

# Mohawk Trail

## Woodlands Partnership 2014-2015



**A Plan for Forest-Based Economic Development and Conservation**

December 2015 (Updated October 2016)





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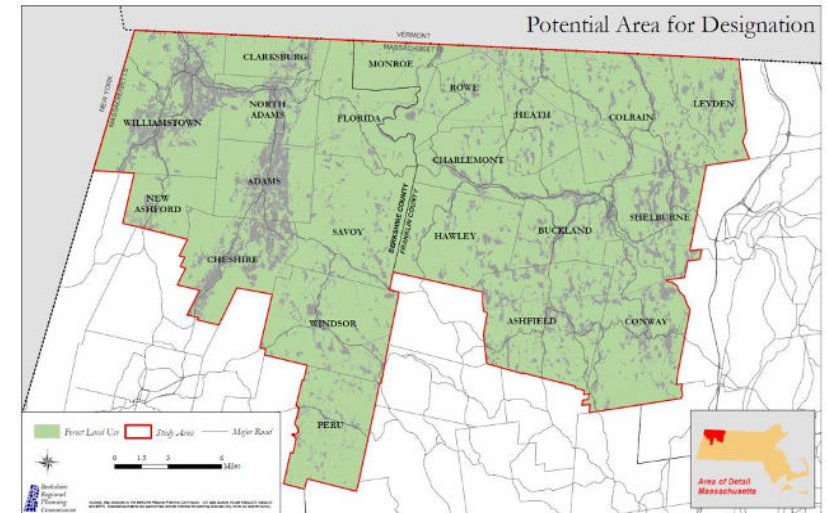


# Chapter One: Introduction and Project Background

## Project Background

The Northwestern corner of Massachusetts is comprised of bountiful natural resources. The Deerfield and Hoosic Rivers flow through expanses of northern hardwood forests, with farms and homes interspersed along mostly rural roads. The woodlands of this area provide a variety of opportunities and benefits. People are drawn to the area for its natural resource-based tourism activities such as hiking, skiing, camping, fishing and snowmobiling. A significant number of people make their living off the woodlands, whether running recreation-based businesses, cutting and selling firewood off their woodlots, harvesting timber for furniture or flooring, working as foresters or tapping sugar maples and selling maple syrup. In addition, forests provide critical ecological services including water supply recharge and protection, wildlife habitat and diversity, water and air purification, and carbon storage.

This remarkable forested area is the focus of the Mohawk Trail Woodlands Partnership project, specifically the 21-town<sup>1</sup> area shown to the right. The project was brought about in part as a response to public input in recent regional sustainability plans. In *Sustainable Franklin County: A Regional Plan for Sustainable Development*, protecting forests is identified as one of the public's top natural resource goals and promoting economic development in the forestry sector is a key recommendation. In *Sustainable Berkshires*, the report calls for improving land conservation and management capacity countywide and recognizes the value of nature-based businesses, such as tourism. In 2013, the project team, including the Franklin Regional Council of Governments (FRCOG), the Berkshire Regional Planning Commission (BRPC) and the Franklin Land Trust (FLT) in partnership with the Massachusetts Executive Office of Energy and Environmental Affairs (EEA) began to explore the possibility of leveraging one the region's strongest assets—its extensive mostly privately-owned woodlands—to obtain a federal designation. Such a designation would recognize the region's outstanding forestry resources and could bring with it economic and environmental benefits to the region, while keeping land in private ownership.



<sup>1</sup> The data and information in the Plan was updated in June 2016 to incorporate the Town of Peru, which joined the project as the 21<sup>st</sup> town in October 2015.



Through a series of public outreach events, the project team determined the level of interest in the project among community leaders, residents, natural resource-based businesses, foresters and private landowners. Throughout the course of the planning process, public input and conversations with key forestry stakeholders shaped the elements that a potential federal designation would need to include. These elements are included in the “Framework” (see Chapter 7).

## Summary of Purpose and Benefits

The purpose of a federal forest designation is to bring recognition and additional financial and technical resources to the 21-town region, primarily via the U.S. Forest Service and the Massachusetts Executive Office of Energy and Environmental Affairs (EEA). A federal designation could provide funding to conserve forests, increase economic development related to sustainable forestry practices and forest-based businesses and recreational tourism, and improve the fiscal stability of municipalities. Potential benefits are detailed in Chapter 6, and include funding for specific activities such as a feasibility study for a wood pellet manufacturing plant, creation of new hiking trails, technical assistance for expanding local wood products markets, assistance with forestry-related business plans, and payments to willing landowners for conservation restrictions to permanently protect forests. See Appendix B for information on the model conservation restriction.

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## Project Goals

Project goals were developed using input gathered throughout the public participation and planning process. Primary goals for the project include:

- Conserve forest land in private ownership to protect the region’s rural character and ecological resources and to support forest based economic development
- Increase sustainable forestry practices and support energy efficient renewable wood heat to reduce fossil fuel use, retain rural jobs, and keep more fuel dollars in the local economy
- Increase research on sustainable forestry practices and marketing and use of local forest-based products
- Increase natural resource- and tourism-based jobs and sustain and expand forestry and tourism businesses
- Increase funding for flexible Conservation Restrictions for private landowners for sustainable forestry, habitat protection, and/or passive recreation
- Increase public education about all the services that forests and forest management provide from wood products to clean air and water
- Support the financial health and sustainability of communities by increasing tax revenues or other payments to towns or reducing operating costs while maintaining or improving municipal services
- Provide technical assistance to private landowners to improve forest management, climate change resiliency, and to address invasive species and other threats to forest resources
- Improve tourism infrastructure, including the establishment of a visitor center and/ or a technical resource center
- Support local foresters who provide technical assistance to private landowners to increase forest productivity and to address invasive species and other threats to forests
- Conserve forests for the ecological services they provide including water quality protection, flood control, air quality improvement, carbon sequestration, and habitat protection

## Key Issues and Concerns

In addition to goals, land owners, municipal leaders, foresters and other stakeholders identified key issues and concerns related to a potential federal designation including:

- Potential loss of local tax revenues for land in Federal or State ownership
- Potential impact on municipal services such as road maintenance or provision of emergency response services for visitors
- Lack of reliable Payment in Lieu of Taxes (PILOT) to support town services for existing publicly owned lands
- Need for the process to be locally driven and supported
- Lack of information about actual incentives or support that could be provided to the towns, private landowners and forest-based businesses by the U.S. Forest Service and/or the State
- Need to understand how sustainable this project will be given the budgetary challenges faced by the Federal government
- Need for the State to better manage and maintain their own forests and recreational facilities
- Need for reduced regulations to support sustainable forestry
- Need for flexible Conservation Restrictions that allow landowners to decide whether the parcel should be managed to provide forest products (lumber, firewood, etc.), habitat protection, and/or recreational opportunities and the level of public access
- Need for towns to be able to review and comment on any legislation proposed for the Federal Designation to determine if they want to participate

## Timeline

This project commenced in 2013, with regional and town-by-town public outreach sessions conducted by the project team from late 2013 through early 2014. Input from these sessions helped shape the framework, goals and this plan. A key recommendation from the community meetings was the formation of an Advisory Committee to help oversee the creation of this plan and the specifics of any designation. The Advisory Committee has met quarterly over the course of 2014 and 2015 to develop and refine this plan. The final draft of this plan will be presented at regional meetings and to each of the 21 towns' Select Boards in fall 2015. A timeline for filing State and/or Federal legislation will be determined if there is enough community support.

	2013				2014												2015											
	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC
Project Commences																												
Past Public Input Reviewed																												
GIS Maps Prepared																												
Regional Public Info Sessions																												
Town-by-Town Public Info Sessions <sup>2</sup>																												
Draft Framework Developed																												
Draft Goals Developed																												
Formation of Advisory Committee & Meetings																												
Draft Plan Developed																												
Draft Plan Presented at Regional Meetings																												
Draft Plan Presented to Town Select Boards																												
If Supported by Towns, State Legislation Prepared																												
State Legislation Filed																												
Federal Legislation Filed																												

<sup>2</sup> The Town of Peru was added as the 21<sup>st</sup> town in October 2015, and was not included in the 2014 public information sessions

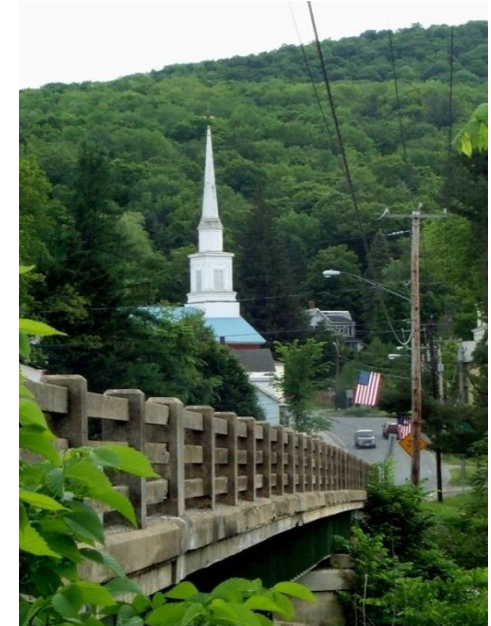




## Chapter Two: Study Area

The forests of the 21-Town region (see Appendix A for a 21-town map) encompass the valleys, foothills and mountains of the most rural section of Massachusetts. Settled as agricultural communities, many of the towns in the region retain historic village centers with a mix of homes, civic buildings, and locally-owned businesses. Historic downtowns and close-knit residential neighborhoods are found in the communities that developed as larger employment centers along the region's rivers during the industrial revolution. Outside of these villages and downtowns, homes and the occasional cluster of businesses are interspersed among working farmland and dense forests. From the summit of the Hoosac Range to the Deerfield and Hoosic River Valleys, the region is one of scenic and diverse beauty.

