



Low-Density Development in Williamstown

Annika and Regina

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.

Introductions!



Regina Fink '22.5

- Environmental Studies
- Thesis on Landscaping
- From New Jersey
- Educator in Hopkins Forest



Annika Harrington '23

- Environmental Studies and History
- Needham, MA
- Gap year - sustainable agriculture in Guatemala!

Problem:

Low density development and increasing house size have numerous environmental, economic, and social impacts

Goals:

Protecting socioeconomic diversity of Williamstown, its natural resources, farmland, and open space

Making development more environmentally and agriculturally friendly



Image Source:
<https://www.stonehouseproperties.com/homes-for-sale/williamstown-ma>

Methods

Literature review

- The Problem: Increasing House Size, Rural Sprawl
- Social impact of Large Houses/Rural Sprawl
- Economic Impact of Large Houses/ Rural Sprawl
- Ecological Impact of Large Houses/Rural Sprawl

Stakeholder interviews

- Residents, farmers, architects

Bylaw research

- Interviews with MA planning boards



Intro to the Problem:

*Low Density Development and Larger Houses, and
the Ensuing Loss of Farmland and Open Space*

Land Use History



WILLIAMSTOWN, MASS.
ELEVATION 700 FEET.

- Mohican peoples
 - lived and farmed for the last 12,000 years
- 1765: Extensive land clearing for agriculture
 - 80% deforestation
- Berkshire County
 - 2012-2017: 52 of 527 farms and 3,000 acres of farmland lost to LDR development

Image Source: Library of Congress

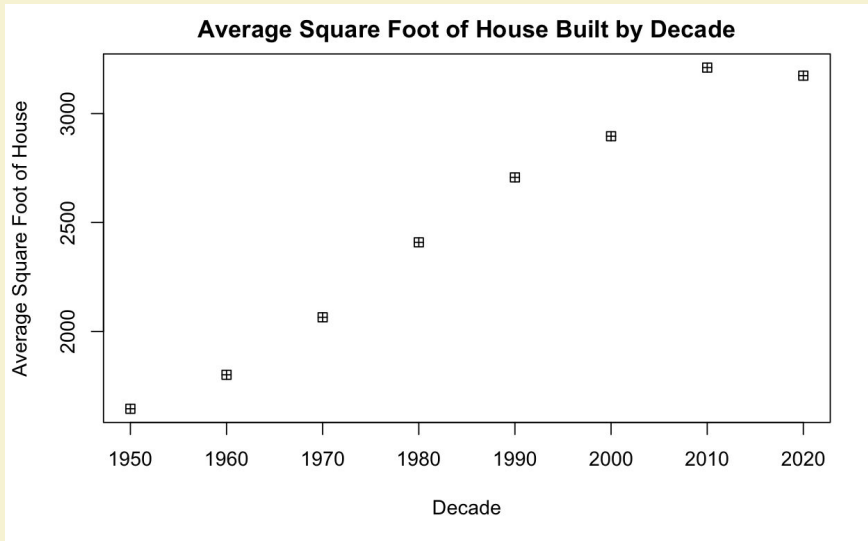
Rural Sprawl

- Definition
 - low-density residences far from urban spaces
 - commercial strip development
- Causes
 - scenic & natural value
 - lower land taxes
 - fewer environmental regulations
- Problems
 - economic repercussions
 - social changes
 - harms farmland use

