster from Andrew Groff: https://en.wikipedia.org/wiki/Bungalow_court.

an accessory dwelling unit or garage.

Maintain Current Rural Residence Density

Williamstown should not rezone the Rural Residence zones to make lot sizes smaller and increase housing density in the countryside. Some people posit that reducing lot sizes in rural residence areas would make lots more affordable. While reducing lot sizes from 2.5 acres to 1.75 acres, as has been recommended, would somewhat reduce the cost of these lots, it would not make the houses “affordable.” Concord, MA defines affordable housing as housing that is affordable for “households earning below 80% of the metropolitan area’s median income (or AMI)... Housing is generally considered affordable if the household pays less than 30 percent of its monthly income to secure the housing.” This definition is also used by the Partnership for Working Families, a national network of advocates and organizations that aim to ameliorate economic struggles for working-class families in the US. For reference, 80% of the AMI Maximum Income for a family of four in Williamstown is \$68,300.¹¹ Therefore, 1.75-acre lots, while somewhat cheaper than 2.5-acre lots, would likely not meet this definition.

Additionally, smaller rural lots would not be substantially more affordable because of the high fixed cost of building a home in Williamstown’s rural residence zones. Recommendations from concerned citizen and rural resident Nicholas Whitman enumerate some of these fixed costs, including a four-wheel drive vehicle to navigate roads during mud season, a well costing up to \$10k+, and maintenance of a septic system with an electric pump (\$40K+). In reality, halved lots

¹¹ Visit <https://www.mass.gov/doc/erma-area-median-income-information/download> to find AMI for families of 1 to 8 people.

would provide housing for the upper and middle class, not for low-income families. Halving lot size might have increased affordable housing opportunities in the 1950s when smaller lots translated into smaller homes, but this is no longer the case today.

Additionally, planners need to think smarter and more ecologically, especially in the face of climate change's imminent effects. In 2021, we now have an incredible array of planning tools at our disposal that take into account numerous social and environmental concerns, many of which are highlighted in our report. The environmental and agricultural impacts of reducing the lot sizes in rural residences, and therefore the overall housing density, would be catastrophic. Reducing lot sizes would increase the number of houses permitted in the rural residence zone, which would destroy even more open space than is currently being destroyed. Destroying open space would reduce viable habitat for wildlife as well as the amount of contiguous arable land. Developing more lots would create more lawns which would increase water consumption, fertilizer use, and carbon emissions. Creating more housing would also increase resource consumption, energy consumption, and carbon emissions, which would contribute to global warming and harm the air quality in Williamstown.

Additionally, reducing lot sizes in rural residence zones would lead to suburban sprawl. Many scholars have detailed the detrimental environmental, economic, and social effects of this phenomenon, including increased carbon usage and decreased sense of community. Instead, Williamstown should attempt to limit both rural and suburban sprawl and focus on infill and higher-density development downtown. Furthermore, halving lot size might not actually decrease the size of homes, and would instead lead to houses taking up the majority of the lot in rural residences. This could lead to the phenomenon of McMansionization, a problem many suburban

communities in Massachusetts are already facing (see interview with Wellesley's Planning Director).

When weighing the benefits of large lots to smaller lots, some argue that preserving the environment and creating affordable housing will always be in tension with each other. However, this view assumes that the only two options are restricting development or allowing increased density of development. In reality, there are a plethora of creative solutions in the middle of these two extreme options. We can create more housing options through cluster design or multifamily zoning that allow for denser housing that takes environmental considerations into account.

Environmental Protection

Strengthening the Wetlands Protection Act with a Local Wetlands Bylaw

Currently, intermittent streams are not protected under the Wetlands Protection Act. Protecting them in Williamstown could help keep siting developments away from vulnerable areas important to water quality and the functioning of our ecosystems. The Sustainable Berkshires Plan (Berkshire Regional Planning Commission, 2014) outlines a policy for adopting land use regulations that encourage redevelopment, allow complementary new development, and protect environmental and natural resources (Policy LU 1.2.1, HN58-59). Strategy D of this policy recommended promoting the adoption of Local Wetlands Bylaws. They highlight that as of 2013, four Berkshire towns — Great Barrington, Peru, Richmond, and Stockbridge — have adopted local wetlands bylaws, and that the Berkshire Regional Planning Commission can work with municipal Conservation Commissions to assist with the adoption of bylaws by municipalities.

Moreover, vernal pools should be easier to certify or should be better protected in Williamstown in order to further protect natural resources. According to Mass Audubon, isolated, uncertified vernal pools receive limited protection under the Massachusetts Wetlands Protection Act. Isolated vernal pools that hold less than one-quarter of an acre-foot of water are not protected by state law unless the area is part of a larger wetland system. These areas *can* be protected, however, under local wetlands bylaws. Local bylaws can, for example, presume the existence of a vernal pool habitat based on certain physical characteristics, leaving it incumbent on a developer to prove that the area does not actually support vernal pool-dependent wildlife. Local bylaws can also increase the amount of protection for buffer areas around vernal pools, compared to the limited buffer zone protections provided through state law.