While many of the country's rural areas have been lost to suburban development, the 21-Town region of western Franklin and northern Berkshire Counties remains largely un-fragmented and intact. From an ecological perspective, the region is a convergence of different types of forests, with an astounding amount of diversity for a region this size. The region also has a rich history of human interaction with the land, from agriculture and forestry to outdoor recreation and tourism. This diversity and history, coupled with the educational resources that are available in the region, provide an opportunity for research and innovation that can be instructive for many other places. At the same time, the region's resources and sense of place provide a backbone for what can be a sustainable, vital rural economy into the future.



*Colrain Village Center is nestled alongside working farmland and dense forests.*

*“In the largely forested landscape of northwestern Massachusetts there are rural communities struggling to keep their schools open, their roads plowed and their meager town budgets from going into the red. Yet **the wooded hills of northern Berkshire and Franklin counties provide important public benefits to the State as a whole. An investment in the forest resources and the economic potential of this region by the U.S. Forest Service would help support the landowners and [communities] while preserving the ecosystem services that improve the quality of life for everyone.** Across southern New England large intact forest landscapes have been carved up and cut down to feed suburban sprawl and economic growth. Support for sustainable forest management provides an opportunity to improve the value of the forests [in the Mohawk Trail region]. The use of low grade trees that need to be weeded to improve the growth and quality of stands can be used to provide a low cost heating fuel while keeping heating dollars in the community. This is just one example of how the U.S. Forest Service can protect the forest and the public benefits it provides by working as a partner with the State, the towns, and other regional entities to strengthen the rural economy and provide incentives to forest landowners to keep their land in forest. **Increasing the sustainability of the Mohawk Trail Forest area benefits everyone who wants clean air, clean water and a planet we can live on.**”*

- Dicken Crane, owner and manager of Holiday Brook Farm, Dalton, MA, and member of the Mohawk Trail Woodlands Partnership Advisory Committee, 2015



*A forested ridgeline is located nearby downtown North Adams.*

## History

The region's history is closely tied to its natural resources. Native Americans occupied the area since the retreat of the glaciers approximately 12,000 years ago, cultivating the valleys and using the forested highlands for fishing and hunting. European settlers later cleared forests for farming and timber and established sawmills and other mills along the regions' waterways. As more land opened up to the west, the forests slowly reclaimed much of the farmland, and today the region is approximately 81% forested. Working farms, however, remain a vital part of the region's identity and economy. Contrary to national trends, there has been steady growth in the number of farms and the amount of acreage being farmed in recent years.

The construction of the Hoosac Tunnel through the Hoosac Range between 1850 and 1875 created a railroad link between Boston and Albany, spurring large-scale industrial development in several communities within the region. Manufacturing continues to be an important sector in the regional economy. Nonetheless, factory closings in recent decades have spurred revitalization and reuse efforts of former industrial buildings such as the Sprague Electric complex in North Adams, which now houses the Massachusetts Museum of Contemporary Art (MassMoCA), one of the largest centers for contemporary visual and performance art in the country. MassMoCA is just one example of the multitude of cultural offerings found throughout the region.

In 1914 the opening of the Mohawk Trail as the State's first scenic tourist route made the region a popular destination during the auto-touring days through the 1950s. The 21-Town region now includes four State-designated scenic byways: Mohawk Trail (Route 2); Mount Greylock; Route 112; and Route 116. These byways provide travelers access to the many historical, natural, cultural, and recreational resources of the region.

## Demographics

Today the 21-Town region is home to nearly 51,000 residents, with a population density of 90 people per square mile, compared to the State population density of 835. The median town population is 1,266, ranging from 121 residents in Monroe, to 13,708 residents in North Adams (town by town demographic information can be found in Appendix C). The population in the 21-Town region declined by 4.8% between 2000 and 2010, a greater decline than in Berkshire and Franklin Counties, which experienced losses in population of 2.8% and 0.2%,

**Table 2-1: 21-Town Demographic Summary, Compared to Berkshire and Franklin Counties and the State**

	<b>21-Towns</b>	<b>Berkshire County</b>	<b>Franklin County</b>	<b>Massachusetts</b>
2010 Total Population	<b>50,936</b>	131,219	71,372	6,547,629
Population Change 2000 - 2010	<b>-2,575</b>	-3,734	-163	198,532
Percent Population Change 2000 - 2010	<b>-4.8%</b>	-2.8%	-0.2%	3.1%
Population Density (population per square mile)	<b>90</b>	141	102	835
Median Population Age	<b>37.4 - 50.9</b>	44.7	44.2	39.1
Percent of Population 65 and Older	<b>17%</b>	19%	15%	14%
Per Capita Income	<b>\$27,728</b>	\$28,939	\$28,841	\$35,485

*Source: 2000, 2010 U.S. Census; 2008-2012 American Community Survey five-year estimates.*

arts college founded in 1793 that currently enrolls approximately 2,000 undergraduates; and the Massachusetts College of Liberal Arts (MCLA) in North Adams, a State college enrolling close to 1,800 undergraduates and over 400 graduate students. Retaining these young people, however, has been a challenge. The percent of residents between the ages of 25 and 64, the core of the region’s workforce, is comparatively less in the 21-Town region, and has experienced a decline in recent years. See Chapter 4 for more information on the region’s workforce and economy.

Overall the 21-Town region has an older population than Berkshire and Franklin Counties and the State. The median population age for each town ranges from 37.4 in Williamstown to 50.9 in Rowe. Sixteen of the 21 towns have a median population age over 45, which is older than the median age for Berkshire County (44.7), Franklin County (44.2), and the State (39.1). Seventeen percent of residents in the 21-Town region were 65 or older as of the 2010 U.S. Census. Only Berkshire County has a higher percentage of residents within this age group. In the next 20 years, the percent of the population age 65 and over within the 21-Towns is projected to increase to 29% of the total population, while most other age groups decline in number.<sup>3</sup>

respectively.<sup>1</sup> The population in the 21-Town region is projected to continue to decline by another 4.5% by the year 2030, while Berkshire and Franklin Counties are expected to decline by only 1% and 2%, respectively.<sup>2</sup>

The 21-Town region has a high percentage (16%) of residents between the ages of 15 and 24 compared to Berkshire and Franklin Counties. This is likely due in part to the presence of two colleges: Williams College in Williamstown, a private liberal

<sup>1</sup> U.S. Census Bureau, 2000, 2010 Decennial Census.

<sup>2</sup> UMass Donahue Institute Population Projections. December 2013.

<sup>3</sup> Ibid.

## Land Use

The 21-Town region comprises roughly 362,000 acres. Forests are the predominant land use, encompassing approximately 82% of the region. Agricultural land makes up almost 8% of the total area. Residential uses comprise approximately 4%, while commercial and industrial uses comprise only 0.5% of the total area.

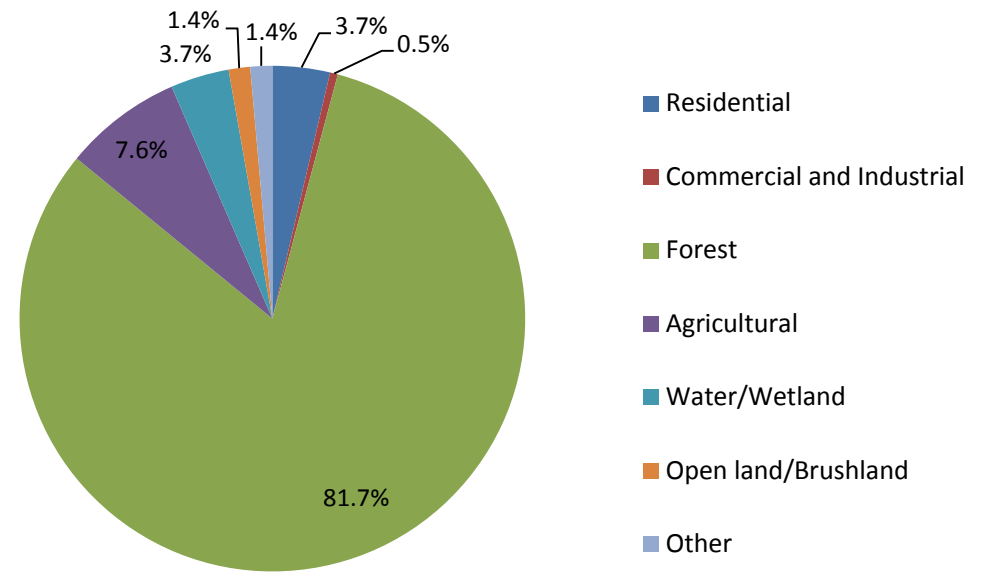
Approximately 100,100 acres, or 28%, of land within the region is permanently protected from development. This includes State forests and wildlife management areas, land owned by conservation organizations, Town-owned land under the jurisdiction of the local Conservation Commission, and privately-owned farm and forestland protected through the Agricultural Preservation Program or a Conservation Restriction.

In addition, roughly 79,500 acres, or 22%, of land in the region is enrolled in one of three Chapter 6I programs for forestry, agriculture, or open space/recreation.<sup>4</sup> Each program provides a means to assess and tax land at its current use as opposed to its development value. Land can be removed from the Chapter 6I programs at any time, and therefore the land is not considered permanently protected from development. Municipalities have a right of first refusal to purchase a property being removed from the program if it is to be sold or converted to another use.

