

Housing & Demographics Chapter Madbury, NH Master Plan



JULY 2024

ACKNOWLEDGEMENTS

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Marcia Goodnow, Chair Casey Jordan, Vice-Chair Mark Avery, ex officio (2024) Thomas Burbank (2023) Tim Burt, ex officio (2023) Bill Courtemanche, Alternate (2023), Member (2024), Secretary Michael Card Doug Hoff Andrew Losee Greg Merrell, Alternate

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INTRODUCTION

The 2024 Housing & Demographics Master Plan Chapter is a comprehensive update of the 2003 Housing Chapter and the 2003 Demographics Chapter of Madbury's Master Plan. It is intended to serve as a:

- Long-term guide for the community on housing and residential land
- Prioritized list of actions for the Planning Board as well as other boards, commissions, committees, and staff
- Resource on housing and demographics information and data.¹

This chapter was informed by community input gathered through a survey, housing forum, one-on-one interviews, and public Planning Board meetings. An online StoryMap was created and updated throughout the process to provide residents with a way to follow along and learn about the master plan, housing and demographic data, public input, and how to get involved.

The Housing & Demographics Chapter is designed to be a readerfriendly document. It includes a high-level overview of housing and demographic trends and projections, followed by a discussion of four key issues:

- Maintaining rural character and protecting natural resources
- Accommodating diverse and changing housing needs
- Quality of life
- Climate resilience.

The chapter also includes a set of planning, regulatory, educational, and other recommendations and an implementation matrix to guide the community as it advances its housing goals and priorities.

Public Engagement

The primary components of the public engagement strategy for this chapter included:

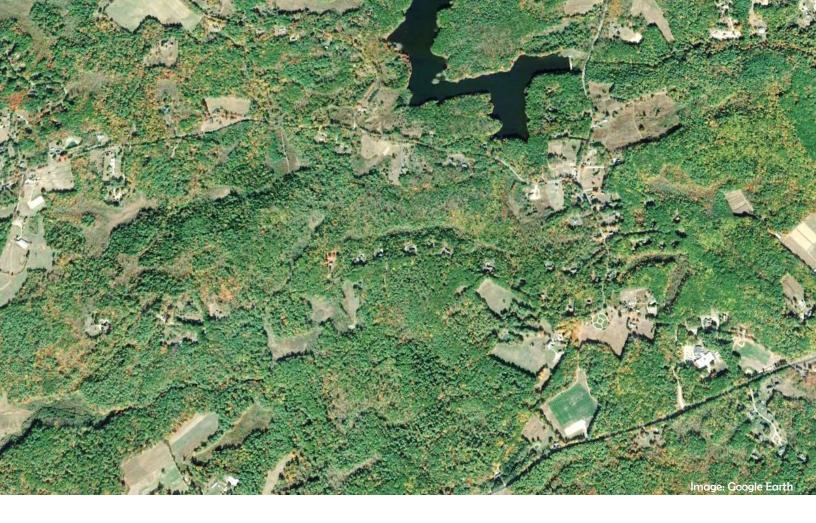
- 1. Online StoryMap
- 2. Madbury Day Table
- 3. Housing Survey
- 4. Housing Forum
- 5. Discussions at Planning Board meetings

Public input opportunities were advertised through a postcard mailing, business cards and flyers, social media posts, Madbury Musings and the Madbury Post, flyers, emails from the Planning Board, and word of mouth.

Detailed housing and demographic data derived from the U.S. Census, American Community Survey 5-year estimates, New Hampshire Housing Finance Authority, New Hampshire Office of Planning & Development, the Town of Madbury, and other sources is included in Appendix 1 and Appendix 2. Findings from a regulatory audit conducted as part of the Housing & Demographics Chapter update are included in Appendix 3. Documentation of all public input and a copy of the online StoryMap developed for this chapter update can also be found in Appendices.

674:2 Purpose of the Master Plan

The purpose of the master plan is to set down as clearly and practically as possible the best and most appropriate future development of the area under the jurisdiction of the planning board, to aid the board in designing ordinances that result in preserving and enhancing the unique quality of life and culture of New Hampshire, and to guide the board in the performance of its other duties in a manner that achieves the principles of smart growth, sound planning, and wise resource protection.



GOALS

- 1. Be a welcoming community to all
- 2. Maintain a high quality of life for current and future residents
- 3. Maintain an open mind about creative and innovative housing options while protecting natural resources and water resources
- 4. Take a regional perspective on housing supply, needs, and demands and collaborate with regional partners to identify and support housing solutions
- 5. Promote strategies to reduce the carbon footprint of and increase the resilience of community members and their homes to changes in temperature, precipitation, and sea level



WHERE WE ARE TODAY

Madbury is a sparsely settled community characterized by low density residential development, farms, and forests. The Town's rural character combined with its proximity to Dover, Portsmouth, Rochester, and Boston - and the amenities and services these cities offer – are among the top

reasons Madbury residents move here.² The Town is part of the renowned Oyster River Cooperative School District (ORCSD) and just two miles from the University of New Hampshire, which contribute to its desirability.

ORCSD ranks in the top 0.5% in the state and top 1% in the nation in <u>U.S. News & World</u> <u>Report's 2023-2024 Best High Schools report</u>.³ ORCSD students consistently have higher math and in reading and writing SAT scores than other students in the state and nation.⁴

POPULATION

As of the 2020 US Census, the population of Madbury was 1,918 residents⁵ with a population density of 170 people per square mile.⁶ Between 2000 and 2020, the town's population grew by 27% - over double the rate of growth in the state and well above 17% increase in population in Strafford County. New Hampshire's population is projected to increase through the year 2040 and then drop over the next decade. While Madbury's growth rate is not anticipated to decline as much as that of the state, the rate of growth is projected to be about half that of the preceding 30 years, reaching 2,190 by 2050 (Figure 1).

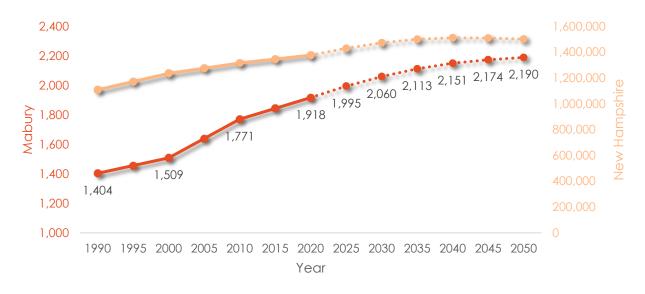


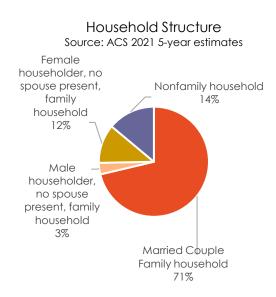
Figure 1. Past and projected population in Madbury and New Hampshire (Source: 1990, 2000, 2020 Decennial Census; OPD 2021 estimates; Note: data for 1995, 2005, and 2015 is an average the 5 years before and after)

Like most areas of New Hampshire, the median age of Madbury's residents continues to increase. While residents' median age of 38.6 years remains lower than the statewide median age of 43.0 years, the town's median age has increased at a slightly greater rate over the last 15 years. The estimated share of the population over age 65 is nearly double that of a decade earlier. The percentage of the population under age 20 has declined slightly over the last decade.

The median household income in Madbury is \$144,191, which is approximately 88% higher than that of Strafford County (\$76,560) and up 75% over the last decade. ⁷ Madbury's median income has increased at a much greater rate than that of the county or the state.