- A. Beverly, MA added an Additional Wetland Resource Areas Protected Under the Wetland Protection Ordinance in order to include vernal pools.¹²

Tree Removal Bylaws

Williamstown could implement tree removal bylaws, which several towns in MA have used to preserve the appearance and atmosphere of the town, protect ecosystem services provided by trees, and deter forest clearing for development. Tree removal bylaws also generally require that a certain percentage of land remain untouched and preserved, thereby minimizing environmental impacts.

¹² Beverly's Vernal Pool bylaw: <https://ecode360.com/33133407>.

A. Orleans, MA introduced a tree removal bylaw because many of the town's trees and forests were being cleared for development, which was hurting both the aesthetic and the groundwater quality of the town. The bylaw specifies that no one can clear an area greater than 40,000 square feet (approx. 1 acre) without receiving a Site Alteration Special Permit from the planning board. There are exceptions for agricultural purposes. The bylaw also states that when an area is cleared for residential development, "Clearing of vegetation and alteration of topography shall be limited to 35% of the site, with native vegetation planted in disturbed areas as needed to enhance or restore natural wildlife." The building itself must "blend in with" and reflect the natural terrain, meaning it must be built according to the slope of the plot. Furthermore, forested areas shall be preserved if they are associated with significant forested areas; wetlands, waterbodies, and their buffers; critical wildlife habitat areas; and slopes over 25%. Indigenous species are also placed under protection and cannot be cut down.

Mandating Solar Energy on New Homes

Installing solar panels on houses is one of the easiest ways to make large houses greener. They also use roof space in an effective manner, reducing the need for solar farms that directly conflict with agriculture.

A. In a proposed bill in the Massachusetts state legislature, the Solar Neighborhoods Act (H.D.3098) mandates that solar panels be installed on roofs of newly built homes, apartments, and office buildings (Bebon).

- B. Watertown, MA requires solar power with all new commercial construction and retrofits greater than 10,000 square feet (Weaver).

BTU on Heating

As a municipality, Williamstown can only tax through property tax, rooms and meals, marijuana, and vehicle access. The town should encourage and support the state legislature passing a law that would allow communities to adopt a local option tax or fee on real estate transactions that goes to local affordable housing trust through a BTU tax. Williamstown has a renewable energy requirement for marijuana establishments, specifically that applicants are required to integrate roof or ground mounted solar photovoltaic systems or an alternative renewable energy technology to provide at least 25% of the energy needs of the facility. If Williamstown can apply this law to marijuana farming, it can also apply this law to large house construction.

Low Impact Development Ordinances

The Sustainable Berkshires Plan also included a Policy LU 1.2.1, which encourages communities to adopt land use regulations that encourage redevelopment, allow complementary new development, and protect environmental and natural resources. One strategy they proposed was municipalities adopting Low Impact Development Ordinances. These bylaws or ordinances can improve the aesthetic quality of development projects by increasing natural vegetation and minimizing impervious surfaces.

Resource Protection Overlay District Ordinances

A second strategy the Sustainable Berkshires Plan included to encourage redevelopment was adopting Resource Protection Overlay District Ordinances (such as water supply protection bylaws). Natural resource protection zoning of some type has been adopted in two-thirds of the Berkshire municipalities. These bylaws mostly address floodplains but also focus on water quality and upland protection. Overlay districts are valuable tools because in most instances, they do not change underlying zoning requirements for minimum lot size or frontage, but they limit or condition certain uses that may impact desired resources. Williamstown already has an overlay zone for resource protection and should keep this zoning in place.

Driveway Bylaws

One solution to mitigate the impacts of large houses would be to update the Building Code to have it limit the length or steepness of a driveway, limit driveways' impervious surface area, and mandate drainage conditions through retention basins. Longer driveways create a host of issues for rural communities. They increase pressure on fire and emergency services, who must transport water for houses not on the municipal water system and navigate long, steep driveways with large vehicles. Additionally, according to Professor Emeritus Hank Art, ecological impacts include increased runoff and erosion, higher taxes to cover the costs of clearing municipal streets, and increased corrosion and well contamination. Williamstown unsuccessfully attempted to pass a bylaw to make driveways safer for emergency vehicles and should try to work with the Fire Chief to try again to pass a bylaw that would make driveways safer.

The Sustainable Berkshires Plan's Policy IS6.1 shows that local public works' superintendents are reporting an increase in road failures due to overwhelmed culverts, road washouts, eroded ditches, undercut road bases, and overtopped bridges. Warmer late winter temperatures will result in more rain-on-snow storm events, leading to higher spring melt flows, which typically are already the highest flows of the year. Studies have also reported increases in precipitation, with the increases being observed particularly in storms characterized as heavy and extreme events. These storms are expected to increase both in number and in magnitude. The Sustainable Berkshires Plan, through Policy 13.1, encourages reducing water runoff from residential properties by transitioning driveways or portions of driveways and parking areas to permeable materials that can help absorb more rainwater on-site and reduce stormwater flow speeds and volumes during storm events (IS-64).