## Natural Resources

A wealth of important natural resources lies within the 21-Town region. Bordered by the Green Mountain National Forest to the north, the region's large forested land area contributes to an even larger regional forest block that supports biodiversity and wildlife habitat, and includes the headwaters for the Deerfield, Hoosic, and Westfield Rivers. Much of the remaining old growth forest in Massachusetts is located

Figure 2-1: 21-Town Region Land Use



Source: 2005 MassGIS Land Use data.

<sup>4</sup> Chapter 6I acreage is based on the total acreage of a parcel with land enrolled in the program. The actual acreage that falls within the program is likely less, as some parcels include acreage not enrolled in the program.

in the region. Geologic features such as the Glacial Potholes in Shelburne Falls and the Natural Bridge in North Adams, add to the uniqueness of the area. Table 2-2 provides a summary of the natural resources in the region.

The forests of the region include “Transition Forests,” a combination of plants and deciduous trees from Middle Atlantic Forests and Northern Forests. Middle Atlantic Forests contain oak, chestnut, and many other tree species. Northern Forests are comprised of hemlock, maple, beech, birch, northern red oak, ash, and pine. Large tracts of Northern Hardwood Forests are found in the northern uplands of Franklin County and in the Berkshires. Much of the old growth forest in Massachusetts is within or adjacent to the Mohawk Trail State Forest, where 400-year old Eastern Hemlocks are found. At the higher elevations of the region in eastern Berkshire County, the soils are thin and the weather conditions are harsh. Trees here grow laterally rather than vertically to avoid damage to branches and foliage from the icy winds of winter and the severe winds of summer storms.<sup>5</sup>

**Table 2-2: Natural Resource Values within the 21-Town Region**

Resource Category	Acres	Percent of Total Area
Total Area of Proposed Designation	361,941	100%
Forest	295,866	82%
Prime Forest Soils	299,034	83%
BioMap2 Core Habitat and Critical Natural Landscape	227,060	63%
MassWildlife Key Sites	29,627	8%
Surface Water Protection Areas	36,039	10%
MA Department of Environmental Protection (DEP)- Approved Zone II Groundwater Protection Areas	3,936	1%
Habitat Reserves	159,374	44%
Prime Farmland Soils	68,543	19%
Wetlands	10,469	3%
Number of Certified Vernal Pools	168	N/A

***“The Northern Berkshire and Western Franklin counties region is especially well-suited to host demonstration forestry projects because it is situated at the convergence of several economically important forest types common from the Canadian border to the Mid-Atlantic states. The geographic location of the Mohawk Trail region coupled with the varied topography and relief conspire to produce a diversity of forest types from montane, boreal forests dominated by red spruce and balsam fir at elevations above 2000-feet, to Northern Hardwood forests dominated by sugar maple, American beech, and yellow birch on moist, north- and east-facing sites at lower elevations, as well as oak-hickory forests dominating on south and west-facing slopes and ridges. Over a distance of but a few miles, one can encounter forest types typical of environments hundreds of miles away.”***

- Henry W. Art, Robert F. Rosenburg Professor of Biology & Environmental Studies, Williams College, and member of the Mohawk Trail Woodlands Partnership Advisory Committee, 2015

<sup>5</sup> Mohawk Trail Scenic Byway Corridor Management Plan. Berkshire Regional Planning Commission and Franklin Regional Council of Governments. June 2002.



*BioMap2: Conserving the Biodiversity of Massachusetts in a Changing World*<sup>6</sup> is a statewide plan designed to guide strategic biodiversity conservation in Massachusetts over the next decade by focusing land protection and stewardship on the areas that are most critical for ensuring the long-term persistence of rare and other native species and their habitats, exemplary natural communities, and a diversity of ecosystems. Approximately 227,060 acres, or 63%, of the 21-Town region is designated as BioMap2 Core Habitat and/or Critical Natural Landscape (CNL), representing 11% of these areas in the State.

Building on *BioMap2*, MassWildlife's (Massachusetts Division of Fisheries and Wildlife) Key Sites Initiative identifies a unique sub-set of *BioMap2* lands that represent the Commonwealth's most significant natural areas. In the 21-Town region, 29,627 acres, or 8% of the total area, have been identified as Key Sites. These areas are a combination of rare species "hotspots"; have the best occurrences of highest priority species and natural communities; and include the most diverse forest cores in the State.<sup>7</sup>

The Massachusetts Executive Office of Energy and Environmental Affairs has targeted ten large, un-fragmented ecosystems across the State as a focus for conservation funding in order to protect the State's most unique large habitats. These Habitat Reserves include a mix of private and public lands consisting of mountain tops, wilderness areas, sustainably managed forests and forest reserves, and wild rivers. The 21-Town region hosts four of the ten reserves - the Northern Taconics, Mohawk/Savoy/Dubuque, Mount Greylock, and Chalet - which encompass 44% of the region.

The forests play an integral role in supporting the water resources in the region. The Deerfield River is generally considered to be one of the most pristine rivers in Massachusetts, and is home to a large variety of aquatic and wildlife species. Many of the streams and rivers in the Deerfield River and Hoosic River Watersheds are



*Forest play an integral role in supporting the region's water resources, including the Cold River in Charlemont.*

<sup>6</sup> [http://www.mass.gov/dfwele/dfw/nhesp/land\\_protection/biomap/biomap\\_home.htm](http://www.mass.gov/dfwele/dfw/nhesp/land_protection/biomap/biomap_home.htm).

<sup>7</sup> <http://www.mass.gov/eea/agencies/dfg/dfw/wildlife-habitat-conservation/key-sites-protecting-our-investment-in-public-land.html>. Forest Cores identifies the best examples of large, intact forests that are least impacted by roads and development, providing critical "forest interior" habitat for numerous woodland species. Forest core minimum sizes range from about 500 acres in eastern Massachusetts and major river valleys, to over 2,000 acres in the western Massachusetts highlands.





*Many farms in the region include open farmland and woodlots, important for a farm's viability.*

known for their excellent trout fishing opportunities.<sup>8</sup> Surface waters, including ponds and lakes, and underground aquifers provide residents and businesses in the region with clean drinking water.

The majority of the region is made up of prime forest soils, which is land that has been rated as being very productive for growing timber based on a high site index for red oak or white pine.<sup>9</sup> In addition, 19% of the region is identified as prime farmland, mostly in the river valleys where rich alluvial soils have been deposited for thousands of years. Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for economically producing sustained high yields of crops when proper management and acceptable farming methods are applied.

The region contains ancient deposits of marble and limestone, which once supported several quarries, including an abandoned marble mine at the Natural Bridge State Park in North Adams. The park features the Natural Bridge, a geological formation which is the only bridge in North America created by the erosive forces of water. The exposed marble near the bridge was formed over 500 million years ago. According to geologists, the marble was carved into an arch by the force of glacial melt water over 13,000 years ago and is one of the best places in New England to illustrate the effects of glaciation.

The melting of the glaciers also formed another unique geological feature in the region. The Glacial Potholes in Shelburne Falls are one of the largest known concentrations of glacial potholes in the country. Over fifty potholes, ranging in size from six inches to thirty-nine feet, were formed by the whirlpool action of water and gyrating stones during the glacial age. They were created beginning 14,000 years ago, when flooding and receding waters of the Deerfield River eroded the underlying gneiss rocks, and have continued to form and change ever since.<sup>10</sup>

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<sup>8</sup> *Mohawk Trail Scenic Byway Corridor Management Plan*. Berkshire Regional Planning Commission and Franklin Regional Council of Governments. June 2002.

<sup>9</sup> See Mass GIS for more information on the definition of Prime Forest Soils: <http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/primeforest.html>.

<sup>10</sup> *Mohawk Trail Scenic Byway Corridor Management Plan*. Berkshire Regional Planning Commission and Franklin Regional Council of Governments. June 2002.

## Summary and Key Findings

- Massachusetts' most rural area, the 21-Town region contains diverse historic, scenic, and natural beauty and a rich history of working landscapes. While the region's economy has struggled in recent decades, the area's resources and preserved sense of place provide a strong backbone for building a sustainable rural economy.
- The 21-Town region is approximately 82% forested. The varied topography of the region creates a convergence of different forest types within a small geographic area, providing a unique opportunity for research and demonstration forestry that could be instructive to many other areas of the eastern United States.
- Bordered by the Green Mountain National Forest to the north, the region's forests contribute to an even larger forest block that supports biodiversity and wildlife habitat, and includes the headwaters for the Deerfield, Hoosic, and Westfield Rivers. Much of the remaining old growth forest in Massachusetts is located in the 21-Town region, and geologic features such as the Glacial Potholes in Shelburne Falls and the Natural Bridge in North Adams, add to the uniqueness of the area.



## Chapter Three: Public Participation

Public participation and input was a key element in the Mohawk Trail Woodlands Partnership project. Press releases in newspapers and flyers posted throughout the 21-town region were employed to encourage high turn-out at meetings. Members of the public attended regional and community information sessions. The project team also conducted meetings with municipal officials, key stakeholder groups and the project Advisory Committee. Public input was obtained at different stages in the planning process, including project initiation and development. Public input shaped the strategies and recommendations, determined the level of interest and gauged support for a potential federal designation by community leaders, residents, natural resource-based businesses, foresters and private landowners.

### Project Initiation

The public participation process began in November 2013 with two sub-regional meetings; one each in Berkshire and Franklin Counties. These meetings were followed by community meetings in each of the municipalities in the 21-town area<sup>1</sup> in winter and spring of 2014.