Source: ACS 2021 5-Year estimates



As recognized in the 2003 Housing Chapter, Madbury is a bedroom community with no major businesses. While the majority of workers continue to travel to other municipalities in and outside of Strafford County and the state, an estimated 9% of workers work from home. The actual number of individuals working from home is likely higher than this estimate, which factors in data from before the COVID-19 pandemic. Those that do commute travel an average of 27 minutes to work.⁸

An estimated 557 Madbury residents ages 3 and over are enrolled in school. ⁹ Enrollment in the Oyster River Cooperative School District (ORCSD), which includes residents from Madbury, Durham, and Lee, shows that the total kindergarten through grade 12 enrollment has declined from a peak in 2019. ¹⁰ Student enrollment is projected to continue to decline slightly through the year 2028, then begin to rise in the early 2030s. ¹¹

Working from Home

25% of the people who responded to the housing survey indicated that they work from home all the time and 51% work from home some of the time. In comparison, the national work from home rate is estimated at 19.8%

Source: 2023 Madbury Housing Survey, Bureau of Labor Statistics Current Population Survey

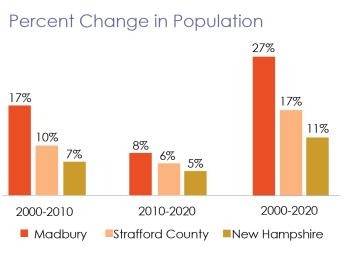


Image Courtesy of Moharimet Elementary School

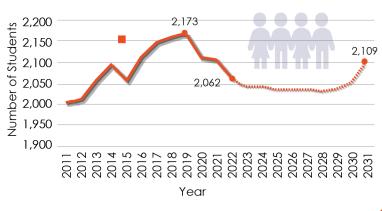
Population in 2020 **1,918** Projected increase in population between 2020 and 2050

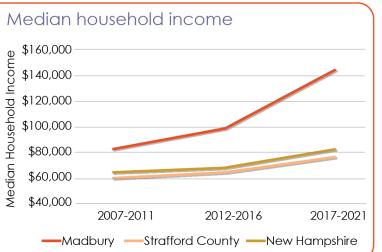


2023









Madbury, NH

Median Age in 2021 38.6 VS Madbury NH Median age increased +8% 8% over the last decade Share of the **2**x population age 65+ doubled over the last decade 91% of the population is 91% white, 9% is another race or 2+ races 3% of the population is below the poverty level





1% of the working population over age 16 is unemployed

Sources: Decennial Census and 5-Year American Community Survey Estimates, ORCSD Report of the Distric 2022

HOUSING & RESIDENTIAL LAND USE

Land Use

Residential development accounts for 12% of the total land area of the town (182 acres) and 64% of land that is developed.¹² Other types of developed land include roads, utilities, and non-residential uses such as Moharimet Elementary, the Town Hall, churches, and commercial and industrial development, of which the town has little. Table 1 and Figure 2 display the total acres of land classified as residential at three points in time for which this data is available: 1962, 1998, and 2015. The amount of residential land has increased by an estimated average of 14 acres annually.

Nearly all of the town (95% of its area or 7,299 acres) lies within the General Residential and Agricultural zoning district (Figure 2). The remaining land is located within the Civic District or the Commercial and Light Industrial District.

Permitted Uses

Uses allowed within the General Residential and Agricultural District are limited to:

- Single family homes
- Duplexes
- Attached accessory apartments
- Tourist homes
- Home occupations
- Nursing homes, assisted living facilities and hospice facilities located on state roads
- Agriculture
- Agritourism

The minimum lot size for a single-family home is 80,000 square feet or 1.84 acres. A duplex is required to have 2.75 acres. Each lot must have at least 200 feet of road frontage. Lots must be capable of accommodating a drinking water well and septic system.



Images: Single-family home (left), Carriage Hill Assisted Living (right), Liz Durfee

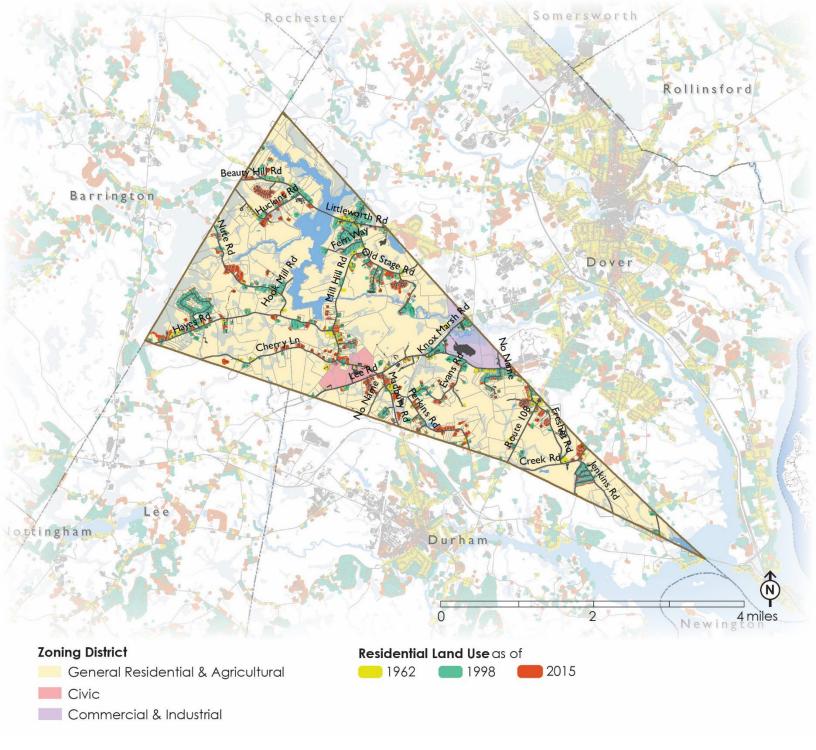


Figure 2. Zoning districts and residential land use as of 1962, 1998, and 2015 derived from digitized aerial imagery (Source: Town of Madbury, NH Geodata Portal, Land Use)

Table 1. Total acres of residential land in Madbury as of 1962, 1998, and 2015 based on digitized aerial imagery

	Year of Data	Residential Land
	1962	144 acres
	1998	624 acres
	2015	882 acres
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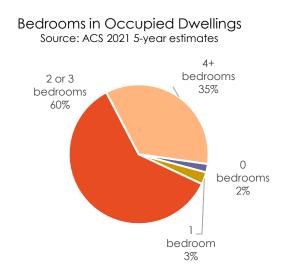
(Source: NH Geodata Portal, Land Use)

DWELLINGS

Between 2011 and 2021, the estimated number of dwellings increased by 113 units.¹³ Local planning and building data indicate that over the last decade (2012 to 2022), Madbury approved 12 residential subdivisions, resulting in an additional 25 residential lots (Figures 3).¹⁴

Today, there are an estimated 711 occupied housing units in Madbury. The vacancy rate in Madbury is 4%, compared to 8% in Strafford County. Around 8% of homes were built before 1940 and many of these have historic significance that contributes to the overall character of the town. According to assessing data, the most prevalent home styles are colonials, capes, and ranches.

Most dwellings in Madbury are single family homes. A limited number are mobile homes (8%) or apartments (6%). Around 60% of occupied dwellings have 2 or 3 bedrooms and 35% have 4 or more bedrooms. The average household size is just over 3 people. Compared to a decade earlier, the percentage of households with 4 or more people has declined while that of 2-person households has increased.¹⁵



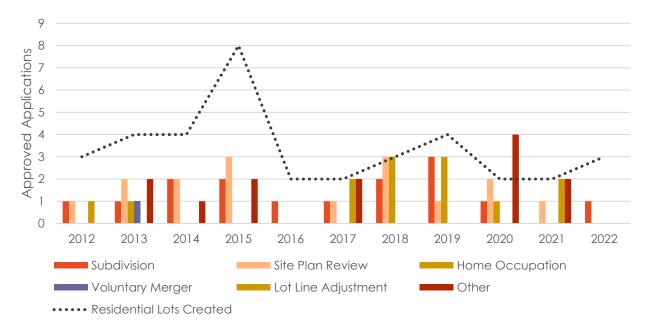


Figure 3. Number and type of applications approved by the Planning Board with number of residential lots created by year (Source: Annual Reports, 2016-2022, Planning Board's Website and property records)

COST OF HOUSING

While the American Community Survey estimates that the median value of dwellings in Madbury is \$385,900, ranging from \$100K to \$1M or more, most homes are selling for significantly higher than this.¹⁶ In the last five years, the number of housing units sold within Portsmouth-Rochester Fair Market Area (of which Madbury is a part of) for less than \$300,000 has declined, reaching a low not seen in the last 20 years.¹⁷ Madbury's home sale prices are even higher. According to data from Redfin, the median monthly sales price ranged from reached \$853,000 in September 2023.¹⁸

About one in five households in Madbury experience a housing burden, meaning that their monthly housing costs exceed 30% of their monthly income.¹⁹

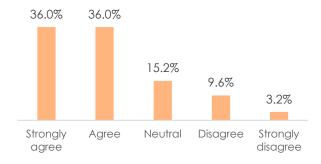
Over half of the 125 people who responded to the Madbury Housing Survey question about housing cost indicated that the cost of their housing (including mortgage/rent, utilities, insurance, and property taxes) is easy to handle. Thirty-seven percent said that their housing costs are a burden, and 4% indicated that their housing costs were a significant burden. Those who consider their house cost a burden have lived in Madbury a median of 15 years, while those who are not burdened have lived in Madbury for a shorter time (median of 11 years).