- A. Massachusetts provides Sample Impervious Zoning Bylaws.¹³ For example, the Town of Mashpee amended their Groundwater Protection District Zoning Bylaw to include additional specifications to their impervious surface bylaw.

Wildflower/Lawn Reduction Bylaw

Many new and larger residential developments in Williamstown include large sprawling lawns that are harmful to the environment. These lawns require large amounts of fertilizer and water to maintain. They also require routine mowing, which releases a lot of carbon dioxide. In addition to actively contributing to harmful chemical emissions, lawns take the space of more

¹³ <https://www.mass.gov/service-details/sample-impervious-zoning-bylaw>.

efficient and natural vegetation, such as meadows, trees, and agriculture. Local songbirds and butterflies have been under strain as important successional forest habitats are lost to mowing.

One way to make large lots more sustainable is to limit the amount of lawn space allowed and replace traditional grasses with more eco-friendly meadows, shrubs, or agricultural alternatives. Mandating a certain percentage of lawn to be pollinator gardens, for example, would reduce the amount of harmful lawn space in Williamstown and provide habitat for small birds, small mammals, and pollinators that would directly benefit agriculture in town.

- A. Williamstown should encourage large property owners to utilize the tax breaks from Chapter 61A. Chapter 61A applies to all forest land that is at least ten contiguous acres. The town’s assessor classifies the land as “forest land” following a written application filed with the state forester. Such application is accompanied by a forest management plan (General Laws of MA, Ch. 61, Section 2).

Pesticide Use Reduction Bylaw

In addition to limiting the amount of lawn space permitted on a property, Williamstown can make these lawns more eco-friendly by limiting the amount of harmful chemicals that people are allowed to treat their lawns with. These harmful chemicals have persistent and far-ranging impacts on water quality, soil health, and wildlife, as well as demonstrated increased cancer rates in pets.

- A. Victoria’s Pesticide Use Reduction Bylaw: “A person must not apply or otherwise use pesticides on public land or private land, for the purpose of maintaining outdoor

trees, shrubs, flowers, or other ornamental plants and turf, if the application or use is a non-essential.” People must apply for permits if they wish to use pesticides. “The bylaw applies to all Victoria residents living in single family homes, townhouses, duplexes, apartment buildings, and condominiums, as well as landscape professionals, lawn care companies, small scale commercial urban food producers that do business within Victoria’s boundaries” (City of Victoria).

Encouraging Environmental Uses on Large Lots

The Sustainable Berkshires Plan outlined multiple strategies that mitigate the effects of large houses and could be applied to any home. Rain barrels attached to downspouts can capture rain for later use, such as watering garden plants. This reduces stormwater runoff as well as water processed by municipal systems and paid for by customers. Another way to reduce stormwater runoff is to plant a rain garden, which retains water on-site. These gardens are attractive and functional. Homeowners can also use Wildlife-Friendly Fencing in rural areas to ensure that yards do not pose a barrier for wildlife movement. This entails using fencing that is open or reducing the size of fenced-in areas (such as just fencing in the vegetable garden or an area for pets).

Committing to Net Zero

At a town meeting in 2021, Williamstown passed a net zero resolution, which in theory could have major impacts on future development. The upcoming Master Plan must focus on ways to mitigate the impacts of low density development as a part of the net zero resolution.

Design Review Process

Site review processes and design review processes, much like the National Environmental Policy Act (NEPA), allow a Planning Board or similar entity to review the design of a development and verify that no zoning or environmental regulations are violated by the plans. Design review processes can go through a host of organizations, including planning boards, architectural review boards, zoning boards, and historic preservation commissions. In a study published in the *Journal of Urban Design*, scholars identified eleven cities that use a special district design review process for historic, conservation, overlay, or environmentally sensitive districts (Nasar et al. 2007). Design approval for construction in these cities mostly went through historic or landmark commissions or had administrative approval. Some cities had separate design guideline manuals, but the guidelines centered on historic architecture or an environmentally sensitive area. Three things trigger review processes across communities:

- House size (example: any house over 3,500 square feet)
- Ratio (example: a 7,000 square foot home on a 30,000 square foot lot)
- Both house size and ratio

A. Wellesley's 2017 Large House Review Bylaw: If the size of a proposed home, calculated as Total Living Area plus Garage Space (TLAG), exceeds the established TLAG threshold for the district in which the property is located, the home must complete the Large House Review process and be approved by the Planning Board before a building permit may be issued.¹⁴ The plan requires that before applying for Large House Review with the Planning

¹⁴ Details of the TLAG definition and 6 criteria can be found in Section 16D of the Large House Review: [https://wellesleyma.gov/DocumentCenter/View/560/Section-16D_Large-House-Review?bidId=.](https://wellesleyma.gov/DocumentCenter/View/560/Section-16D_Large-House-Review?bidId=)

Department, applicants must submit a TLAG Affidavit to the Building Department for review. Applicants to the LHR process are expected to consider how their projects will impact six criteria — Preservation of Landscape, Scale of Buildings, Lighting, Open Space, Drainage, and Circulation — and explain how they have designed the dwelling and site to minimize the negative impacts on its surroundings.¹⁵ To this end, applicants are required to submit an array of plans and documentation, as listed in the Large House Review Rules and Regulations. Once an LHR application is submitted, it will be reviewed by the Planning Board, Design Review Board, and the Engineering Division. Generally, Large House Review is a 3 to 4 month-long process. Additionally, any applicant seeking plan approval under this section must submit an application and cover any expenses connected with public notice and review of plans.