### Sub-Regional Meetings

A Berkshire County public information session was held on November 19, 2013 at McCann Technical School in North Adams, Massachusetts. A Franklin County session was held on November 20, 2013 at the Shelburne-Buckland Community Center in Shelburne, Massachusetts. Members of the project team presented information about the project background, key concerns, and possible features of any potential federal designation. In addition, there was an opportunity for questions and community input. To focus the community input, attendees were requested to respond to specific questions such as how a designation might impact the local forest industry and



*Berkshire East ski lodge, constructed using local lumber, was the site of this project's Advisory Committee meetings.*

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<sup>1</sup> The Town of Peru joined the project in October 2015, and was not included in the 2014 community meetings.

municipalities, what types of technical assistance is needed by forest landowners, and what specific elements should be included in the proposal.

In addition to numerous questions about the specifics of the proposal, several themes emerged from those meetings. Some of those themes are highlighted below.

**Key concerns:**

The following key concerns were cited:

- The loss of local tax revenue for land in Federal or State ownership
- Potential unforeseen impacts of a Federal Designation on working forests and local economies
- The impact on municipal services such as road maintenance and emergency response services for visitors
- The lack of reliable Payments in Lieu of Taxes (PILOT) to support town services for existing publicly owned lands
- The need for the process to be locally driven and supported
- The need for clarity on actual incentives or support that could be provided by U.S. Forest Service and/ or the State
- The need for the State to better manage and maintain their own forests and recreational facilities
- The need for reduced regulations to support sustainable forestry
- The need for Conservation Restrictions to be flexible
- The need for towns to be able to review and comment on any legislation proposed for the Federal Designation to determine if they want to participate

**Key interests:**

The following key interests were cited:

- The potential for increased State and Federal dollars to support forest conservation and natural resource based businesses
- The opportunity to conserve forests and the rural character of the region
- The opportunity to increase forestry activity and wood product processing, particularly for low grade wood
- The opportunity for research to help improve forestry and identify new manufacturing technologies related to forestry
- The opportunity for improved marketing of local wood products
- The opportunity to increase sustainable recreational tourism
- The opportunity to improve the financial stability of rural towns
- The opportunity to use local wood via a new pellet plant to heat schools, public buildings and residences and create jobs
- The opportunity for forest landowners to get technical and financial assistance to do forest improvement projects
- The opportunity for towns to work together

**Community Meetings**

Public meetings were held in 19 of the 21 municipalities<sup>2</sup> in the proposed project area. The purpose of the meetings was to present the concept, explore potential benefits, present highlights of proposed key criteria and receive input. Staff from the Franklin Regional Council of

<sup>2</sup> The Town of Peru joined the project in October 2015, and was not included in the 2014 community meetings.

Governments and Berkshire Regional Planning Commission presented information about the project background, outlined key potential features of the project, fielded questions and received public comments. Maps of each municipality were also presented showing recreational resources, permanently and temporarily (Chapter 61) protected open space and important environmental resource areas. Based on input from the earlier sub-regional sessions, key elements outlining the framework of the proposal were presented. The key elements that were discussed at the community meetings are shown below. Input obtained on these items helped shape the final proposal. Hand-outs of these maps and questions posed by the project team were distributed to meeting attendees. Attendees were encouraged to comment at the meeting and via the hand-outs. Key elements proposed at Community Meetings:

- **Opt-In Provision:** All 21 municipalities in the proposed area would be eligible for participation but would need to “opt in” in order to receive incentives and to allow private landowners to access funding for Conservation Restrictions or programs.
- **Land Remains in Private Ownership with Payments for Conservation Restrictions:** Land would remain in private ownership. Landowners wanting to conserve their land would be eligible for State and Federal payments for forest Conservation Restrictions. These payments would be made to willing sellers only. There would be no eminent domain power and no Federal right of first refusal.
- **A Maximum Federal “Footprint”:** If the U.S. Forest Service were to own land, for instance for a demonstration forest, visitor center and/or campground, a maximum amount of land that the U.S. Forest Service could own would be established.
- **Notification Process for Municipalities:** If new Conservation Restrictions were placed on forested land funded by State agencies and/or the U.S. Forest Service, municipalities would be notified prior to the placement of that restriction.
- **Town Approval Process above a Maximum Percentage of Conserved Land:** Those municipalities that contained a defined percentage of land already conserved would be able to approve or deny new Conservation Restrictions funded by the U.S. Forest Service.
- **Flexible Options for Conservation Restrictions:** Conservation Restrictions would contain options so that private property owners could specify whether land conserved would be for working forests, habitat protection, passive recreation, or some combination of those activities.
- **Conservation Restrictions to be Held by the State, Town, or Local Land Trust:** Conservation Restrictions could be held by the State, towns and/or local land trust (not the U.S. Forest Service) and would be guided by existing State forestry regulations with no right of external appeals for timber harvesting.
- **Provision of Tax Incentives or Technical Assistance:** There could be a provision for tax incentives or technical assistance programs for sustainable forestry practices to private landowners and/or local foresters.

- **Reliable Payments to Municipalities:** There could be a provision for reliable payments to municipalities (not the current State Payment in Lieu of Taxes [PILOT] program) funded by the State and/or U.S. Forest Service to participating municipalities to support provision of services including such items as road maintenance and emergency response.
- **Improved Tourism Infrastructure:** There could be a provision for additional incentives or funding by the State and U.S. Forest Service to improve tourism infrastructure (i.e. recreational trails, access roads and campground facilities), collaborative marketing of the region, tourism training, and other initiatives.

The community meetings were held between January and April of 2014. Invitations were sent to municipal officials and interested parties. In addition, meetings were announced through the press and on websites. The schedule of meetings follows:

The community meetings produced a wide range of comments and suggestions. Overall, there was general agreement with the key elements presented at the meetings. Many of the comments were directed at presenting greater detail or specific refinement of those elements. In addition to the key elements presented at the meetings, greater emphasis was placed on the following items:

- The promotion of forestry, forestry-related manufacturing (e.g. wood pellet facility) and / or research for new technologies related to forest-based products by providing State and Federal incentives (e.g. tax credits, grants, etc.);
- The provision of financial support by the State and/or Federal agencies for conversion of oil based heating systems in municipal buildings and schools to wood chip or pellet based energy efficient heating systems to increase the market for low grade wood and to decrease municipal and school operating costs;
- Consider disallowing any Federal land ownership;
- The development of a combined visitor/education/technical resource center and a showcase for local wood products;
- A public/private partnership to create a demonstration forest to highlight sustainable forestry in the region; and
- The establishment of a local advisory committee to guide this effort moving forward.

Franklin County Community Meetings		Berkshire County Community Meetings	
Charlemont	1/28/2014, 4/29/2014	Adams	3/10/2014
Buckland	2/3/2014	Williamstown	3/17/2014
Conway	2/11/2014	New Ashford	3/18/2014
Shelburne	2/26/2014	Cheshire	3/24/2014
Heath	3/5/2014	North Adams	3/31/2014
Ashfield	3/12/2014	Florida	4/7/2014, 4/30/2014
Rowe	3/18/2014	Windsor	4/17/2014
Leyden	3/25/2014	Savoy	4/23/2014
Hawley	4/1/2014	Clarksburg	No meeting held per Select Board office
Colrain	4/9/2014	Peru	No meeting held, not yet participating



## Project Development

Throughout the course of the project, public input and conversations with key forestry stakeholders shaped the strategies and recommendations of the project. As requested during the community meetings, a Mohawk Trail Woodlands Partnership Advisory Committee was formed to oversee all aspects of the project. Each town has a representative appointed by the Select Board or Mayor and there are eight regional appointments representing forestry, land conservation, economic development and the environment. The Advisory Committee has met quarterly during the development of this plan. The Committee has four principal responsibilities:

- review and provide comments on the plan being prepared by the FRCOG, BRPC and the FLT which will include recommended projects and strategies to support forest conservation and economic development;
- review and provide input on the goals of the project and key elements of any Federal or State designation;
- communicate the progress of the project to the Select Board or regional organization they represent including the recommended projects and strategies; and
- assist with the drafting of State legislation if enough towns would like to proceed with a Federal designation based upon the key elements developed.

A full list of the Advisory Committee members, meeting minutes and agendas are included in Appendix E.

### **Advisory Committee Meetings**

**September 17, 2014** – Primary meeting agenda items: Review of the Role of Advisory Committee, Discussion of Project Goals, Discussion of Project Framework, Review of Project Plan Report and a report by the Department of Energy Resources about their Heating Initiative Study

**November 19, 2014** – Primary meeting agenda items: Approval of Project Goals, Discussion of Conservation Restriction elements, Continued Discussion of Framework Elements, Discussion of Economic Development Impacts

**January 6, 2015** – Primary meeting agenda items: Continued Discussion of Economic Development Impacts, Continued Discussion of Conservation Restriction Elements, Continued Discussion of Framework Elements

**February 11, 2015** – Primary meeting agenda items: Review and Discuss Study Area and Public Participation Draft Chapters, Finalize Key Framework Elements and the Model Conservation Restriction

**March 31, 2015** – Primary meeting agenda items: Review and Discuss Municipal Services and Tax Impacts, Benefits of Partnership with the U.S. Forest Service and the State, Framework, and Projects and Recommendations Chapters, Discuss Potential Special Designation, Vote on Final Drafts of Study Area, Public Participation, and Economic Development Impacts Chapters

**May 19, 2015** – Primary meeting agenda items: Presentation of Final Draft Model Conservation Restriction, Discussion of Priorities for Forest Conservation and Special Designation, Review and Vote on Final Drafts of Municipal Services and Tax Impacts, Benefits of Participation with the U.S. Forest Service, Framework and Project and Recommendations chapters, Review and Discuss Draft Management Structure

**October 20, 2015** – Primary meeting agenda items: Request by the Town of Peru to join the MTWP Program, Review and Vote on Final Drafts of Municipal Services and Tax Impacts, Benefits of Partnership with the U.S. Forest Service and the State, Framework, and Projects and Recommendations Chapters, Presentation and Discussion of the Draft Business Plan, Presentation and Discussion of the Draft Governance Structure

Over the summer of 2015, the project team worked with a sub-committee of the Advisory Committee to develop a proposed governance structure that would include the participation of towns that opt-in to the designation. At its October 20, 2015 meeting, the Advisory Committee voted to adopt this plan.