Housing in New Hampshire is characterized a high demand for affordable housing, a very limited supply, and a very low vacancy rate for all types of housing. - NH Housing's <u>2023 Residential Rental Cost Survey Report</u>

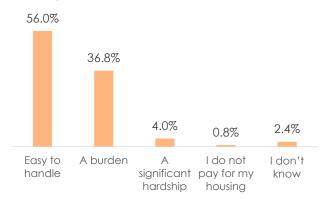
Rent and home price increases outpaced wage growth. Between 2000 and 2020, New Hampshire's home sales prices rose 111% and rents increased 94%, while household median income increased only 73%.

- NH Housing's <u>2023 NH Statewide Housing Needs</u> <u>Assessment</u>

Does your current housing meet your needs for the next 10 years?



The cost of my housing (including mortgage or rent, utilities, insurance, and property taxes) is...



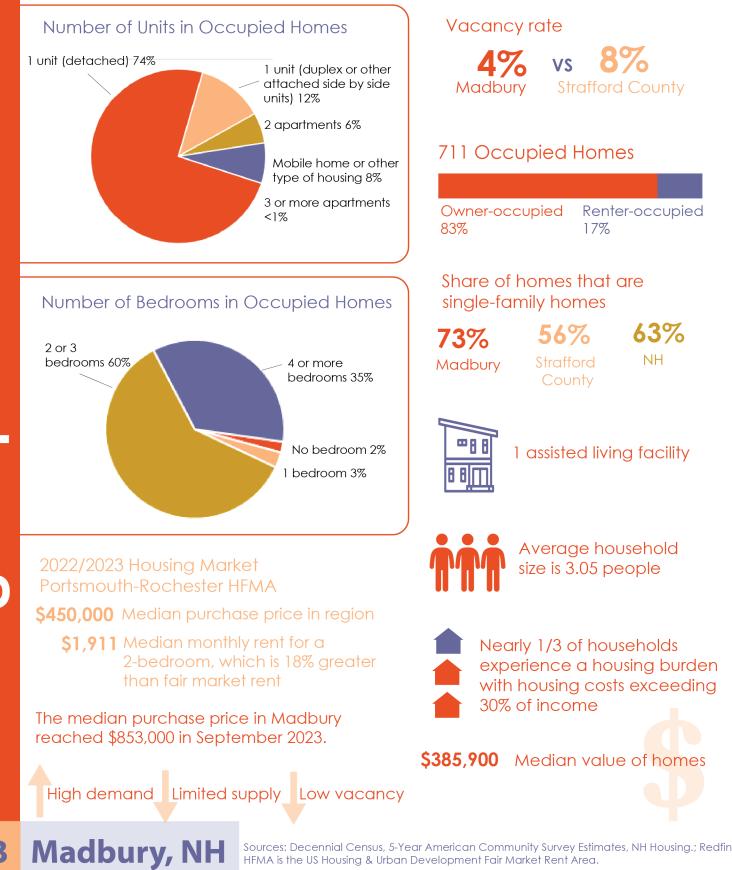
Which type of housing do you prefer to be living in today?

- 93% Single family home
- 3% In-law/accessory apartment, backyard cottage
- 2% Senior housing or assisted living
- 1% Multi-family (condo, apartment, townhouse)
- 0% Tiny house
- 0% Manufactured or mobile home

Source: 2023 Madbury Housing Survey







Sources: Decennial Census, 5-Year American Community Survey Estimates, NH Housing.; Redfin HFMA is the US Housing & Urban Development Fair Market Rent Area.

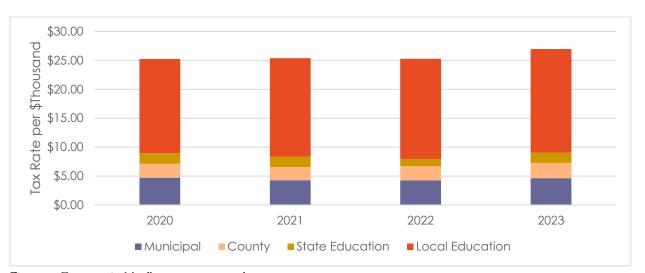
ASSESSED VALUE AND TAX RATE

The total property valuation in Madbury in 2023 was \$282,558,413, which is significantly lower than that of the other communities in the ORCSD and the Strafford County average (Table 2).²⁰ Madbury's 2023 tax commitment was around \$8 million. Residential uses, including land and buildings, account for approximately 88% of the total value of taxable property in Madbury. The remaining value is associated with commercial/industrial development (5%), utilities (7%), and other uses including farm and forest land.²¹

The Town's tax rate has remained fairly stable in recent years, but did see an increase from \$25.27 in 2022 to \$26.97 in 2023 (Figure 4). The impact of this on a homeowner with a property assessed at \$400,000 is a \$680 increase in the annual tax bill, from \$10,108 to \$10,788.

Municipality	Valuation	Valuation with Utilities	Municipal	County	State Ed.	Local Ed.	Total Rate	Total Commitment
Madbury	\$282,558,413	\$303,447,313	\$4.64	\$2.63	\$1.79	\$17.91	\$26.97	\$8,095,833
Durham	\$1,753,952,068	\$1,856,713,268	\$5.75	\$1.76	\$1.39	\$11.58	\$20.48	\$37,750,649
Lee	\$720,220,316	\$733,320,216	\$5.59	\$2.24	\$1.50	\$14.30	\$23.63	\$17,166,206
Strafford County Average	\$1,493,098,893	\$1,574,761,479	\$4.45	\$1.91	\$1.52	\$10.51	\$18.39	\$26,752,418
State Average	\$1,059,502,944	\$1,100,733,283	\$5.54	\$1.80	\$1.56	\$11.09	\$19.99	\$19,486,628

Table 2. 2023 Tax Rate



(Source: NH Department of Revenue)

Figure 4. Tax rate in Madbury 2020-2023 by category (Source: NH Department of Revenue)

Buildout Analysis and Capacity for Residential Growth

Three analyses of developable land provide insight into development potential and capacity for residential growth in Madbury. These analyses are summarized below.

REGIONAL HOUSING NEEDS ASSESSMENT HOUSING DEVELOPMENT MODEL

The 2023 Regional Housing Needs Assessment (RHNA) modeled development capacity and estimated buildable area by municipality through an analysis of environmental constraints (water, wetlands, slopes greater than 20%), public roads, and conservation lands. This model did not exclude existing developed land in recognition of the potential for infill and redevelopment, nor did it factor in local zoning regulations.

The model estimated that 1,277 to 2,406 housing units could be feasibly sited at 0.5 units per acre to 1 unit per acre under a no water/sewer infrastructure scenario in Madbury. This analysis shows that land in Madbury could feasibly accommodate the projected additional housing units that the RHNA estimated are needed in the town by 2040 to accommodate growth: 824 additional housing units (about 90 units per decade). It also revealed the total future homes needed to accommodate future growth in nearby communities (Dover, Durham, Newmarket), as well as other larger communities in the region (Rochester, Somersworth) may exceed the development capacity in these municipalities, which could result in greater development pressure in Madbury (Table 3).

Municipality	Current Homes (2020)	New Homes Needed (2020-2040)	Replacement Homes (2020)ª	Total Future Homes (2040)	Development Capacity (low-high) ^b
Madbury	710	110	4	824	1,277 - 2,406
Barrington	3,830	559	20	4,409	4,987 - 9,768
Dover	15,166	2,077	250	17,493	13,257 - 20,286
Durham	3,763	771	150	4,684	4,001 - 6,670
Lee	1,808	265	0	2,703	2,144 - 4,122
Newmarket	4,398	756	205	5,359	3,197 - 5,222

Source: Root Policy Research Fair Share Housing Production Model, Strafford Regional Housing Needs Assessment ^a Replacement homes are derived from the <u>2019 HUD Comprehensive Housing Affordability Strategy</u> housing condition data. Replacement homes are those that lack plumbing or kitchens. These homes are likely not suitable for long-term residence but could be upgraded to have plumbing and kitchens.

^b Development capacity does not account for zoning requirements. The model assumes a potential density of 4 to 6 units/acre with water and sewer; 1 to 1.5 units with water or sewer; and 0.5 to 1 unit/acre with no water or sewer. Madbury has no water or sewer.