Image Source: <https://www.skyscrapercity.com/threads/rural-sprawl.1498629/>



Increasing House Size

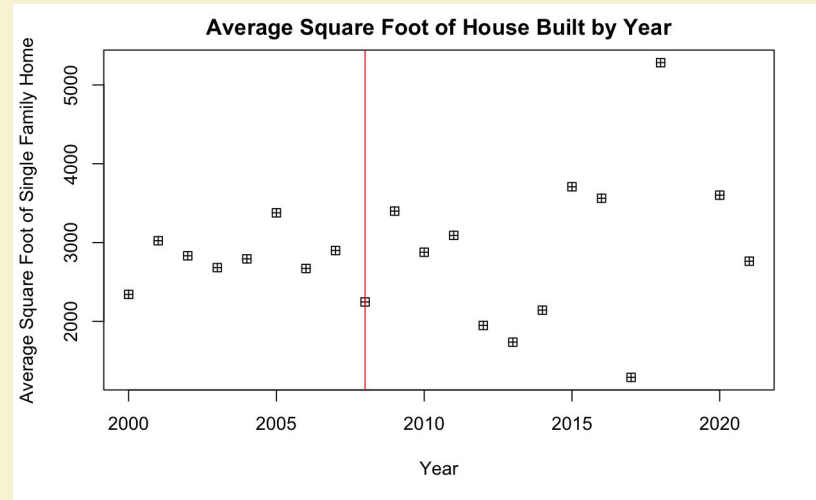


Graphic made through R Studio , data from tax database provided by Andrew Groff

- Data shows an average *increase* of 24 square feet per decade of new single family homes built in Williamstown
- Increase in population size due Covid
 - Climate change and refugees
- Correlates with national trend
 - Increasing house size
 - Despite decrease in individuals in single family homes

Increased economic disparity post 2008

- Trend from last slide seen only through averaging by decade
- Due to variability brought on by financial crisis
 - Red line shows increased heteroskedasticity post 2008
- Regulating low density development provides method to address increased income disparity → protects socioeconomic diversity of Williamstown



Graphic made through R Studio, data from tax database provided by Andrew Groff



Impact on Farming

- Farming is vital for local economy
 - Resilience against climate change → 90% of food imported
 - Only 12 farms left in Williamstown
- LDR is responsible for 65% of farmland loss in NE from 2001-2016
 - fragmentation → less productive
- Farm transition gap
 - no succession in younger generation
 - land prices, economic feasibility to blame

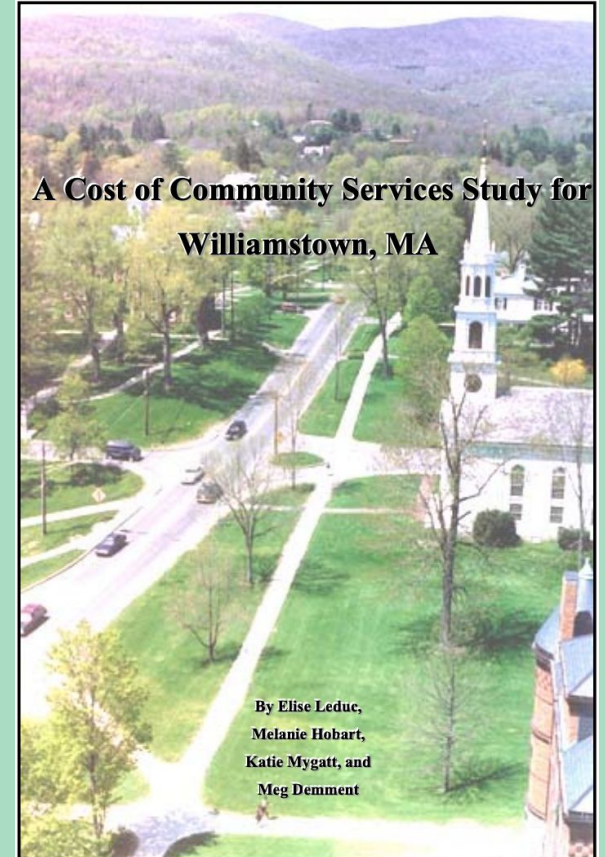


Environmental Impact

- Large Houses
 - More building materials and energy
- Rural Sprawl
 - Habitat fragmentation → lowers resilience
 - Greater carbon emissions
- Loss of ecological services
 - Stormwater management
 - Microclimate regulation
 - Biodiversity/resilience against climate change
 - Pollution mitigation
 - Human access to restorative nature
 - Pollinators

Economic Impacts

- Increasing house size and sprawling development
 - Higher home values (despite possible decrease in property tax rates) means higher tax bills for everyone
 - ex: Pittsfield
 - Costs municipality more in emergency services
 - mud-season and pressure to pave dirt roads
 - Environmental effects (should be internalized in cost)
- Cost of Community Services Studies
 - Working lands generate more public revenues than they receive back in public services (American Farmland Association)
 - “Cows don’t have to go to school” -Leslie Reed-Evans



**A Cost of Community Services Study for
Williamstown, MA**

By Elise Leduc,
Melanie Hobart,
Katie Mygatt, and
Meg Demment

Solutions
Potential Bylaws and
Other Creative
Thoughts



Zoning Solutions





Zoning: House Size

Tools to Limit House Size:

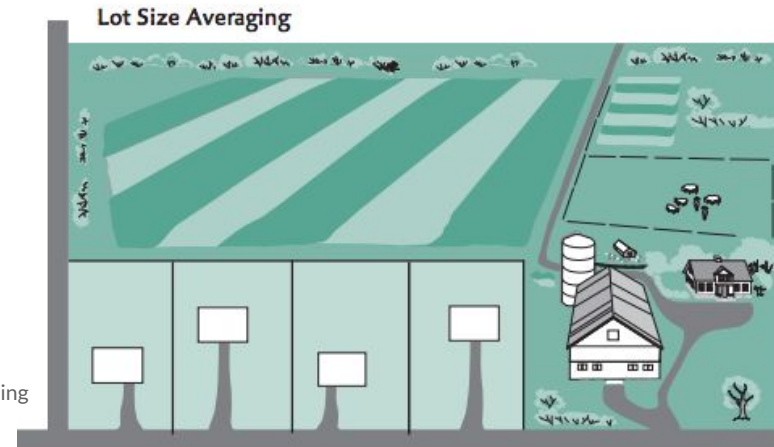
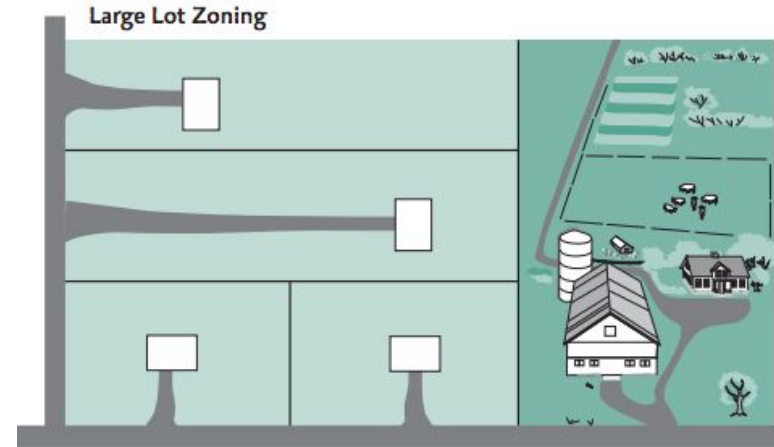
- Floor Area Ratio (FAR)
- Neighborhood Average Scale
- Building Heights
- Floors Area Limit (FAL)

Image Source:
<https://monarchrealty-ma.com/listing/227338/231-sloan-williamstown-ma-01267/>



Zoning: Siting

- Smaller Setbacks
 - Limit distance from street (make a maximum)
 - Shorter driveways
 - Leaves more open space
- Improve Minor Lane Subdivision Law
 - Permits road creation for frontage and access
 - Allows multiple houses developed on one lot,
- Flexible Zoning
 - Lot Size Averaging
 - Density Zoning
 - Hybrid Zoning
 - Cluster Zoning
 - Natural Resource Protection Zoning
 - Open Space Residential Design



Example of Flexible Open Space Design

Image Source: <https://www.mass.gov>

Caldwell Farm (Newbury, MA)

- 125 acres
- 66 units
- 80% preservation

Pros

- preserves historic farmhouse
- builds community
- walking trails, access to nature
- preserves land

Cons

- not affordable
- other environmental impacts
- Requires developer cooperation



Zoning: Density Bonuses

Newbury and Rowley, MA Examples:

- Additional 10% open space = 5% bonus
- 1 affordable dwelling unit = 1 unit bonus.
- 1 historic structure preserved = 1 dwelling unit bonus
- 62 units → 66 units

Bonus only works with subdivisions



Zoning: Maintain Current Density

We do NOT recommend reducing lot size in the rural residences.