### **Project Advancement**

Sub-regional meetings (one each in Berkshire and Franklin County) will be held in fall 2015 to present the final draft of the plan, its findings and recommendations, and receive feedback. The sub-regional meetings will be followed by meetings with each community's Select Board. If

enough communities are interested in pursuing a Federal designation, the project team and Advisory Committee will work to draft State legislation. Special legislation would need to be drafted and filed by our State Legislative Delegation to receive a Special Federal designation. If State legislation is approved, passage of Federal legislation would be needed to create the Special Designation accepting the requirements of the State legislation.





## Chapter Four: Economic Development Impacts

The *Massachusetts Climate Change Adaptation Report* notes that each acre of forest in the State provides approximately \$1,500 annually in economic value from forest products, water filtration, flood control and tourism. This indicates that forests contribute more than \$440 million in value to the 21-Town region per year.

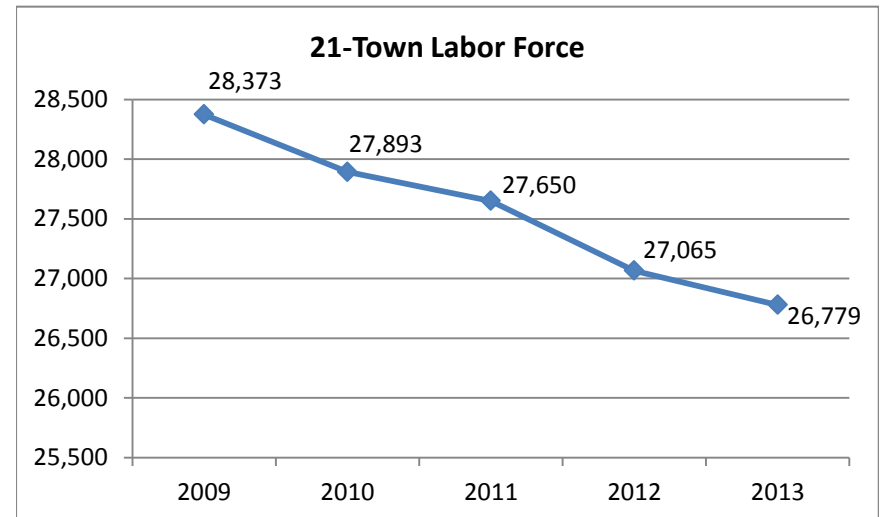
Responses to public outreach for the Mohawk Trail Woodlands Partnership Project have shown strong support for natural resource-based economic development that is consistent with the 21-Town region's rural character. More local jobs are needed to help replace lost jobs within the manufacturing sector in recent years, and to retain more of the region's young people to work and raise families in the places where they grew up. It was noted at one community meeting that even the addition of a handful of jobs could provide a huge benefit to a small town. This project provides an opportunity to create rural economic development initiatives that will benefit the 21-Town region, which could also serve as a model for other rural regions.

### Economic Overview of the 20-Town Region

Overall the 21-Town region has experienced a decline in population, jobs, and its labor force in recent years. The 21-Town region experiences higher unemployment rates and lower per capita incomes than Franklin and Berkshire Counties and the State. Tables with data for each individual town can be found in the Appendix.

As discussed in Chapter 2, between 2000 and 2010, the 21-Town region experienced a 4.8% decrease in total population.<sup>1</sup> The 21-Town region has a labor force, defined as those ages 16 and over whom are either employed or actively seeking employment, of 26,779. Between 2009 and 2013, the labor force in the region declined

Figure 4-1: 21-Town Labor Force, 2009-2013



Source: Massachusetts Executive Office of Labor and Workforce Development, Labor Force and Unemployment Data.

<sup>1</sup> 2000 and 2010 U.S. Decennial Census.

steadily by 1,594 people, or 5.6% (Figure 4-1).<sup>2</sup> Average monthly employment within the 21 towns has also fallen in the last decade, with a loss of approximately 1,077 jobs between 2001 and 2013.<sup>3</sup>

Per capita income in the 21-Town region is less than in Berkshire and Franklin Counties and the State (Table 4-1).<sup>4</sup> The average weekly wage for all industry sectors in the 21-Town region is slightly higher than the Franklin County average, and lower than the Berkshire County average. Wages in the region are 60% that of the State average weekly wage.<sup>5</sup> The unemployment rate in the 21-Town region in 2013 was higher than both Berkshire and Franklin County and the State.<sup>6</sup>

**Table 4-1: Income, Wages, and Unemployment Rate in the 21-Town Region, Compared to Berkshire and Franklin Counties and the State**

Geography	Per Capita Income (2012)	Average Weekly Wage (2012)	Unemployment Rate (2013)
<b>21-Town Region</b>	<b>\$27,728</b>	<b>\$706</b>	<b>7.5</b>
Berkshire County	\$28,939	\$771	7.1
Franklin County	\$28,841	\$700	6.6
Massachusetts	\$35,485	\$1,171	7.1

*Source: 2008 - 2012 American Community Survey Five Year Estimates; Massachusetts Executive Office of Labor and Workforce Development, ES-202 Data and Labor Force and Unemployment Data.*

## Forest Products

The forest-products industry includes jobs in the areas of forestry, logging, primary manufacturing (such as lumber and veneer products), and secondary manufacturing (finished consumer products). The industry also includes paper manufacturing, which utilizes pulp; and wood for energy for heating and/or electric energy production.

### Forestry, Logging, Wood Product and Paper Manufacturing

Forestry and forest products are an important part of the regional and State economy, yet trends point to more wood being processed out of State, with sawmills and other primary processing facilities declining in number and jobs. At the same time forestry and logging jobs have remained steady. A steep decline in paper manufacturing has resulted in a loss of local markets for low grade wood. Losses in employment have been more severe in Berkshire and Franklin Counties than the State.

<sup>2</sup> Massachusetts Executive Office of Labor and Workforce Development, Labor Force and Unemployment Data.

<sup>3</sup> Massachusetts Executive Office of Labor and Workforce Development, ES-202 Data.

<sup>4</sup> 2008 - 2012 American Community Survey Five Year Estimates.

<sup>5</sup> Massachusetts Executive Office of Labor and Workforce Development, ES-202 Data.

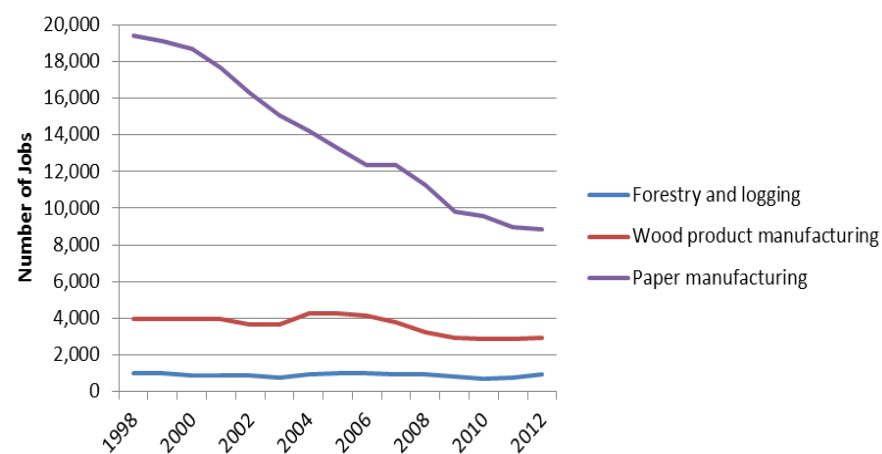
<sup>6</sup> Massachusetts Executive Office of Labor and Workforce Development, Labor Force and Unemployment Data.



### State-Level Impacts

- Between 2001 and 2013, the number of businesses within the forestry and forest products sectors declined by 30%, from 537 to 378. The loss was seen in the wood product manufacturing and paper manufacturing sectors, while forestry and logging remained steady, and support activities for forestry<sup>7</sup> grew from four establishments in 2001 to 24 in 2013.<sup>8</sup>
- In 2012, forest products provided Massachusetts with 12,707 jobs, consisting of 961 jobs in forestry and logging, 2,906 jobs in wood products manufacturing, and 8,840 jobs in paper manufacturing.<sup>9</sup>
- Since 1998, jobs within the paper manufacturing sector declined by 55%, and by 26% in the wood product manufacturing sector. Combined, an estimated 11,633 jobs have been lost within these sectors between 1998 and 2012. Forestry and logging jobs experienced only a 3% decline during the same period (Figure 4-2 on previous page).<sup>10</sup>
- The total annual wages and salaries earned in 2012 was approximately \$646 million, with \$4.2 million in the forestry and logging sector, \$103 million in the wood products manufacturing sector, and \$539 million in the paper manufacturing sector.<sup>11</sup>
- Gross Domestic Product (GDP) in the wood products and paper products sectors, which includes value added products, equaled \$897 million in 2012 (in current dollars). GDP for paper products peaked in 1999 at \$1,511 million, and has since dropped by 50% to \$757 million. GDP for wood products hit a low in 2009 of \$106 million, but has since increased steadily to \$140 million, close to 1998 numbers.<sup>12</sup>
- The value of industry shipments (the total value of all products produced and shipped, essentially sales) in 2011 was \$451 million for wood product manufacturing and \$2,896 million for paper manufacturing, for a total value of industry shipments of \$3,347 million. In the period from 2005 through 2011, annual sales for paper products peaked in 2007 at \$4,068 million, while wood products peaked in 2006 at \$906 million.<sup>13</sup>

Figure 4-2: MA Forestry and Forest Product Jobs, 1998-2012



Source: U.S. Bureau of Economic Analysis.