GIS-BASED LAND USE ANALYSIS

A geographic information systems (GIS)based land analysis prepared for this Master Plan Chapter update revealed that approximately 77% (5,981 acres) of the area of the town is not developable. This is due to the following constraints and limitations:

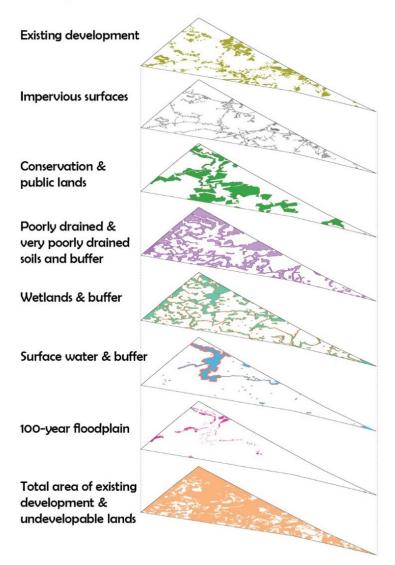
- Existing development according to the 2015 Land Use data layer provided by GRANIT
- Conservation land
- Town-owned or other public lands
- Water bodies and wetlands
- Local environmental regulations, including wetland setbacks, shoreland setbacks, and floodplains.

This analysis does not account for zoning requirements such as lot size, buildable area, setbacks, or the presence of existing development that precludes further redevelopment of the lot. As a result, the actual acreage of land that is potentially developable under existing regulations is

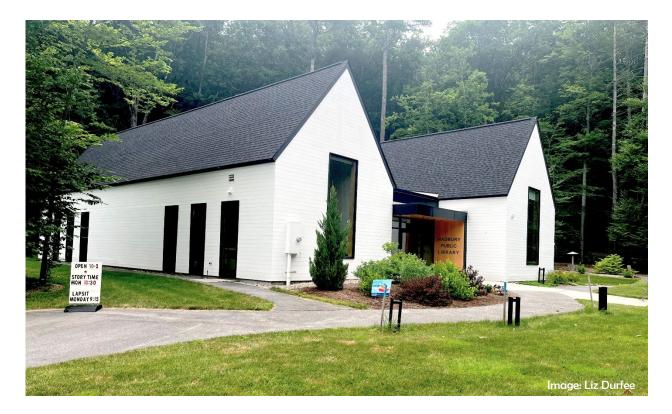
Protected Land

Approximately 2,234 acres in Madbury are protected via conservation easements (35% of protected land), flowage rights or easements (10%), fee ownership (55%), or protective easements (3%) for water supply lands.

Development Constraints



likely much less than the roughly 1,170 acres of land identified in this analysis. However, if redevelopment is factored in, the result could be greater development potential.



BUILD-OUT MODEL

CommunityVIZ GIS software was used to take the potentially developable land analysis a step further and estimate how much additional single-family housing could be developed given the constraints identified in the previous section as well as existing dwellings and the current minimum lot size requirement of 80,000 square feet.^a A partial and full buildout were modeled based on the growth rate determined from the Fair Share Model that was created as part of the Strafford Regional Housing Needs Assessment. The partial buildout models new development by the year 2040. The full buildout models the maximum additional dwellings that are feasible given the zoning requirements. The model does not account for factors such as existing lot lines, frontage requirements, or the location of roads.

This analysis determined that it is plausible that 120 additional single-family dwellings could be developed by the year 2040 and that full buildout could result in an additional 585 single family dwellings. The full buildout is estimated to occur nearly 100 years from now in the year 2118.

In the future, the Town could model other scenarios such as incorporating multi-family housing or changes to the lot size requirement to assess how these regulatory changes could impact the number of dwellings in the town.

^a CommunityViz modeling was completed by Strafford Regional Planning Commission.

KEY ISSUES & PLANNING IMPLICATIONS

HOUSING & DEMOGRAPHICS CHAPTER Town of Madbury, NH Master Plan



MAINTAIN RURAL CHARACTER & PROTECT NATURAL RESOURCES

Madbury's rural landscape is fundamental to the community's identity. Residents value open space, forests, farmland, and water resources. Future development should preserve rural viewsheds and protect the integrity of natural resources and water resources to the greatest extent possible.

Preservation of agricultural lands and agricultural soils is important to Madbury's character and economy and to the region. Of the approximately 586 acres of agricultural land in the town, approximately 104 acres (18%) are potentially developable. Furthermore, 976 acres of farmland soils in Madbury – including prime farmland, farmland of local or statewide importance, and land that is prime farmland if protected from flooding – are potentially developable. As the agricultural character is valued by the town and the ability to grow food locally is critical, care should be taken to minimize the loss of farms and agricultural soils to development.

Conservation subdivisions that protect open space and minimize the footprint of development and impervious surfaces are preferred over conventional subdivisions.

The Town should continue to enforce and to periodically assess and amend its Aquifer Protection Overlay District, Wet Areas Conservation Overlay District, Shoreland Protection Overlay District, and Flood Hazard Overlay District to ensure the protection of both surface water and groundwater resources. Protecting the Bellamy River and Bellamy Reservoir are of particular importance.

Stormwater should be carefully managed, and impervious surfaces should be minimized to lessen the impacts of development on water resources. Vegetated buffers and landscaping that provide wildlife habitat should be encouraged.

The Town should also continue to educate property owners and real estate agents about the importance of natural resources and water resources, including wetlands, and to encourage backyard wildlife habitat and stewardship of natural resources.

ACCOMMODATE DIVERSE AND CHANGING HOUSING NEEDS

The community recognized the importance of providing diverse housing options in its 2003 Housing Master Plan Chapter. Twenty years later, accommodating households of all ages, sizes, and incomes remains a key housing objective.

While single-family homes on large lots remain a preferred housing type for many, at a national scale, younger generations are more interested in apartments, smaller homes, and townhomes than their predecessors.²² These housing types often also double as suitable options for older residents wishing to downsize or reconfigure their home to better meet their needs for the future.

In Madbury, where residential tax revenue accounts for a significant portion of the municipal budget, it is important that the housing stock reflects the type of housing that people in the community, region, and state seek. As the population leans toward an older demographic and smaller household sizes, housing must adapt to meet changing demands, provide options for aging residents who wish to remain in town, and continue to attract younger individuals and families.

Community input collected through the Madbury Housing Survey and Housing Forum showed that residents' sentiments about housing cover a wide spectrum of interests ranging from a desire for 'no change' to a desire for things like smaller lots and more affordability.

One strategy to expand housing diversity is to modify the regulations for accessory apartments, also referred to as accessory dwelling units. The Town currently allows attached accessory apartments of 350-750 square feet associated with single-family homes in the Agricultural and Residential District. Allowing residents to build or convert existing detached structures for accessory apartments or loosening the square footage requirements would provide homeowners with more flexibility to create accessory

Allowing detached accessory apartments in Madbury would create more housing options. apartments. These units can provide homeowners with

Madbury Housing Survey Input

Who needs more affordable housing?

- Young people,
- First time homebuyers
- Renters
- Single parents
- Families with young kids
- Retired residents on reduced income
- Average people
- Older people
- People in the workforce

Madbury Housing Survey Input

What types of affordable housing are needed?

- Starter homes
- Townhouses
- Apartments
- Duplexes
- 1-2 bedroom homes
- 4 bedroom homes
- Single level 2-bedroom houses
- Smaller lots
- Grouped housing with shared open space
- Smaller lots with conservation

Madbury Housing Forum Input

What types of housing would you like to see in Madbury?

- Single family
- New England style
- No 'econo-boxes'
- Duplexes
- Tiny homes
- Condos/starter homes
- Communities with small clusters of modest homes with small yards
- Homes that support an aging population, such as single-family living
- Homes with financial assistance for aging population

rental income, a place for adult children or aging and downsizing parents to live, or accommodations for a caregiver.

HOUSING & DEMOGRAPHICS CHAPTER Town of Madbury, NH Master Plan Reducing the lot size and road frontage requirements in areas of the Town could lower land prices and provide more opportunities for subdividing land. When paired with a modest home, smaller lots have a lower purchase price, tax liability, and maintenance cost and upkeep than a large home on a large lot. Adding flexibility to construct clustered cottage developments would further diversify the housing stock and provide more affordable options. These strategies, along with the planning and zoning tools highlighted on page 20, warrant further exploration.