- B. Cohasset’s 2004 Large House Review bylaw: For houses greater than 3,500 square feet or 10% of the lot up, abutters receive notification, and the Planning Board holds a hearing and makes recommendations to the building commissioner, who takes them into consideration when deciding whether to issue a building permit (Barnes).
- C. Brookline, MA uses a preservation commission for historic districts to accept and process local historic district and demolition review applications consistent with its standard procedures to the extent possible.
- D. Weston, MA Site Plan Approval: Houses that are either over 3,500 square feet and over 10% of the lot area, or over 6,000 square feet regardless of percentage of lot area must go

¹⁵ More information on their review processes here: <https://wellesleyma.gov/274/Large-House-Review-Information> and on the Rules and Regulations of the bylaw: <https://wellesleyma.gov/DocumentCenter/View/7289/Large-House-Review-Rules-and-Regulations-PDF>.

through a Site Plan Approval. According to Town Planner Imaikalani Aiu, “By and large, this process has been successful, but it does have some holes such as a house built just under the sf thresholds do not come in for review, but any additions then trigger review and much of the site is already set and many of our mitigation options have been taken away. It also only applies to new construction after enacting the bylaw. So a house built just before the bylaw is free to get as large as it wants without review.” The town is also considering adopting a special permit for large residential houses and adding additional triggers such as lot clearing and impervious surface.

- E. Chilmark, MA bylaw requires that large homes go through a design review process, adding another level of review to building large houses. This bylaw and others allow neighbors to input on how large a house can be, so it does not overshadow theirs. While this bylaw might not be as relevant in a place where large houses are not too tightly packed but rather too spread out, requiring houses to be smaller could also translate to parcels being smaller.
- F. Austin, Texas uses a Residential Design and Compatibility Standard to minimize the impact of new construction, remodels, and additions to existing buildings on surrounding properties in residential neighborhoods by defining an acceptable building area for each lot within which new development may occur.¹⁶
- G. Weston, MA requires that landscaping creates a buffer between houses and the streets for privacy and to retain the natural “woody” character of Weston. The larger the house, the greater the buffer that will be required. Existing native trees, understory and bushes should

¹⁶ Austin’s website provides resources on Large House bylaws:
<http://www.austintexas.gov/department/residential-design-compatibility-standards>.

be preserved as much as possible along the property's frontage to a minimum of at least 50 feet. This means that a septic system or storm water drainage structure should be located on the lot where it will require the least removal of the existing landscape buffer and allow for a new buffer to be planted. Outside of the immediate construction area trees can be lost due to regrading for a septic system and damage from heavy equipment compacting the roots. In cases of significant or specimen trees near the limit of work, extra protection measures such as chain link fencing will be necessary.¹⁷

H. *Berkshire Scenic Mountain Act*: This bill was passed by the Massachusetts state legislature and does not require towns to comply with the act. As of 2013, seven Berkshire towns, Richmond, Lenox, Stockbridge, Alford, Great Barrington, Monterey and Tyringham, have adopted its provisions. It requires that the Conservation Commission would determine whether a construction or land-clearing project is subject to review by the board. If it is, the board can impose limits on how much land can be cleared and what precautions must be taken during construction. According to Great Barrington's fire chief, it could help to regulate construction of extremely steep driveways (Lahr).

Economic (dis)Incentivizes

Residential Tax Exemptions

A common trend across towns in MA, especially towns with significant amounts of open space, is wealthy people moving into towns, building large houses (some of which serve as

¹⁷ <https://www.weston.org/340/Guidelines-for-Homes-Under-Site-Plan-App>

seasonal homes), and increasing the value of land. When land values rise, year-round residents frequently get priced out of their homes. Residential Tax Exemptions will help Williamstown to avoid this trend and preserve its socioeconomic diversity by effectively decreasing the property taxes of year-round residents and increasing the taxes of seasonal residents.

Residential Tax Exemption redistribute the residential class' portion of the tax levy away from lower valued single-family homes and onto higher valued single-family homes, as well as multi-family units, non-domiciled property owners, and vacant residential land. This act of redistribution results in a higher residential tax rate for all; however, those with homes valued at less than the "breakeven" value will experience a reduced tax liability, while those above it shoulder a greater burden. The Residential Exemption is not means tested – it is based solely on the assessed value of one's home rather than their ability to meet their annual tax obligation.¹⁸

Williamstown tax assessor Chris Lamarre points out that “a community truly needs an imbalance of multi-family properties (urban areas) or an overwhelming presence of second homeowners (resort areas) for the exemption to realize its full potential.” Additionally, Residential Tax Exemptions can “exacerbate the affordability of rents as owners will pass along cost increases to tenants,” both of which are important caveats to keep in mind.