<sup>7</sup> This industry comprises establishments primarily engaged in performing particular support activities related to timber production, wood technology, forestry economics and marketing, and forest protection. These establishments may provide support activities for forestry, such as estimating timber, forest firefighting, forest pest control, and consulting on wood attributes and reforestation.

<sup>8</sup> Massachusetts Executive Office of Labor and Workforce Development, ES-202 Data.

<sup>9</sup> U.S. Bureau of Economic Analysis.

<sup>10</sup> Ibid.

<sup>11</sup> Ibid.

<sup>12</sup> Ibid.

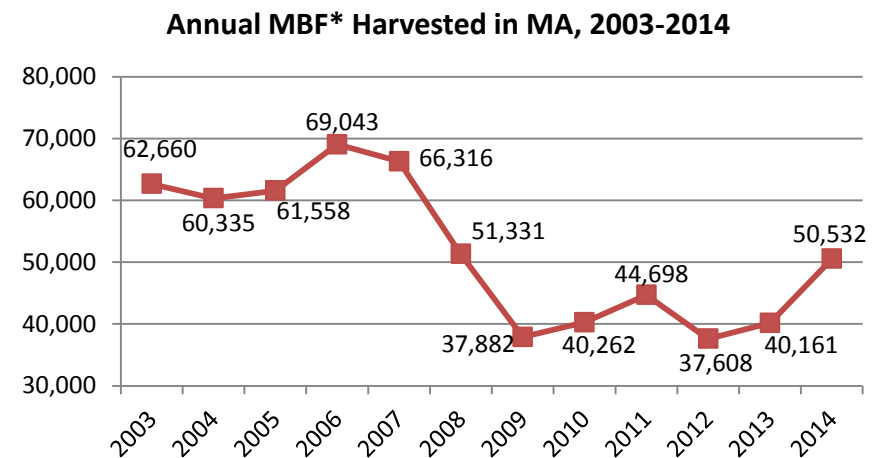
<sup>13</sup> U.S. Census Bureau Annual Survey of Manufactures.

The 2010 Massachusetts Forest Action Plan notes that when wood is shipped out of State, it only employs two local jobs – a forester and a logger – whereas local processing and sale of wood products increases the economic benefit to the local and regional economy. Since the 1970s, Massachusetts’s sawmill production has declined steadily, from 130 sawmills in 1973 to 49 in 2006.<sup>14</sup> A 2007 survey of licensed harvesters in Massachusetts revealed that the majority (roughly 2/3rds) of logs harvested in Massachusetts are sold out-of-state for processing.<sup>15</sup> At the same time, only approximately 2% of the wood used in the State is actually grown, harvested, and manufactured within Massachusetts, while the remaining 98% of wood products consumed in Massachusetts are imported from out of State.<sup>16</sup>

There are a number of factors that have likely contributed to the decline in the forest products industry in Massachusetts,<sup>17</sup> including:

- Globalization and competition from Canada – For certain products, such as 2x4s and other dimension lumber, Massachusetts’ mills have difficulty competing with the high production mills located in northern New England and Canada. In Canada most timber lands are owned by the government.
- High costs of doing business – Insurance costs are high for foresters, loggers, and sawmills. Energy costs represent a severe hurdle for Massachusetts sawmill owners. Smaller mills can’t invest in equipment upgrades to compete with the larger high production mills out of state.
- Small parcels and a diverse private landownership pattern create challenges to forestland management – There is a need to conduct additional outreach, education, and coordination among many landowners in order to achieve higher levels of production.

**Figure 4-3: Harvesting Trends in Massachusetts, FY2003 – FY2014**



\* Million board feet.

Source: MA Department of Conservation and Recreation cutting plans.

<sup>14</sup> Massachusetts Sawmill Directory, 2006. MA Department of Conservation and Recreation Marketing and Utilization Program.

<sup>15</sup> *Finding and Removing Barriers to Sustainable Harvest and Primary Processing of Massachusetts Native Woods*. Damery, Dr. David T., University of Massachusetts, Amherst. March 2008.

<sup>16</sup> *Massachusetts Forest Action Plan: An Assessment of the Forest Resources of Massachusetts*, UMass Amherst and MA DCR, June 2010.

<http://www.forestationplans.org/states/massachusetts>.

<sup>17</sup> Summarized from *Finding and Removing Barriers to Sustainable Harvest and Primary Processing of Massachusetts Native Woods*. Damery, Dr. David T., University of Massachusetts, Amherst. March 2008, and from input from the Massachusetts Department of Conservation and Recreation, January 2015.

- Need for more landowner and public education on the benefits of forest management and greater public support for sustainable harvesting.
- Lack of local markets for low value and small diameter wood has been a persistent problem for many years – Local markets for low grade and small diameter wood are needed to help support sustainable long-term forest management in the State. Pulp markets helped the situation starting roughly 25 years ago although this market has declined over the last decade. Wood going into pellet production has improved the situation recently. However, many of the markets for low grade wood are further from Massachusetts than is cost effective to access so additional demand for low grade wood is needed in the MTWP region.
- The recent economic recession – Decline in construction activity impacted harvesting operations and forestry businesses, which have not recovered to pre-recession levels. An aging logger workforce without enough young people entering the profession is also a concern for the future of the industry.

According to the Massachusetts Department of Conservation and Recreation, much has changed for the forestry industry in Massachusetts since the end of the recession. All markets and prices are strong and demand is very high. Firewood markets are particularly strong which helps support forest management. Roundwood and chips going into pellet production is also very strong. Statewide harvesting data (Figure 4-3) shows a decline in harvesting of roughly 45% between the years of 2006 (pre-recession) to 2009. Between 2012 and 2014, harvesting has increased steadily to 2008 levels.

### County-Level Impacts

The decline in local wood processing has translated to fewer jobs in wood product manufacturing in Berkshire and Franklin Counties. In 2013, there were a total of 22 wood product and paper manufacturing businesses in the two counties, which provided on average 1,417 jobs (Table 4-2). Information on forestry and logging businesses was not available at the county level due to suppression of data for confidentiality reasons. Employment within the wood product and paper manufacturing sectors represent 2% of all employment within the two counties, a higher percentage than within the state, where the two sectors represent 0.3% of all employment.

**Table 4-2: 2001, 2007, and 2013 Number of Establishments and Average Monthly Employment, Berkshire and Franklin Counties**

Sector	2001	2007	2013*	2001-2013 Change	2001-2013 % Change
<b>Number of Establishments</b>					
Wood Product Manufacturing	28	15	12	-16	-57%
Paper Manufacturing	21	18	10	-11	-52%
Total	49	33	22	-27	-55%
<b>Average Monthly Employment</b>					
Wood Product Manufacturing	297	246	150	-147	-49%
Paper Manufacturing	2,284	1,591	1,267	-1,017	-45%
Total	2,581	1,837	1,417	-1,164	-45%

*\* 2011 establishment and average monthly employment was used for Berkshire County Wood Product Manufacturing. 2012 and 2013 data were suppressed for this sector in Berkshire County. Source: Massachusetts Executive Office of Labor and Workforce Development, ES-202 Data.*

The number of businesses and jobs within these two sectors has declined at a greater rate than the State in the last decade. A major difference between the State and the counties is within the wood product manufacturing sector. Jobs in the State declined by roughly 26% since 1998, while jobs in this sector in the two counties declined by 49% since 2001. Overall the two counties have seen a loss of 1,164 jobs in wood product and paper manufacturing since 2001. The recent recession likely contributed to these losses, however it appears that both the number of businesses and the number of jobs in these sectors were already in decline prior to the onset of the recession in 2008.

As of 2006, the Massachusetts Sawmill Directory reported that there were 11 sawmills in Franklin County, the most out of any county in the State, and three sawmills operating in Berkshire County. Four sawmills are listed for the 21-Town region, with a total annual production of 5,631 million board feet (MBF). One portable sawmill was listed for the 21-Town region, and one dry kiln, with a capacity of 1.6 MBF.

Agriculture is an important sector of the economy in Berkshire and Franklin Counties, and woodlots are a vital part of many farms. In 2012 there were 140 farms selling forest products (not including Christmas trees, short rotation woody crops, or maple syrup), an increase of 35 since 2007, with total income from these sales amounting to \$2,308,000.<sup>18</sup> Within the 21-Town region, wood products offered by farms include firewood, framing timbers, siding, and lumber.<sup>19</sup>

Public outreach for this project highlighted some of the concerns and needs of local forest product businesses, including: the need for more processing facilities in the region; assistance for locally-owned sawmills to upgrade equipment and meet regulations; assistance for businesses to upgrade equipment to conduct low-impact logging; the need to develop more local markets for low-grade wood; and the need to develop local markets for wood products and provide marketing assistance to businesses.

### ***Value of Current Timber Stands and Timber Harvest Trends***

Timberlands (i.e. capable of growing more than 20 cubic feet per acre per year, and excluding forest reserves) in Franklin and Berkshire Counties have an estimated value of \$508 million, representing 30% of the total value of private timberlands in the State. Each year, the new growth in these



*The decline in local wood processing has translated to fewer jobs in wood product manufacturing in Berkshire and Franklin Counties.*

<sup>18</sup> United States Department of Agriculture (USDA) 2007 and 2012 Census of Agriculture.