The allowance of multi-family homes in defined areas of the community is a requirement of the State's Workforce Housing Law (RSA 674:58-61). Dwellings of more than two units in certain areas of the town should therefore be permitted. The community should determine the best

Workforce Housing Law

New Hampshire State Law (<u>RSA 674:58-61</u>) requires communities to provide reasonable opportunities for housing alternatives affordable to the local workforce. Workforce housing is rental housing for households earning up to 60 percent of the area median income and for-sale housing for households earning up to 100 percent of the area median income. In Madbury, in 2023, homes priced around \$400,000 would be considered workforce housing for a family earning \$136,000 or less. The law also requires that multi-family housing be allowed in some areas of the community.

area(s) for multi-family dwellings and the maximum number of units per dwelling and carefully craft design guidelines and standards for multi-family housing that blends well with Madbury's rural landscape. Permitting multi-family units may also enable existing residents who convert their larger homes to smaller, rentable units to remain in the community longer.

The "big house, little house, back house, barn," or "connected farmhouse," is a unique New England architectural typology that developed as farmers converted separate farm and barn buildings into one structure. Madbury has many examples of these farmsteads. Conversion of these larger compound structures into two or more units presents an opportunity to increase the availability of smaller homes or condos, rental apartments, or accessory apartments while maintaining a rural, agrarian aesthetic.



The Town has historically permitted manufactured homes and mobile homes in the General Residential and Agricultural district. Since 2013, the Town has allowed eldercare facilities on state roads. As of 2023, there is one assisted living facility located on NH Route 155. These uses should continue to be allowed as they fill a critical gap in home types in Madbury. In addition, agritourism and home occupations, which enable residents to earn a living where they reside with minimal impacts to the neighborhood, should also be continued in residential areas. Short-term rentals are another a potential source of revenue that may make homeownership more feasible. This type of

use should be carefully managed to avoid potential negative externalities to the community.

Housing Resources

Any future proposed regulatory changes will require extensive engagement with residents to identify and build support for appropriate amendments to zoning regulations in Madbury. The need for new zoning districts or overlays should be considered in conjunction with discussions about zoning and regulatory changes.

The <u>Seacoast Workforce Housing Coalition</u> and <u>Plan</u> <u>NH</u> are two organizations that offer communities resources and support in the form of planning and design charrettes, community engagement tools and training, reports, and more to address housing affordability and diversity.



2023 Housing Forum



Planning & Zoning Tools

Municipalities have access to a variety of tools to plan and zone for housing. A suite of these tools is described in the <u>2023 New Hampshire Housing Toolbox</u>, which was coordinated by the State Office of Planning and Development. The Housing Toolbox is designed to provide communities with innovative zoning and planning strategies meant to help increase housing production. The toolbox has a variety of resources on:

- Accessory Dwelling Units
- Alternative Small Housing Types
- Cluster Housing (Conservation Subdivision)
- Village Plan Alternative
- Alternative Wastewater Systems
- Inclusionary Zoning
- Age-Friendly Neighborhoods
- Infill Development
- Mixed-Use Development
- Missing Middle Housing Types

- Form Based Codes
- Adaptive Reuse
- Community Revitalization Tax Relieve (79-E)
- Housing Opportunity Zones
- Planned Unit Developments (PUDs)
- Transfer of Development Rights (TDRs)
- Tax Increment Financing (TIF)
- Short-Term Rental (STR) Regulations
- Workforce Housing Ordinance

Some tools are better suited to a small, rural town like Madbury than others. For example, accommodating <u>'missing middle' housing types</u> – like condos, duplexes, triplexes, townhouses, and small clustered homes or 'cottage courts' – within existing and new neighborhoods should be explored in Madbury. This housing category offers increased housing options, affordability, and walkability, and open space preservation. It can also blend nicely with the existing single-family-home-dominated housing stock.

Consideration of <u>alternative wastewater systems</u> like community septic or innovative/alternative septic technologies that pretreat wastewater before it is discharged into soil may be required to accommodate new homes on existing buildable land or smaller lots.

Madbury should consider the merits of <u>inclusionary zoning</u>, which typically provides some zoning requirement flexibility in exchange for renting or selling a portion of a development at an affordable rate to income-eligible households.

To increase the feasibility that Madbury residents can age in place, greater attention to cultivating <u>age-friendly neighborhoods</u> is needed. Addressing the regulatory and other barriers to age-friendly neighborhoods can help older residents as well as young adults who wish to stay in their hometown.

LOCAL EXAMPLES

THE CONNECTED FARMHOUSE / BIG HOUSE, LITTLE HOUSE, BACK HOUSE, BARN - TEMPLE, NH

In 2022, the Town of Temple, NH participated in a Plan NH design charrette to explore design ideas with residents and professionals. Participants envisioned the 'connected farmhouse' design concept as a solution to a shortage of housing for the elderly and a lack of housing near the school. This concept allows multi-family housing that embodies the quaint, traditional, single-family New England farmhouse look. Through the design charrette, the community created a site plan that included four houses with four bedrooms in each lot with an accessory dwelling unit for each, totaling about 20 bedrooms on a Town-owned parcel with a buildable area of 13 acres.

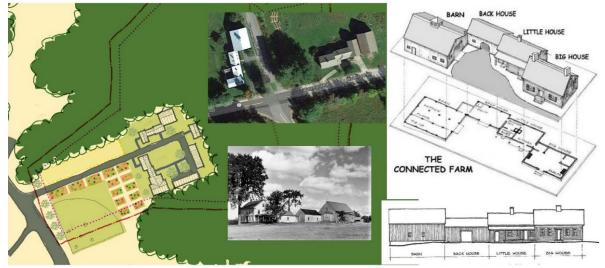


Image: PlanNH, Temple Community Design Charrette, Temple, NH Oct 14-15, 2022

The Cottages at Back River Road – Dover, NH

The Cottages at Back River Road in Dover is a 44-unit development on 7.2 acres designed and built by GSD Studios, PLLC. Each cottage is 385 square feet with a 159 square foot loft that could be used as a bedroom. The cottages have a porch overlooking a common green space and a separate parking area. The development plan also includes community space with gym and laundry facilities in the original home on the lot. Each rental unit will be priced according to the NH Housing Finance Authority's fair market rental rate, which was \$1,232 in late 2023. The development footprint is far smaller than a conventional subdivision would be.



Images: Exterior and interior of the Cottages at Back River Road, GSD Studios, PLLC. HOUSING & DEMOGRAPHICS CHAPTER Town of Madbury, NH Master Plan

MAINTA Madbury offe space, their r like their libro

MAINTAIN & ENHANCE QUALITY OF LIFE

Madbury offers a high quality of life and is a desirable place to live.^{23,24} Residents value their space, their neighborhoods, access to amenities, outdoor recreational opportunities, and assets like their library and the school system.²⁵ It is important that housing – especially the addition of new housing or new types of housing – does not detract from, but rather enhances the quality of life in Madbury.

Because the town is comprised of geographically dispersed neighborhoods, it is important to continue to foster social connections and engage the community through Town events and programming for individuals of all ages. It is also important to maintain Madbury's sense of place as a rural community as the town evolves over time. The desire to 'stay Madbury' and interest in avoiding out-of-character development was shared by multiple individuals during the housing forum. Design guidelines should be developed to help define the physical characteristics of new development and redevelopment.

The Town should strive to provide residents with access to support and services that they need to maintain a high quality of life – whether that be transportation to medical services in nearby communities, high speed internet to support the growing work-from-home community, or childcare to support working households. Future population growth may require expansion or addition of municipal services and infrastructure; this will be further explored as other Master Plan Chapters are developed.

In both the Housing Survey and at the Housing Forum, residents expressed a desire for safer, more walkable bike- and pedestrian-friendly neighborhoods. Attention to these topics should be considered when crafting amendments to the Town's Site Plan Review and Subdivision Regulations, evaluating proposals for development, in the Capital Improvement Plan, and when making streetscape improvements.

Similar to residents of many communities in New Hampshire, high taxes remain a concern for community members. The Town should continue to educate residents about and offer property tax exemptions such as for solar, the elderly, disabled individuals, and veterans. Additionally, the Town should continue to educate property owners about programs like current use, which can double as a tax savings for individuals and a method to maintain forests and farms. Following other communities in the state, the Town may wish to explore power purchasing options that may provide lower cost and greener purchasing options for power for residents, as enabled by RSA 53-E.

The Town may also explore options to increase the presence of commercial activity in Madbury, such as through allowing mixed use development or limited types of commercial uses in discrete areas of the community. The community could also identify and develop standards for the types of commercial uses that should be allowed within the Commercial and Light Industrial Zone.