- A. Provincetown, MA has a residential tax exemption of 25%, meaning that year-round residents get to deduct 25% of the average value of a residential property from their property taxes (in 2020, the average was \$175,221). The overall tax rate goes up to account for the loss in revenue. In Provincetown, it increased from \$6.77

¹⁸ For more information visit Mass.gov “Living with the Residential Exemption” provided by Chris Lamarre <https://www.mass.gov/doc/living-with-the-residential-exemption/download>

per thousand to \$7.08 per thousand, a 31% increase. This plan shifts the town's tax burden onto wealthier residents that do not contribute to the town in other economic fashions. It also prevents long-time residents from being priced out. Sixteen municipalities in MA have similar programs, and some even have a 35% residential tax exemption.

Development impact fees

Development Impact Fees are one-time charges applied to new developments. Their purpose is to raise revenue for the construction or expansion of capital facilities located outside the boundaries of the new development that benefit the surrounding community. Impact fees are assessed and dedicated principally for the provision of additional water and sewer systems, roads, schools, libraries, and parks and recreation facilities made necessary by the presence of new residents in the area. They acknowledge that new development frequently creates infrastructure costs greater than the revenue generated for the municipality providing the service (Carrión and Libby; 1, 11).

- A. House Bill No. 1859, An Act Promoting the Planning and Development of Sustainable Communities, encouraged communities to establish districts for prompt permitting of housing and commercial growth while adopting environmental protections. It determines development impact fees with a formula and creates standardized zoning protections after developers file an application for building, special permit, or subdivision. Although the bill did not pass,

Williamstown could consider utilizing the outlined development impact fees to improve development environmentally and socially.¹⁹

Deed-Restricted Housing

Vail, Colorado's InDeed program protects existing dwellings from turning into second homes or Airbnbs by attaching the requirement to a deed that the home is lived in by at least one person (homeowner or renter) who works in the county. This program effectively gets rid of second homes. Furthermore, because of the restriction, home prices in the area must be tied to local wages in order for the house to sell on the market.²⁰

Historic Preservation and Anti-teardown Laws

Many studies demonstrate that maintenance and renovation require fewer materials than new construction. Additionally, preserving older and smaller houses helps towns provide more affordable housing opportunities. A large portion of Williamstown's affordable housing is made up of older houses. Evidence of the loss of new affordable housing after the 1950s can be seen through the Williamstown tax database: the average size of a new single-family home in the 1950s was 1,645 feet, and that number has steadily climbed to 3,174 square feet. Preserving these more modest sized houses will keep the socioeconomic diversity of Williamstown intact. One way of

¹⁹ <https://www.google.com/url?q=https://malegislature.gov/Bills/188/House/H1859&sa=D&source=docs&ust=1638469310539000&usg=AOvVaw3b6pLvp1xcOEUPeYJis32U>.

²⁰ Gloria, Liu. "How to Save a Ski Town," *Outside Magazine*, <https://www.outsideonline.com/culture/essays-culture/how-to-save-a-ski-town-west-tourism-economy/>

preserving homes would be allowing them to be subdivided, as described in the Multi-Family Housing section.

Multiple municipalities have used historic preservation as a way to review low density development. Demolition delay bylaws provide a way to preserve historic or affordable buildings. Usually, property owners requesting a demolition permit through the building department must first receive approval from the Historical Commission. If the Historical Commission determines that the building is "preferably preserved," a delay period is imposed (usually 6 to 12 months) to allow time to explore alternatives to demolition. At the end of this delay period, demolition can still occur. Nonetheless, the period provides time for historical preservation groups to outline alternatives to demolition and for bodies such as Conservation Commissions to ensure all environmental regulations are met with a tear-down.

Teardowns can also be made more environmentally friendly. Local builder Jack Miller describes how he uses "deconstruction for salvage (materials are donated to a non-profit) when tearing down or stripping buildings for renovation/new building." He points out one constraint: the lack of deconstruction contractors in the market. He believes that improving regulations to reduce constraints on the market for salvaged building materials (e.g., many don't meet code requirements) and making it easier for enterprising individuals to start small businesses would increase the number of deconstruction contractors.

- A. Pittsfield and Becket have demolition delay periods of 6 months, and Stockbridge and Tyrangham have delay periods of 12 months.