<sup>19</sup> From a search of farms on the Community Involved in Sustaining Agriculture (CISA) and Berkshire Grown websites: <http://www.buylocalfood.org/>; <http://berkshiregrown.org/>.

timberlands is valued at \$16.2 million.<sup>20</sup> Privately-owned forests in the 20-Town region have an estimated total value of \$450 million.<sup>21</sup>

Each year, Massachusetts forests grow more than they are harvested. As of 2012, there were approximately 1,585,000,000 trees in Massachusetts and a growth to removal ratio of 2.33.<sup>22</sup> In 2012, the volume of growing-stock trees increased by 74,529,000 ft<sup>3</sup>.<sup>23</sup> In the 21-Town region, the amount of wood harvested, according to cutting plans filed with the Massachusetts Department of Conservation and Recreation, has declined over the last nine years (Figure 4-4). The amount of wood annually harvested hit a low in 2010 during the Recession at 3,749 MBF. Harvesting has increased since 2010, but to less than half of the total volume harvested in 2006. Wood harvested from the 21-Town region during the last nine years accounted for 14% of all wood harvested in the State.

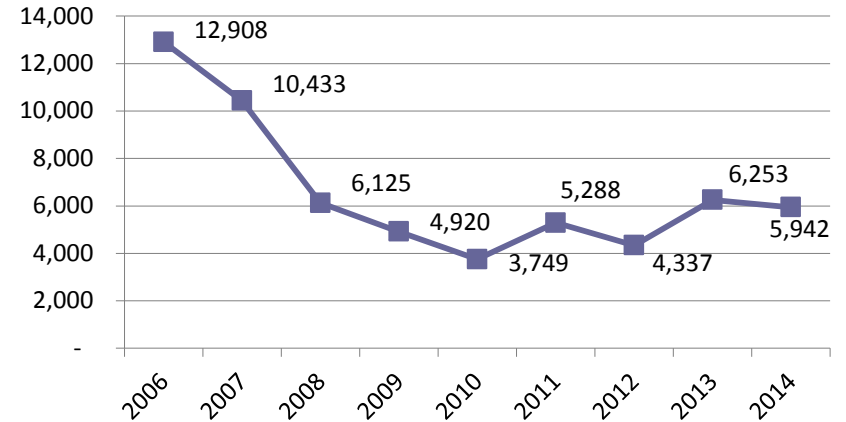
### Wood Energy

Currently, an estimated 11% of homes (2,375) in the 21-Town region heat with wood, compared to 14% in Franklin County and 5% in Berkshire County. Roughly 44% (9,332) of households use fuel oil to heat their homes, the most common type of home heating fuel used in the region.<sup>24</sup> Current wood heat businesses in the region include firewood producers and businesses that sell, install, and/or service wood heating appliances such as wood stoves, pellet stoves, and pellet boilers. Some loggers may also sell wood to pellet plants, the closest located in Jaffrey, New Hampshire. The wood used for pellets is not cost-effective to ship long distances, and typically pellet mills procure wood from within a 60 – 90 minute drive of the wood pellet manufacturing facility.

Participants at the community meetings expressed interest in converting school buildings and municipal buildings to energy efficient wood heat systems, in order to save towns money on heating costs. There was also support for conducting a feasibility study for siting a pellet plant

**Figure 4-4: Harvesting Trends in the 21-Town Region**

**Annual MBF\* Harvested in the 21-Town Region, FY2006-2014**



\* Million board feet.

Source: MA Department of Conservation and Recreation cutting plans.

<sup>20</sup> Forest Inventory and Analysis Program, U.S. Forest Service.

<sup>21</sup> Berkshire Regional Planning Agency GIS analysis, 2014.

<sup>22</sup> American Forest and Paper Association.

<sup>23</sup> *Massachusetts Forest Action Plan: An Assessment of the Forest Resources of Massachusetts*, UMass Amherst and MA DCR, June 2010.

<http://www.forestationplans.org/states/massachusetts>.

<sup>24</sup> 2008-2012 American Community Survey five-year estimates.



within the region that would utilize local wood and in turn provide a local fuel source for communities. A feasibility study for a pellet plant is currently underway for the 21-Town region through the Massachusetts Department of Energy Resources (DOER).

## Potential Impacts of Economic Development in the Forest Product Industry

### ***Increasing Sustainably Harvested and Processed Wood in the Region***

Increasing the amount of wood sustainably harvested and processed in the region would result in more businesses and jobs within the forestry, logging, and primary processing sectors. This would in turn provide additional tax revenue to towns. Additionally, sustainable timber harvests can be a valuable source of income for landowners, thereby supporting continued ownership and stewardship of the land.

Poor harvesting practices such as high-grading, which removes the most valuable trees and leaves the rest, reduces the future value for wood production, reduces growth rates, damages the forest aesthetics, increases vulnerability to disturbances such as invasive species, and reduces the long term ability of the forest to sequester carbon.<sup>25</sup> Sustainable forestry means keeping forests healthy, dynamic, and available for future generations. It addresses all of the resources provided by forests, including habitat, clean water and air, recreation, timber, jobs, and scenic beauty, and seeks to keep viable all of these options and opportunities.<sup>26</sup>



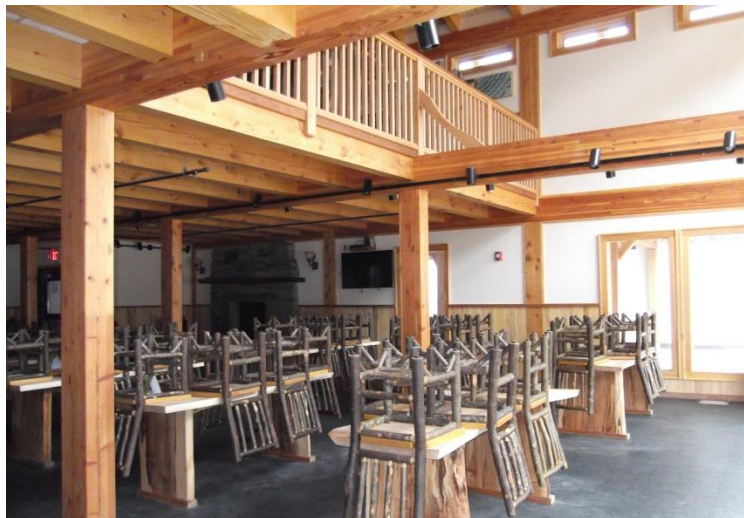
*Sustainable timber harvests can be a valuable income source for landowners.*

According to the Massachusetts Climate Change Adaptation Report, climate change impacts to New England forests could include changes in forest structure, more frequent droughts associated with forest fires, and invasive insects and diseases. While active management is not suitable for all lands, sustainable forestry can increase resilience to climate change through improving wildlife habitats, eliminating invasive

<sup>25</sup> *Climate Change, Carbon, and the Forests of the Northeast*. Robert T. Perschel, Evans, Alexander M., and Summers, Marcia J. Forest Guild, December 2007; *High Grade Harvesting: Understand the Impacts, Know your Options*. Paul Catanzaro, Anthony D'Amato, University of Massachusetts Amherst.

<sup>26</sup> *Diameter Limit Cutting and Silviculture in Northeastern Forests: A Primer for Landowners, Practitioners, and Policy Makers*. USDA Forest Service, 2005; *What is Sustainable Forestry?* Peter J. Smallidge, NYS Extension Forester, Cornell Forestry Extension Program.

species, helping to control the spread of disease, and increasing the ability of forests to store carbon.<sup>27</sup> Having a healthy harvesting and processing infrastructure will help the region better respond to the changing conditions in the forests from climate change.



*Use of local wood for construction, such as that used at Berkshire East, supports local businesses and keeps money circulating in the local economy.*

### ***Increasing Local Markets for Wood Products***

Increasing the percentage of wood that remains in the State for consumption will support primary processing facilities such as sawmills that are set up to sell to local markets, and small businesses and craftspeople who sell finished consumer products locally, and will keep more dollars circulating in the local economy. The buy local movement has steadily grown in popularity in the region, and offers an opportunity to increase the production and sale of local wood products in Massachusetts.

If Massachusetts used more wood from its own forests, it would reduce costs and emissions associated with long-distance shipping, and reduce environmental impacts on regions where wood is being imported from, often with less environmental oversight than in Massachusetts.<sup>28</sup> There is a burgeoning “green” construction business sector in the region, which could tie into a buy

local movement for construction materials. The State Building Code allows for the use of ungraded native wood produced by registered mills in the building of one and two-story dwellings, barns, and sheds. Currently there are 13 registered native lumber producers in the 21-Town region.<sup>29</sup>

A need to develop local markets for low-grade wood was heard at a number of community meetings. This wood has little to no marketable value for lumber, and is not cost effective to ship long distances, necessitating the need for local markets. It can be used for firewood, pallets, wood pellets (see next section), and potentially for flooring and other products if local mills are set up to process small-diameter logs. Establishing more local markets for low-grade wood would help to support sustainable forestry, improve long-term timber management, increase the value of harvests and income to landowners, and support local jobs.

<sup>27</sup> Hines, S.J.; Daniels, A. 2011. Private Forestland Stewardship. (October 10, 2011). U.S. Department of Agriculture, Forest Service, Climate Change Resource Center. [www.fs.usda.gov/ccrc/topics/forest-stewardship/](http://www.fs.usda.gov/ccrc/topics/forest-stewardship/).