- Environmental Impacts of reduced lot size
 - destroys open space
 - more runoff, fertilizer, emissions
 - more resource consumption
- Not necessarily affordable
 - continues to create housing for the wealthy
 - affordable housing is naturally denser → less than 1 acre and multifamily
- Cluster zoning provides balance of these needs
 - requires developer cooperation/incentivisation
 - one incentive: making normal development harder



image source: <https://archive.curbed.com/2019/12/26/21037831/virginia-housing-density-zoning-suburbs>

Zoning: Multi-family in RR

Pros

- more affordable
- minimizes environmental impacts

Con:

- greater septic use,
- higher carbon footprint,
- more wildlife disturbance with cars

Has potential to work in conjunction with OSD

Can subdivide current housing



Environmental Solutions



A photograph of a wetland area. In the foreground, there is a pond with several lily pads floating on the water. The water is calm, reflecting the surrounding greenery. In the background, there is a dense forest of tall trees, some with bright green foliage and others with darker green. The overall scene is peaceful and natural.

Environmental: Strengthening Wetlands Protection Act

- Four Berkshire towns have greater protection
- Beverly, MA includes vernal pools

<https://www.iberkshires.com/story/64215/Williamstown-Conservation-Commission-OKs-Restoration-of-Residents-Pond.html>

Photo provided

Environmental: Land Preservation

- Tree removal bylaws
- Orleans, MA requires Site Alteration Special Permit from planning board for clearing over 1 acre of trees

Image Source:

<https://monarchrealty-ma.com/listing/232961/425-oblong-williamstown-ma-01267/>



Environmental: Driveways

- Problem
 - Emergency services
 - Increased runoff and erosion
- Solutions
 - Limiting length, steepness, impervious surface area
 - Mandating drainage conditions



Image Source:
<https://www.pinterest.com/pin/362610207482267565/>



Environmental: Lawns

- Problems
 - Fertilizer → runoff
 - Increased water use
 - Pesticides → decrease in vital pollinators
- Solution
 - Mandating percentage of lawn to be pollinator friendly or native grasses for large houses

Image Source:

<http://www.burrandmccallum.com/projects#/berkshireshousefourteen>

Environmental: Energy Use



- Mandating solar or renewable energy
 - Supporting passage of Solar Neighborhoods Act
- BTU on heating
 - Support state legislature in allowing communities to adopt local option tax on real estate that goes to local affordable housing trust through BTU tax
- Encouraging air source heat pumps
 - Use electricity instead of fossil fuels



Image Source:
https://www.realtor.com/realestateandhomes-detail/1851-Cold-Spring-Rd_Williamstown_MA_01267_M38711-57904

Economic (dis)Incentives

Economics: Residential Tax Exemption

- Residential exemptions
 - raise overall tax rate
 - allow residents under specific house size/income to apply for exemption
- Provincetown, MA
 - Residential Tax Exemption of 25% (\$175,221)
 - overall tax increases → non-residents pay 4.75% more
 - shifts tax burden onto wealthier second-home owners so year-round residents don't get priced out (gentrification)
- Risks dividing community





Economics: Development Impact Fees

- One time charges applied to new developments
- Inspiration → House Bill No. 1859: *An Act Promoting the Planning and Development of Sustainable Communities*
 - Determines impact fees by formula
 - Creates standardized zoning protections for permits

Image Source:
<https://www.iberkshires.com/story/62914/Williamstown-Affordable-Housing-Project-on-Cole-Avenue-Underway.html>

Economics: Chapter 61B and Farmland Preservation

- Encourage smarter development through preserving highest quality soils APRs

- Leasing land to local farmers
 - Utilize Chapter 61B, tax break program
 - Rural Lands facilitates leasings through matching farmers to interested residents

Image Source: <https://www.caretakerfarm.org/our-history>



Other Solutions



Tiny Houses

- House under 500 sf
- Benefits
 - Affordable
 - Less impact
 - Community (ex: Spruces)
 - Growing in popularity
 - Williamstown aesthetic
- Cons
 - zoning? Must allow cluster housing
 - over-romanticization?