Planning areas such as community facilities and services, recreation, energy, transportation, and natural resources will be further explored in the update of other chapters of the Master Plan. Changes in temperature, precipitation, and sea level affect the current and future population of New Hampshire, as well as the state's built and natural environment.²⁶ In 2023, the contiguous U.S. suffered 28 billion-dollar weather disasters, totaling \$54 billion. This year was also the warmest year on record in New Hampshire and much wetter than normal.²⁷

> The impacts of climate change are anticipated to worsen over this century, with widespread impacts on human health, drinking water supplies, homes, buildings, and roads, and natural communities.

> Sea-level rise induced ground water rise is a threat to well water and infrastructure in coastal New Hampshire. The groundwater rise zone is projected to extend up to 2.5 to 3 miles inland from the coast, which is three to four times farther inland than tidalwater inundation. ²⁸ Impacts include wetland expansion and migration, pavement and other infrastructure failure, and septic system failure, which can cause degradation of groundwater. Brackish water can enter wells, impacting drinking water and, over time, degrading water infrastructure. Changes in the water table can also impact septic systems, causing degradation of groundwater.²⁹

> Madbury should continue to participate in local and regional efforts to increase resilience of people, housing and other structures, infrastructure, and drinking water. Regulations and design standards for stormwater management, building construction, and floodplains, for example, should reflect the best available science. Housing should not be developed in locations that are at risk of flooding now or within the life expectancy of the structure. <u>The New Hampshire Coastal Flood Risk Summary – Part II:</u> <u>Guidance for Using Scientific Projections</u> provides municipalities with science-based and user-informed guiding principles and a step-by -step approach for incorporating coastal flood risk projections into planning, regulatory, and site-specific efforts.

Local governments that are prepared for growth can prevent overdevelopment in vulnerable areas, prepare for current and future climate impacts, anticipate the need for more public services, and grow sustainably and equitably.

- National League of Cities

Climate change projections include an increase in:

- Annual temperature
- 1 Number of extreme heat days
- Frequency and intensity of extreme precipitation
- ↑ Total annual precipitation
- Sea level

Source: NH State Climate Assessment 2021

Percent of properties in Madbury that are at risk to climate impacts:

Flooding: 8% Wildfire: 87% Wind: 73% Heat: 99%

Source: First Street Foundation

What does resilient housing look like?

- Smaller for less heating and cooling
- More energy savings features
- Plan for and account for extreme weather conditions
- Location out of harm's way, specifically the floodplain and low-lying areas
- Walkable communities
- Closer to transit

Source: Arigoni, Danielle. Climate Resilience in Housing: Collaborative for Success About 20% of emissions come from the residential sector, excluding waste and transportation.³⁰ Therefore, the Town should also encourage resilient housing that has a smaller carbon footprint, ³¹ such as smaller homes, energy efficient homes, and development that is closer to public transportation. Multi-family housing utilizes about 50% less emissions per unit than a single-family home. ³² Solar installations should be encouraged and regulated to avoid potential negative externalities to the community.

The Town should help to educate residents about hazards and available resources, such as warming and cooling centers. Particular attention should be given to vulnerable populations including the elderly, disabled, children, non-native English speakers, and residents who live in manufactured homes, which may be more vulnerable to damage during storm events.

The community should also be prepared for an increase in climate migrants – people who temporarily or permanently leave their homes for less vulnerable locations in order to escape extreme events like wildfires and coastal flooding.³³ New England should be prepared for an increase in people coming from areas that are fleeing fires, heat, and floods³⁴ as the Northeast ranks as more resilient than most regions of the country and has lower disaster damages.³⁵ Madbury's proximity to the coast but relatively little land within tidal waters makes the community an attractive place for waterfront residents impacted by flooding or newcomers looking to settle near the coast.

Resources like the National League of Cities' 2022 report <u>The Next American Migration, What Cities</u> <u>Should Know about Climate Change and Populations on the Move</u> help to understand the complexities of climate migration within the U.S. and proactively prepare for the future. The report notes that already, an increasing number of residents are forced to leave their homes – either temporarily or permanently - to escape extreme events.³⁶ The impacts of climate change on towns and cities will be disproportionate. Smaller communities like Madbury may face challenges like:

- Applying for and winning grants, given a lack of dedicated planning, emergency management or sustainability staff. ³⁷
- Adapting practices developed by larger cities to smaller communities.³⁸
- Gaining state level attention and support of the Town's needs and priorities.³⁹
- Lack of capacity to grapple with the intersectional challenges of climate change and housing.⁴⁰
- Lack of ability to engage in difficult, emotional conversations around mitigation and its implications.⁴¹
- Collaborative across local, regional, and state jurisdictions, given the highly fragmented nature of governance systems in the New Hampshire and the Northeast.⁴²

However, the Town benefits from its location within the coastal zone and the support and opportunities from the state and entities like NH Coastal Adaptation Workgroup (CAW).

RECOMMENDATIONS/ACTIONS

REGULATORY

#	Recommendation
R 1	Review and revise the Accessory Apartment regulations to allow for detached accessory dwellings. Develop appropriate standards and guidelines.
R 2	Develop regulations for short term rentals to avoid impacts on neighborhoods, quality of life, and long-term rental opportunities.
R 3	Adopt Inclusionary Zoning (NH RSA 674:21) and/or allow multi-family dwellings within an area of Madbury to bring the Town into compliance with the State's Workforce Housing Law (NH RSA 674:58-61).
R 4	Create an overlay district in an appropriate location(s) in town where multi-family dwellings would be permitted. This would not preclude this type of development from undergoing site plan review. The Planning Board should develop specific standards and design guidelines for multi-family housing.
R 5	In conjunction with the update to the existing and future land use chapter(s) of the Master Plan, consider the long-term vision for desired uses in the Residential and Agricultural District, Commercial / Light Industrial District, and Civic District.
R6	Develop a solar ordinance(s) with standards and design guidelines for accessory rooftop, ground mounted arrays, community solar arrays, and/or large (1 MW or more) arrays. The NH Sustainable Energy Association Developed a <u>Model Solar Zoning</u> Ordinance for New Hampshire that could serve as a guide.
R 7	Consider reducing lot size requirements and dimensional standards within the General Residential and Agricultural District or create a new district or overlay with reduced dimensional standards.
R 8	Reduce the acreage requirements for two-family homes to that required for single family homes.
R 9	Conduct a comprehensive review of the Cluster Subdivision Ordinance using the guidance available from the <u>Innovative Land Use Guide Section 1.4 Conservation</u> <u>Subdivision</u> .
R 10	Preserve rural character and protect natural resources and water resources through design guidelines and regulations for subdivisions, multi-family dwellings, and non-residential uses.
R 11	Consider developing ordinances such as a lighting ordinance or noise ordinance to minimize impacts on wildlife and abutters.
R 12	Conduct a comprehensive review and update of the Zoning Ordinance, and Site Plan, Subdivision, and Conservation Subdivision Regulations to ensure that local regulations comply with state laws and that development standards and procedures are sufficient to guide future development while preserving rural character and protecting natural resources.
R 13	
R 14	
R 15	as opposed to including this provision in the Subdivision Regulations.
R 16	Develop regulations for electric vehicle charging stations.

PLANNING & POLICY

#	Recommendation
Р1	Collaborate with partners such as the Strafford Regional Planning Commission, UNH Cooperative Extension, NH Housing, and PlanNH to promote diverse housing options.
P 2	Develop a bike and pedestrian safety campaign. Recruit and coordinate with neighborhood leaders to identify bike-ped hazards and opportunities in their neighborhoods. Improve the walkability of the Civic District and Town Properties.
P 3	Improve the Town's website as a place for current and prospective residents to find information about events in Madbury, resources and services available at the Town Offices, Town regulations and policies, Town volunteer opportunities, natural resources and water resources protection, and other relevant information.
P 4	Participate in regional resilience projects and studies. Take advantage of grant funding and technical assistance that will help the Town and its residents reduce vulnerability to extreme precipitation, heat, cold, and storm events, and to sea level rise.
P 5	Create a plan for the use of Town-owned lands that includes policies for public access, trail systems, parking, and permitted uses.
P 6	Update the Master Plan every 5 years.