Working with Local Builders and Architects

Local builder Jack Miller believes that “most clients want to be as environmentally friendly as possible within their program goals.” Local architect Ann McCallum similarly expressed that many new homeowners want their houses to possess sustainable features. Architects and builders can consider ecological desires in the design process by installing solar panels or air source heat pumps, aiming for LEED certifications, and using locally-sourced materials. This energy should be further harnessed and encouraged at a larger scale. In addition to adding sustainable features, houses can be made more eco-friendly through simple size-reduction. According to an article in the *Journal for Industrial Ecology*, there are a host of techniques architects and builders can implement to encourage smaller houses. These include:

- providing open plan living/dining/kitchen areas (eliminating the formal dining room in favor of a larger kitchen that provides both dining space and some informal living space)
- providing built-in furnishings and storage spaces
- eliminating single-use hallways
- designing multiple uses into rooms
- utilizing attic and low-roof space

Most people function under the assumption that “bigger is better,” so convincing them to build smaller will require new advertising strategies. During the design process, builders and architects can provide examples of local compact houses and emphasize the higher quality and energy efficiency of smaller houses. They can also emphasize that the money saved by building a smaller house can be redirected towards added amenities — such as granite countertops, hardwood

floors, and higher quality architecture — later in the design process. While some builders and architects may prefer to design larger houses because of the increased revenue gain, providing options for smaller and more affordable but equally as nice (if not *nicer*) houses will attract new clientele who will also benefit their business.

Prioritize Farmland Preservation

According to the Williamstown Farmland Project, there are only 16 active farms and stables remaining in Williamstown operating on 2,005 acres of owned land and 2,180 acres of leased land (Bigham et al.). Five are at imminent risk of loss within the next five years (Bigham et al., 4). It identified low density residential land use as the biggest threat to farming in Williamstown (Bigham et al., 6). Farmland preservation offers a two-pronged approach to addressing the problems of low density development.

One way to mitigate the impacts of LDR development, namely the loss of open space, is by preserving the farmland with the highest quality soils. This can be done through an Agricultural Preservation Restriction (APR) if the land is actively farmed and consists of at least 50% prime soils. The APR Program is a competitive voluntary program that is intended to offer a non-development alternative to farmers and other owners of "prime" agricultural land who are faced with a decision regarding future use and disposition of their farms. The program offers to pay farmers the difference between the fair market value and the agricultural value of their farmland in exchange for a permanent deed restriction, which precludes any use of the property that will have a negative impact on its agricultural viability (Leduc, 2005). According to Leslie Reed-Evans, restrictions cost between two-thirds to three-fourths of the total value of the property and require

a minimum of 10% local match of the property's worth. This 10% draws upon the Community Preservation Act, as well as neighbors and concerned citizens who feel strongly about preserving nearby farms.

Another way to mitigate the impacts of large houses on agricultural practices is by encouraging landowners to lease their land to local farmers. These leases should be long-term to maintain longevity of these farms. There are many successful examples of leasing farmland in Williamstown, such as Bigfoot Farm and several haying operations. Rural Lands should encourage the connection between landowners and farmers by promoting Chapter 61B's tax breaks that encourage farming on one's property. One way of facilitating this relationship would be to set up a system similar to Hudson Valley Farmland farmer, essentially "Match.com to connect landlords to farmers."²¹ An article from the *New York Times* describes a success story of a couple who leases their land and rents their duplex out to a pair of farmers and their young child. This relationship helps the farmers afford both housing and farmland (McKeough).

Williamstown should encourage residents to utilize Chapter 61B. Chapter 61 is a preferential tax program for land actively engaged in agricultural, forestry, or recreational land use. It provides tax benefits for forested lands but does not put protective restrictions on the land; it is a tax abatement program, not a preservation program. Moreover, Chapter 61B provides tax benefits to agricultural and horticultural parcels greater than five acres. The law defines agricultural land as land that is used primarily and directly for raising animals and/or for the purpose of selling such animals or a product (General Laws of MA, Ch. 61B, Section 1).

²¹ "Farmland for a New Generation," New York's Farmland Finder can be found at <https://nyfarmlandfinder.org/>.

Encouraging Downtown Development

The flip side of deterring low density development in the rural residence zones is encouraging high density development in the general residence zones. Previous Master Plans and Planning Board decisions have worked to encourage this sort of development, especially with recent projects such as the Photech Mill site and Cable Mills. We believe that Williamstown can further focus energy on encouraging downtown development through renovation, infill development, and upzoning at unused sites such as the Town Garage site.²²

- A. As a part of their plan to combat low density development, Worcester, MA eliminated rear-yard setback requirements, which increased flexibility regarding downtown development.

EVALUATION MATRIX

We used an evaluation matrix modeled off of Donald M. McAllister's matrix theories in *Evaluation in Environmental Planning: Assessing Environmental, Social, Economic, and Political Trade-offs*. It is included below:

²² A detailed plan for development at this site can be found in *Revitalizing Williamstown's SuperBlock: Lessons from New Urbanism*, an Environmental Planning Report from 2009. <https://web.williams.edu/wp-etc/ces/Wmstn-superblock.pdf>.