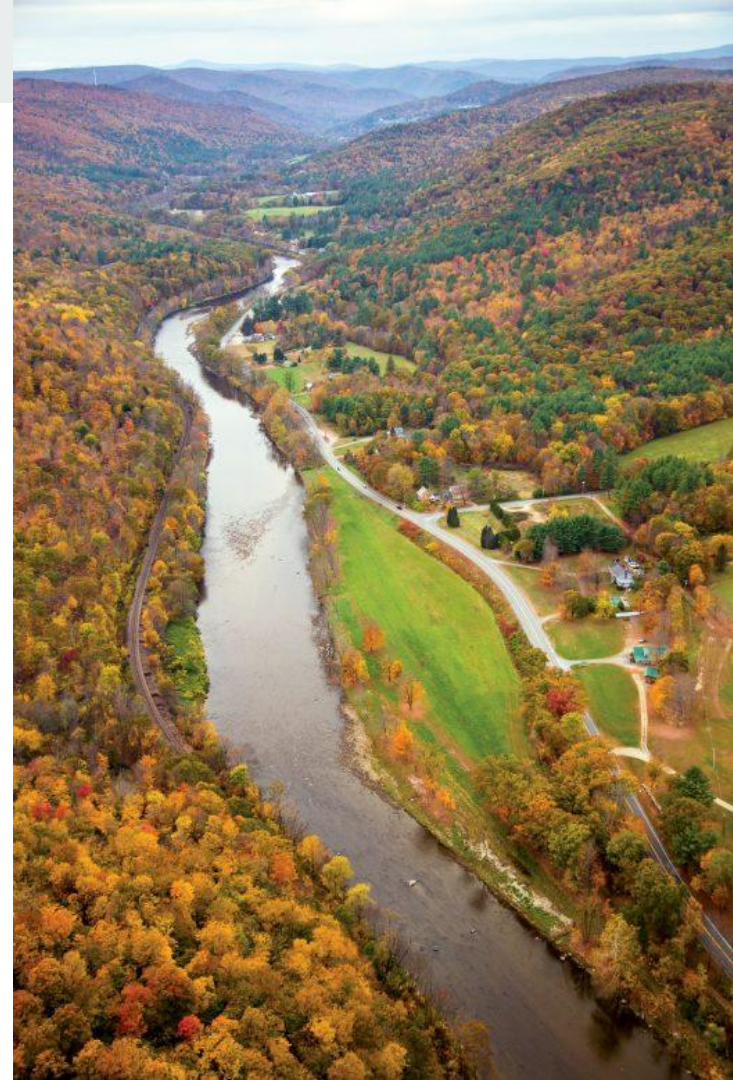


Image source: Saratoga magazine



Design Review Processes

- Planning Board or similar entity reviews design of development to ensure no violations
 - Triggered by house size or ratio
- Wellesley's successful Large House Review bylaw
 - Submissions are reviewed by Planning Board, Design Review Board, and Engineering Division
 - 3-4 months long
- Berkshire Scenic Mountain Act
 - Conservation Commission would determine whether construction subject to review by board



Historic Preservation and Anti-Tear down

- Ecological Benefits
 - Renovation requires few materials than construction
 - Larger houses = greater impact
 - Can preserve attached lands
- Economic Benefits
 - Maintains smaller and more affordable housing
 - Prevents larger houses from upping land prices
 - Protects socioeconomic diversity
 - Renovations can up price if need be
 - Allows for future subdivisions for multi-family
- Balance the downsides
 - Not ADA compliant
 - Poor insulation





Encouraging Downtown Development

- “Flip side” to deterring low density development
- Consider Town Garage Site

Conclusions





- Rural sprawl and increasing house size are unaddressed
 - Threaten civic fabric and community of Williamstown
 - Massive ecological impacts
 - Agricultural land lost
- Solutions exist!
 - Zoning
 - Environmental regulation
 - Design review processes
 - Economic incentives

Image Source:

<http://www.burrandmccallum.com/projects#/berkshirehousefourteena>

Evaluation Matrix: Top Suggestions

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	
Tiny House Zoning	5	5	5	5	5	4.5	2	31.5	
Resource Protection Overlay District Ordinances	5	4	5	4	4	3.5	4	29.5	
Encouraging Downtown Development	4.5	5	5	5	3	3	3	28.5	
Utilizing Chapter 61B	4	4	5	4.5	3	4	4	28.5	
Open Space Residential Design / Lot Size Averaging	4.5	4	5	4	3	3	4	27.5	

Evaluation Matrix: Tier 2 Suggestions

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	
Mandating Solar Energy on New Homes	4	3	3.5	4	5	4.5	3	27	
Prioritize Farmland Preservation	3	5	5	5	4	3	2	27	
Tree Removal Bylaws	5	3	4	3	5	4	3	27	
Design Review Processes/Scenic Mountain Act	4	4	4	3	5	4	2	26	
Low Impact Development Ordinances	4	5	4	4	3	3	3	26	



Thanks for
listening!

Questions?