EDUCATION

#	Recommendation
E 1	Create a welcome packet for new residents with information about the Town, local and regional resources and programs, and environmental concerns.
E 2	Provide residents with information about current use and tax exemptions.
E 3	Educate homeowners about potential impacts of flooding, extreme heat and cold, wind, and sea level rise on homes, property, and health and wellbeing.
E 4	Develop guidance and educational material on evacuation procedures, shelters, and sheltering in place.
E 5	Conduct a home energy efficiency campaign and encourage homeowners to conduct energy audits.
E 6	Partner with ORCSD to identify opportunities to increase youth involvement and awareness of Town government.
E 7	Help connect residents with resources such as assistance with paying utilities, social services, transportation, meals, housing, etc.
E 8	Coordinate with NHDES to host well water testing events.
E 9	Conduct a septic maintenance campaign to educate residents about the importance of regular septic maintenance to prevent water pollution.
E 10	Update the "Resident's Guide to Land Use Regulations" and compile additional resources and links on navigating town government and planning and post on the Town's website.

IMPLEMENTATION TABLE

INTRODUCTION

This implementation table is intended to guide the Town in acting on the recommendations of the Housing & Demographics Chapter. The Master Plan is the responsibility of the Planning Board (NH RSA 674:1). However, other boards, committees, commissions, and staff in Madbury play a role in implementing the various recommendations of the Master Plan. These entities are identified as responsible parties in the Implementation Table. The Planning Board should provide the responsible party(ies) with a list of all implementation strategies that the Board would like their involvement or leadership. The Planning Board should also engage the responsible party(ies) when the Board begins to act on specific recommendations.

A selection of local, regional, and state partners that may provide technical assistance, funding, or other support to implement the recommendations of this chapter are identified in the Implementation Table as potential partners. The responsible party(ies) should reach out to these and other potential partners for assistance, funding, input, and support.

A supplemental electronic spreadsheet containing the implementation table and a tracking checklist have been developed to help plan and track implementation. This database may be sorted by category, responsible party, date, cost, and/or priority. The Planning Board should assign a minimum of one Planning Board member with the responsibility of maintaining and updating this electronic file.

The Planning Board should also prepare a short report for the Selectboard twice per year that summarizes action and progress with implementing Master Plan recommendations. This report should include a hard copy of the tracking checklist as well as a brief description of progress, any barriers or challenges, and next steps. This report should be shared with other boards, commissions, and committees and included in a Master Plan tracking file at the Town Offices.

The Planning Board should also include 'Master Plan Implementation Updates' as a standing item on their agenda. This will provide an opportunity to revisit the implementation table as needed, to share updates about the status of recommendations.

Continued public input is essential to implementing the recommendations of this chapter. The Planning Board looks forward to engaging the community in the regulatory, planning and policy, and education-based projects identified in this chapter.

IMPLEMENTATION TABLE KEY

Priority

Low, Medium, High ranking is based on the Planning Board's determination of which projects are most important to complete at the time this chapter was prepared. Ease of implementation was considered during the prioritization. Prioritization is subject to change.

Estimated Cost

 Minimal
 <\$5,000 or in kind/volunteer hours</td>

 Low
 >\$5,000-\$10,000

 Medium
 >\$10,000-\$50,000

 High
 >\$50,000

Responsible Parties

- PB Planning Board
- SB Selectboard
- CC Conservation Commission
- ZBA Zoning Board of Adjustment
- FC Fire Chief
- WB Water Board
- BI Building Inspector
- PA Road Agent
- RC Recreation Committee
- CTC Clerk & Tax Collector

Potential Partners

CDDC	Chrouff and De ation of Discontine of Comparisation
SRPC	Strafford Regional Planning Commission
SWHC	Seacoast Workforce Housing Coalition
NHDOT	NH Department of Transportation
NHDES	NH Department of Environmental Services
NHHSEM	NH Homeland Security & Emergency Management
NHBEA	NH Department of Business & Economic Affairs
NHDOE	NH Department of Energy
NHOPD	NH Office of Planning & Development
NHDRA	NH Department of Revenue Administration
NHDHHS	NH Department of Health & Human Services
NHMA	NH Municipal Association
UNH CE	University of New Hampshire Cooperative Extension
NHCAW	NH Coastal Adaptation Workgroup
SNMW	Seacoast Nutrition Meals on Wheels
SCAP	Strafford Community Action Partnership

Implementation Table

#	Recommendation	Priority	Estimated Cost	Responsible Party(ies)	Potential Partners
R1	Review and revise the Accessory Apartment regulations to allow for detached accessory dwellings and increased flexibility. Develop appropriate standards and guidelines.	High	Low	РВ	SRPC, Contractor, SWHC
R2	Develop regulations for short-term rentals to avoid impacts on neighborhoods, quality of life, and long-term rental opportunities.	High	Low- Medium	РВ	SRPC, Contractor
R3	Adopt Inclusionary Zoning (NH RSA 674:21) and/or allow multi-family dwellings within an area of Madbury to bring the Town into compliance with the State's Workforce Housing Law (NH RSA 674:58-61).	High	Medium	РВ	SRPC, Contractor, SWHC
R4	Create an overlay district in an appropriate location(s) in town where multi-family dwellings would be permitted. This would not preclude this type of development from undergoing site plan review. The Planning Board should develop specific standards and design guidelines for multi-family housing.	Medium	Medium	РВ	SRPC, Contractor, PlanNH
R5	In conjunction with the update to the existing and future land use chapter(s) of the Master Plan, consider the long-term vision for desired uses in the Residential and Agricultural District, Commercial / Light Industrial District, and Civic District.	High	Medium	РВ	SRPC, Contractor
R6	Develop a solar ordinance(s) with standards and design guidelines for accessory rooftop, ground mounted arrays, community solar arrays, and/or large (1 MW or more) arrays. The NH Sustainable Energy Association Developed a <u>Model Solar Zoning</u> Ordinance for New Hampshire that could serve as a guide.	Medium	Medium	РВ	SRPC, Contractor
R7	Consider reducing lot size requirements and dimensional standards within the General Residential and Agricultural District or create a new district or overlay with reduced dimensional standards.	Medium	Medium	РВ	SRPC, Contractor
R8	Reduce the acreage requirements for two-family homes to that required for single family homes.	High	Minimal	РВ	SRPC, Contractor
R9	Conduct a comprehensive review of the Cluster Subdivision Ordinance using the guidance available from the <u>Innovative Land Use Guide Section 1.4 Conservation</u> <u>Subdivision</u> .	Medium	Medium	PB, CC	SRPC, Contractor
R10	Preserve rural character and protect natural resources and water resources through developing design guidelines and regulations for subdivisions, multi-family dwellings, and non-residential uses.	High	Medium	PB, CC, WB	SRPC, Contractor
R11	Consider developing ordinances such as a lighting ordinance or noise ordinance to minimize impacts on wildlife and abutters.	Medium	Low- Medium	PB, SB, BI	SRPC, Contractor
R12	Conduct a comprehensive review and update of the Zoning Ordinance, and Site Plan, Subdivision, and Conservation Subdivision Regulations to ensure that local regulations	Medium	High	РВ	SRPC, Contractor

#	Recommendation	Priority	Estimated Cost	Responsible Party(ies)	Potential Partners
	comply with state laws and that development standards and procedures are sufficient to guide future development while preserving rural character and protecting natural resources.				
R13	Contract with an on-call engineer to review development plans for subdivisions.	Low	Minimal	PB, BI	Contractor
R14	Develop regulations for fire protection in coordination with the Fire Chief.	Medium	Low	PB, FC	SRPC, Contractor
R15	Amend the Zoning Ordinance to require that all new utilities be installed underground as opposed to including this provision in the Subdivision Regulations.	Medium	Minimal	РВ	SRPC, Contractor
R16	Develop regulations for electric vehicle charging stations.	Medium	Medium	РВ	SRPC, Contractor, NHDOT
P1	Collaborate with partners such as the Strafford Regional Planning Commission, UNH Cooperative Extension, NH Housing, and PlanNH to promote diverse housing options.	Low	Minimal	РВ	SRPC, UNH CE, NH Housing, PlanNH
P2	Develop a bike and pedestrian safety campaign. Recruit and coordinate with neighborhood leaders to identify bike-ped hazards and opportunities in their neighborhoods. Improve the walkability of the Civic District and Town Properties.	Medium	Minimal- High	PB, RC, RA	SRPC, NHDOT, NHBEA
P3	Improve the Town's website as a place for current and prospective residents to find information about events in Madbury, resources and services available at the Town Offices, Town regulations and policies, Town volunteer opportunities, natural resources and water resources protection, and other relevant information.	High	Minimal	SB	Town committees, Library staff, volunteers
Р4	Participate in regional resilience projects and studies. Take advantage of grant funding and technical assistance that will help the Town and its residents reduce vulnerability to extreme precipitation, heat, cold, and storm events, and to sea level rise.	High	Minimal	PB, SB, CC	SRPC, NHCAW, NHDES, UNH/Sea Grant, NHOPD
P5	Create a plan for the use of Town-owned lands that includes policies for public access, trail systems, parking, and permitted uses.	Medium	Low	PB, SB, CC, RC	SRPC, Contractor
P6	Update the Master Plan every 5 years.	High	Medium- High	РВ	SRPC, Contractor
E1	Create a welcome packet for new residents with information about the Town, local and regional resources and programs, and environmental concerns.	Low	Minimal	SB, PB	Town committees, Library staff, volunteers
E2	Provide residents with information about current use and tax exemptions.	Medium	Minimal	CTC, SB	NHDRA
E3	Educate homeowners about potential impacts of flooding, extreme heat and cold, wind, and sea level rise on homes, property, and health and wellbeing.	High	Minimal	PB, SB, BI, CC, WB	SRPC, NHCAW, NHDES, UNH/Sea Grant