Key: 1 (very bad), 3(neutral), 5 (very good)	min 5 - max 25											
Alternative	Environmental	Social + Equity (impact on class dynamics?)	Agricultural Impact	Economic Impact	Feasibility	Public Support	scope of impact	Total	Stakeholders	Costs		
Encourage Tiny Houses (cluster zoning, etc)	5	5	5	5	5	5	4.5	2	31.5	prospective ow income residents, retirees, young families, single people		
Resource Protection Overlay District Ordinances	5	4	5	5	4	4	3.5	4	29.5	developers, builders, new residents		
Encouraging Downtown Development	4.5	5	5	5	5	3	3	3	28.5	low-income residents, retirees, single popele, devleopers, businesses, taxpayers, Williams College	changes rural character	
Utilizing Chapter 61B	4	4	5	5	4.5	3	4	4	28.5	farmers (esp young and new), residents, taxpayers	perhaps discourages farmers owning land	
Open Space Residential Design / Lot Size Averaging	4.5	4	5	5	4	3	3	4	27.5	developers, residents, builders		
Mandating Solar Energy on New Homes	4	3	3.5	3.5	4	5	4.5	3	27	developers, builders, future generations		
Prioritize Farmland Preservation	3	5	5	5	5	4	3	2	27	farmers, developers, residents, Rural Lands, farmers market	could decrease land for sale	
Tree Removal Bylaws	5	3	4	4	3	5	4	3	27	wildlife, Conservation Commission, property owners, developers, environmentalists, tourists/birdwatchers/hikers, those who work in tourism industry		
Design Review Processes/Scenic Mountain Act	4	4	4	4	3	5	4	2	26	developers, potential new residents, taxpayers, children in school, local business owners, seasonal residents, builders	decentivizes wealthy taxpayers from moving in	
Low Impact Development Ordinances	4	5	4	4	4	3	3	3	26	developers, builders, future generations		
Pesticide Use Reduction Bylaw	4	3	5	5	5	4	3	2	26	wildlife/pollinators, Bee Friendly Williamstown, farmers, Rural Lans		
RR Multifamily Housing	2	5	3	3	5	4	3.5	3	25.5	prospective ow income residents, retirees, young families, single people		
Deed Restrictions (decentivizes second homes)	4	5	3	3	5	3	3	2	25	low income residents, retirees, youngs families, new residents, developers, renters/landlords, builders		
Strengthening the Wetlands Protection Act	5	3	3	3	3	4	4	3	25	wildlife, Conservation Commission, property owners, developers, environmentalists, tourists/birdwatchers/hikers, those who work in tourism industry	increase cost to homeowner s/landdowner s	
Lawn Reduction/Native Grasses Bylaw	4	3	4	4	4	4	3	3	25	wildlife, Conservation Commission, environmentalists, tourists/birdwatchers/hikers, those who work in tourism industry	aesthetic/su burban character lost	
Historic Preservation and Anti-teardown	3.5	5	3.5	3.5	4	4	3	1	24	those interested in historic preservation, low-income residents, devleopers	keeps energy inefficient homes in place	
Working with Local Builders and Architects	3.5	3	3.5	3.5	3	4	5	2	24	builders, architects, developers, new residents		
Development Impact Fees	4	5	4	4	4	3	2	2	24	developers, potential new residents, taxpayers, children in school, local business owners, seasonal residents, builders	decentivizes wealthy taxpayers from moving in	
Stricter Setbacks (Maximums)	4	3	4	4	3	4	3	2	23			
Driveway Bylaws	4	3	4	4	4	4	2	2	23	large house residents, residents in rural areas, residents downhill of large driveways, taxpayers (who then pay for plowing and de-icing, and erosion)	increase cost to homeowner s/landdowner s	
Residential tax emeptions	3.5	5	3	3	5	2	2	2	22.5	taxpayers, local schools, municipal budget, seasonal residents, tourism industry	decentivizes wealthy taxpayers from moving in	
Limit House Size	4	3.5	4	4	4	2	2	2	21.5	developers, residents, builders	decentivizes wealthy taxpayers from moving in	
Reduce Lot Size in RR	1	2	1	1	3	4	2 (huge but bad)		13			
Allow developoment to happen unconstrained	1	1	1	1	2	4	3		12	low-income residents, farmers, taxpayers, conservationists, all residents	loss to farmers, low income residents, environment	
BTU Tax (energy tax)									0	residents, developers, local energy suppliers, alterantive energy suppliers	more expensive for homeowners	

CONCLUSION

Williamstown is witnessing an increase in low density residential development and in the square footage of new homes. These trends have led to a myriad of problems that have been inadequately unaddressed by the existing zoning bylaws. The civic fabric and community structure of Williamstown are threatened by an increase in larger second homes that will drive up property values and make land less accessible for aging populations, an increasingly impoverished middle class, and an already threatened farming community. The environmental impacts of large homes are numerous, including increased stormwater runoff, tree removal, and loss of habitat for important species. Agricultural practices are also under threat as low density developments fragment farmland, destroy productive soils, and make farming economically unfeasible for farmers. These problems contribute to larger scale trends at a national and global level, such as global warming, the biodiversity crisis, the diminishing local food supply, and unsustainable and unhealthy farming.