#	Recommendation	Priority	Estimated Cost	Responsible Party(ies)	Potential Partners
E4	Develop guidance and educational material on evacuation procedures, shelters, and sheltering in place.	High	Minimal	FC, SB	NHHSEM, NHCAW, NHDES, UNH/Sea Grant
E5	Conduct a home energy efficiency campaign and encourage homeowners to conduct energy audits.	Low	Minimal	SB	NHDOE, NH Saves
E6	Partner with ORCSD to identify opportunities to increase youth involvement and awareness of Town government.	Low	Minimal	SB, PB	ORCSD
E7	Help connect residents with resources such as assistance with paying utilities, social services, transportation, meals, housing, etc.	Low	Minimal	SB	NHDHHS, COAST, SNMW, Strafford CAP, NHDHHS, NH Housing, Seacoast Eat Local
E8	Coordinate with NHDES to host well water testing events.	Low	Minimal	SB, WB	NHDES
E9	Conduct a septic maintenance campaign to educate residents about the importance of regular septic maintenance to prevent water pollution.	Low	Minimal	SB, WB	NHDES, SRPC, PREP
E10	Update the "Resident's Guide to Land Use Regulations" and compile additional resources and links on navigating town government and planning and post on the Town's website.	Medium	Minimal	PB, SB	NHMA, NHOEP, SRPC

Endnotes

¹ American Community Survey (ACS) data, among other sources, is used in this chapter and its appendices. ACS data are estimates of the actual figures that would have been obtained if the entire population—rather than the chosen ACS sample—had been interviewed using the same methodology. All estimates produced from sample surveys have uncertainty associated with them as a result of being based on a sample of the population rather than the full population. This uncertainty—called sampling error— means that estimates derived from the ACS will likely differ from the values that would have been obtained if the entire population had been included in the survey, as well as from values that would have been obtained had a different set of sample units been selected for the survey. For area like Madbury with smaller sample sizes, the margin of error can be substantial.

² 2023 Madbury Housing Survey for the Master Plan update.

³ Overview of Oyster River High School. U.S. New Best High Schools Ranking.

https://www.usnews.com/education/best-high-schools/new-hampshire/districts/oyster-river-coop-school-district/oyster-river-high-school-12419

⁴ Morse, James, C. Oyster River Cooperative School District. Presentation Slides. FY 25 Public Budget Hearing. January 12, 2024.

⁵ 2020 US Census

⁶ 2021 NH Office of Planning and Development Estimates

⁷ 2017-2021, 2007-2021 ACS 5-year estimates

⁸ 2017-2022 ACS 5-year estimates

9 Ibid.

¹⁰ Oyster River Cooperative School District Report of the District 2022

11 Ibid.

¹² 2015 Land Use Layer, NH Geodata Portal

¹³ 2017-2022 ACS 5-year estimates

¹⁴ Annual Reports, 2016-2022, Planning Board's Website and property records

¹⁵ 2017-2022 ACS 5-year estimates

¹⁶ Ibid.

¹⁷ NH Housing. Annual data. Based on information from the PrimeMLS for towns in New Hampshire,

compiled by New Hampshire Housing. Excludes land, interval ownership, seasonal camps/cottages, multi-

family property, mobile/manufactured homes and commercial/industrial property.

¹⁸ Redfin. 2023. This data is based on the limited number of homes that have been on the market.

¹⁹ 2017-2022 ACS 5-year estimates

²⁰ NH Department of Revenue

²¹ Assessing Data provided by Town of Madbury via email December 12, 2023.

²² Missing Middle Housing. Accessed December 2003. <u>https://missingmiddlehousing.com/</u>

²³ Madbury 2023 Housing Survey for the Master Plan update.

²⁴ Strafford Regional Planning Commission Regional Housing Needs Assessment. 2023.

https://strafford.org/plans/regional-housing-needs-assessment/

²⁵ Madbury 2023 Housing Survey; Madbury December 6, 2023 Housing Forum.

²⁶ Lemcke-Stampone, Mary D.; Wake, Cameron P.; and Burakowski, Elizabeth, "New Hampshire Climate Assessment 2021" (2022). The Sustainability Institute. 71. https://scholars.unh.edu/sustainability/71

²⁷ https://yaleclimateconnections.org/2024/01/u-s-billion-dollar-weather-disasters-set-an-all-time-record-in-2023-with-28/

²⁸ Wake, C., Knott, J., Lippmann, T., Stampone, M., Ballestero, T., Bjerklie, D., Burakowski, E., Glidden, S., Hosseini-Shakib, I., Jacobs, J. (2019). New Hampshire Coastal Flood Risk Summary – Part I: Science. Prepared for the New Hampshire Coastal Flood Risk Science and Technical Advisory Panel. Report published by the University of New Hampshire, Durham, NH.

²⁹ Wake, C., Knott, J., Lippmann, T., Stampone, M., Ballestero, T., Bjerklie, D., Burakowski, E., Glidden, S., Hosseini-Shakib, I., Jacobs, J. (2019). New Hampshire Coastal Flood Risk Summary – Part I: Science. Prepared for the New Hampshire Coastal Flood Risk Science and Technical Advisory Panel. Report published by the University of New Hampshire, Durham, NH.

³⁰ Jonathan Rose Companies. Location Efficiency and Housing Type Boiling it Down to BTUs. 2011.

https://www.epa.gov/sites/default/files/2014-03/documents/location_efficiency_btu.pdf

³¹ Arigoni, Danielle. Climate Resilience in Housing: Collaborative for Success. Webinar. November 17, 2023. https://www.youtube.com/watch?v=PjSCN8vMrLA

³² Jonathan Rose Companies. <u>Emissions associated with different types of residential development</u>. As referenced in Arigoni, Danielle. Climate Resilience in Housing: Collaborative for Success. Webinar. November 17, 2023. https://www.youtube.com/watch?v=PjSCN8vMrLA

³³ National League of Cities. The Next American Migration, What Cities should know about climate change and populations on the move. 2022. <u>https://www.nlc.org/resource/the-next-american-migration-what-cities-should-know-about-climate-change-and-populations-on-the-move/</u>.

³⁴ https://www.wbur.org/news/2023/05/22/climate-change-new-england-migration

³⁵ Cornell Architecture and Art Planning and Antioch University New England Center for Climate Preparedness and Community Resilience. A Northeast Safe and Thriving for All (NEST). Final Report to NOAA Climate Program Office Climate Adaptation Partnerships Planning Grant. https://d3esu6nj4wau0a.cloudfront.net/documents/NOAA NEST REPORT 2023.pdf

³⁶ National League of Cities. The Next American Migration, What Cities should know about climate change and populations on the move. 2022. <u>https://www.nlc.org/resource/the-next-american-migration-what-cities-should-know-about-climate-change-and-populations-on-the-move/</u>.

³⁷lbid.

³⁸ Ibid.

³⁹ Ibid.

⁴⁰ Cornell Architecture and Art Planning and Antioch University New England Center for Climate Preparedness and Community Resilience. A Northeast Safe and Thriving for All (NEST). Final Report to NOAA Climate Program Office Climate Adaptation Partnerships Planning Grant. <u>https://d3esu6nj4wau0q.cloudfront.net/documents/NOAA NEST REPORT 2023.pdf.pdf</u>

⁴¹ Ibid.

42 Ibid.