Nevertheless, we believe that the problem of low density sprawl can be addressed through a variety of means. Zoning bylaws can be altered to encourage smaller house sizes with smarter placement to allow for a more effective use of open space. Multifamily housing developments similarly increase the density of living without increasing strain on land resources. Environmental bylaws, such as strengthening the local Wetlands Protection Act, protecting trees and other resources, limiting impervious surfaces and lawns, and encouraging more eco-friendly land uses can both deter harmful development and mitigate the impacts of residential development. Design Review Processes can be instituted to ensure that new constructions follow these new bylaws. The town can also use economic incentives and disincentives, such as development fees or tax breaks,

to deter the construction of environmentally destructive structures and encourage smarter and more eco-conscious use of land. Local developers can serve as important partners to the Planning Board, as they can encourage the construction of more environmentally friendly houses. Furthermore, with the proper open space residential design bylaws in place, they can reap benefits, such as density bonuses, from these new constructions. Finally, farmland plays an important role in the economy and social structure of Williamstown, and the planning board should prioritize its conservation when considering updates to the master plan. Additionally, Williamstown Rural Lands should facilitate a program that matches interested residents with farmers looking to lease land. Residential development is not the only next step for “unused” land. Working landscapes and preserved ecosystems will be a vital part of increasing Williamstown’s resilience against climate change by sequestering carbon, reducing the impacts of increasing storms, and building a local food system. Despite the widespread belief that development and land preservation are always at odds with each other, utilizing smarter development strategies can serve to both increase the amount of housing while preserving natural resources that will benefit the town and its residents.

This report is by no means conclusive, and we hope that further creative solutions are explored in order to address the problems of rural sprawl in Williamstown. We hope that our recommendations will be considered in the upcoming Williamstown Master Plan in order to conserve the vitality of the diverse community in Williamstown, especially low-income residents and the farming community. Thank you for reading and considering our solutions!

- Williams Students for Sustainable Land Use Planning

ACKNOWLEDGEMENTS

Firstly, we would like to thank Andrew Groff and Stephanie Boyd for allowing us to explore solutions to this problem with them. We are grateful for the knowledge and time they shared with us this semester. We would also like to thank Sarah Gardner for her unwavering enthusiasm and passion for local sustainability. Additionally, we would like to thank Claire Klammer, the Administrative Assistant for Community Development in Williamstown, who provided us with helpful data and background on housing in Williamstown. A huge thank you to all our interviewees for sharing their expertise, time, and creativity with us this semester. Lastly, thank you to our peer reviewees and classmates for their helpful feedback and constant encouragement.

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APPENDIX



Figure A1: Photo referenced in *Description of Problem* section, provided by Professor Sarah Gardner on November 11, 2021 over email.

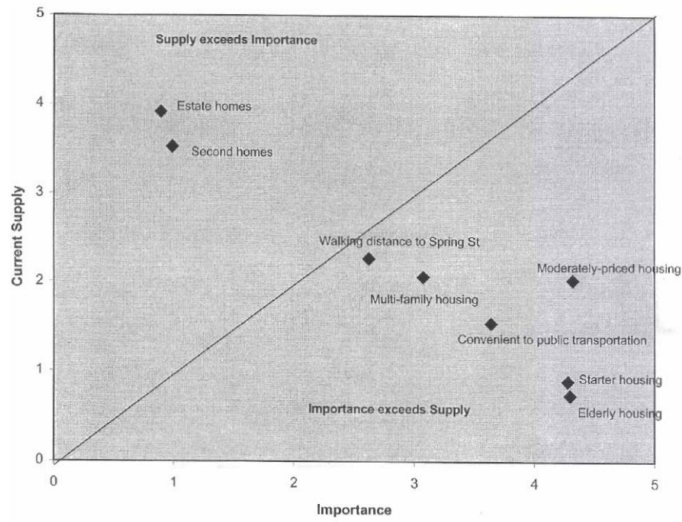


Figure 3. Housing Issues from Master Plan Survey, 2001, n=450

Figure A2: Survey results from Williamstown COCS study.

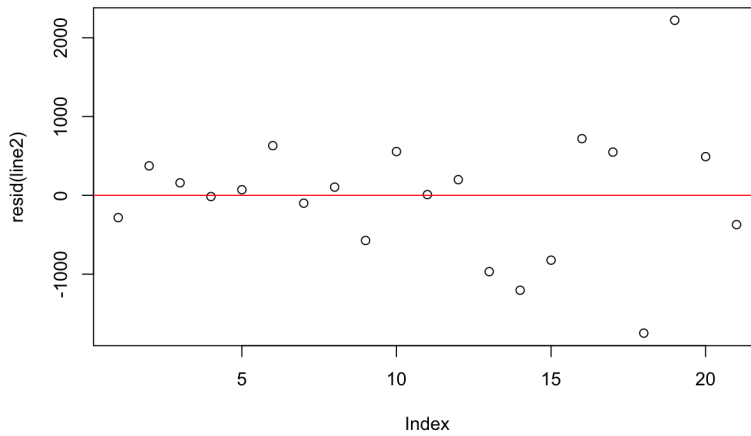


Figure A3: Residuals plot showing increased heteroskedasticity within the mean square foot for new single family homes per year pre and post 2008.