<sup>28</sup> *The Illusion of Preservation: A Global Environmental Argument for the Local Production of Natural Resources*. Mary M. Berlik, Kittredge, David B., and Foster, David R. Harvard Forest. Harvard University Press. 2002.

<sup>29</sup> See <http://www.mass.gov/eopss/consumer-prot-and-bus-lic/license-type/lumber-producers/native-lumber-producers.html> for the list of producers.



### ***Increasing the Use of Wood for Heating Buildings***

Converting buildings to high-efficiency wood heating systems can reduce fossil fuel use, heating costs, and greenhouse gas (GHG) emissions. If the wood is sourced locally, the impacts are even greater – local jobs are supported and more money stays within the local economy. It is estimated that with development support, the wood central heating market could reduce GHG emissions statewide by 500,000 tons and create over 2,000 jobs in Massachusetts by 2020.<sup>30</sup>

In FY 2012 and 2013, the Greenfield Fire Department saved an average of \$4,748, a 31% savings, by heating the 21,200 square foot fire station with wood pellets.<sup>31</sup> In the 2009-2010 heating season, 43 schools in Vermont saw on average a 46% savings from using wood heat, compared to oil. An equivalent of 1,425,948 gallons of oil was replaced, resulting in 15,650 tons of avoided CO2 emissions.<sup>32</sup> Feasibility studies for three elementary schools in the Mohawk Trail Regional School District showed a potential first year average fuel savings per school of \$22,091 by converting to pellet heating, and an average 30 year cumulative savings per school of \$1.5 million.<sup>33</sup>

The Northern Forest Center's Model Neighborhood Project in three communities in New Hampshire and Maine helps homeowners switch from oil to high efficiency pellet boilers. As of February 2012, impacts of the program include a total savings of \$152,057 on heating costs for homeowners, a net reduction in CO2 emissions of 881 tons, and a total of \$577,542 that continues to circulate in the local economy.<sup>34</sup>

Siting a wood pellet mill in the region to produce pellets with local wood could provide on average anywhere from 15 to 30 jobs, and support additional employment beyond the plant. One example is the Vermont Wood Pellet Co., located in North Clarendon, Vermont. Established in 2009 by a local entrepreneur and fifth-generation lumberman, the plant now employs 20. The company uses pulp grade pine logs from local sources, supporting an additional 50 local loggers and truckers.<sup>35</sup>

Because the wood used for pellets is chipped, this provides a market for poor-quality, low-value trees that otherwise are not marketable. Harvesting wood for pellets or chips typically adds another product to an existing harvest that removes other more valuable forest products.

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<sup>30</sup> *Massachusetts Renewable Heating and Cooling: Opportunities and Impacts Study*. Prepared for Massachusetts Department of Energy Resources and the Massachusetts Clean Energy Center. Meister Consultants Group, 2012.

<sup>31</sup> Personal communication, Carole Collins, Director of Energy and Sustainability, Town of Greenfield. October 22, 2014.

<sup>32</sup> Vermont Fuels for Schools Wood Fuel Survey Results for 2009-2010 Heating Season. The Vermont Department of Forests and Parks, Vermont Superintendents Association's School Energy Management Program, and the Biomass Energy Resource Center.

<sup>33</sup> Preliminary Feasibility Reports: Biomass Heating Analysis for Buckland Shelburne Elementary School, Colrain Elementary School, and Hawlemont Elementary School. Yellow Wood Associates, Inc. and Richmond Energy Associates LLC. 2012.

<sup>34</sup> Northern Forest Center website: [http://www.northernforest.org/default/rolledup\\_dashboard.html](http://www.northernforest.org/default/rolledup_dashboard.html).

<sup>35</sup> Vermont Wood Pellet Co. <http://www.vermontwoodpellet.com/>.

Having a local market for low-grade wood can also make improvement harvests, where low quality trees are removed to allow better-quality trees to grow faster, more financially feasible.

Potential impacts of harvesting wood for heating include the removal of certain types of low-value trees that provide important habitat, and impacts to soil health by removing too many leaves and branches, which provide the most nutrients to the forest soil. Impacts can be mitigated by following guidance from the Forest Guild and other sources. Additionally, the Massachusetts Department of Energy Resources (DOER) regulates harvesting of wood that is being taken to a facility that is generating electric power and seeking qualification to the Massachusetts Renewable Portfolio Standard (RPS) program.<sup>36</sup>

In 2016, DOER plans to study the potential air quality impacts of increased use of wood heating appliances in the 21-Town region as part of the Mohawk Trail Renewable Heat Initiative. Smoke from wood burning can be a significant contributor to air pollution and can pose a public health risk. Emissions from wood burning systems typically are higher than fossil fuel heating systems; however, utilizing state-of-the-art equipment can significantly reduce emissions and improve the efficiency of a system.<sup>37</sup> Establishing a “trade- in” program, offered periodically in Massachusetts, to replace older wood stoves with new stoves that have lower emissions is an important strategy to reduce air pollution. Since 1988, all indoor wood stoves and fireplace inserts sold in the United States have been subject to U.S. Environmental Protection Agency (EPA) emission standards. In 2014 the EPA proposed new, stricter emissions standards for wood and pellet stoves, as well as for residential wood furnaces, a category previously not regulated by the EPA.<sup>38</sup> For non-residential heating systems, Massachusetts currently regulates emissions for automated wood boilers of 3 MMBtu or greater, a size generally appropriate for regional school buildings, hospitals, community colleges, and other large structures. While smaller heating systems are not currently regulated, DOER has set strict standards for efficiency and emissions for all wood burning appliances that are funded through the Commonwealth of Massachusetts.

## Tourism

In 2012, visitors to Berkshire and Franklin Counties spent roughly \$413 million in expenditures, generating \$12 million in local tax receipts. The majority of spending occurred in Berkshire County, which attracts an estimated 2.6 million visitors a year. Travel-generated employment for both counties amounted to 3,750 jobs, with a total payroll of \$96 million. Tourism related expenditures and employment within the two counties represented approximately 3% of expenditures and employment statewide.<sup>39</sup> In a recent visitor survey conducted by the Berkshire

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<sup>36</sup> Harvesting Biomass from Your Woods: Make an Informed Decision. Paul Catanzaro, Kittredge, Dave, and Markowski-Lindsay, Marla. University of Massachusetts, Amherst.

<sup>37</sup> *Massachusetts Renewable Heating and Cooling: Opportunities and Impacts Study*. Prepared for Massachusetts Department of Energy Resources and the Massachusetts Clean Energy Center. Meister Consultants Group, 2012.

<sup>38</sup> The new regulations are still under review, and are expected to be finalized by March 2015. For more information see: <http://www2.epa.gov/residential-wood-heaters/proposed-new-source-performance-standards-residential-wood-heaters>.

<sup>39</sup> Massachusetts Office of Travel & Tourism (MOTT).

Visitors' Bureau, scenic beauty was the principal reason 88% of all visitors cited for having selected the region as their destination, and 42% of visitors engaged in some form of outdoor recreation during their stay.

The 21-Town region provides an array of outdoor recreation options for visitors and residents on State-owned lands, municipal, non-profit and land trust properties, and on private properties that allow for public access. Activities include bird watching, hiking, cross-country skiing, snowshoeing, hunting, snowmobiling, kayaking and canoeing, fishing, swimming, camping, mountain biking and off-road vehicles. Maintaining properties and balancing recreational use demands remain a challenge for State and other conservation agencies to sustain. Growing and enhancing the network of recreational offerings will require a strategy for ensuring maintenance is sustainable over the long term.



*The 20-town region is host to a number of outdoor recreation resources, such as the Appalachian Trail.*

The region is part of three long-distance hiking trails, including the Appalachian National Scenic Trail (AT), which sees 2-3 million visitors on its various stretches from Georgia to Maine each year. Recreation companies also contribute greatly to the recreation assets of the region. The three largest recreation companies in Charlemont collectively attract approximately 120,000 to 145,000 visitors to town each year.<sup>40</sup>

Participants at the community meetings expressed the need to better market the region to tourists, and were also interested in having a visitor center where local wood products could be marketed. Keeping recreational tourists in the area longer to support local businesses, and improving tourism infrastructure and access to some recreational sites were also identified as needs. At the same time some communities were concerned about how an influx in tourists would impact the character of their town, and that towns don't have the capacity to deal with emergencies, traffic, and other issues that may arise from more visitors.

### **Potential Impacts of Increasing Forest-Based Tourism in the 21-Town Region**

Potential advantages of increasing forest-based tourism in the region include stimulating local economies by bringing in outside dollars, which in turn will benefit both recreation and tourism businesses, as well as a variety of other businesses that support those industries. Towns benefit through increased tax revenues, and residents gain greater access to recreation and cultural amenities.<sup>41</sup>

<sup>40</sup> *Town of Charlemont Economic Development Chapter*. September 2011.

<sup>41</sup> Reeder, Richard J., and Dennis M. Brown (2005). *Recreation, Tourism, and Rural Well-Being*. United States Department of Agriculture Economic Research Service. Economic Research Report Number 7.

Tourists to rural areas are looking for a broader experience that combines outdoor recreation with quality accommodations, shopping and cultural opportunities.<sup>42</sup> This type of tourism supports the preservation and enhancement of rural communities' quality of place, which can both attract more visitors and benefit existing residents.<sup>43</sup>

The quality of the natural environment plays a key role in drawing visitors to rural areas. While increased access to and promotion of natural amenities can lead to increased tourism and economic growth, at the same time the integrity of the natural resource must be protected in order to sustain a healthy tourism industry into the future. In addition, jobs in the tourism industry are typically seasonal, and have traditionally been low wage, though this may be changing due to shifting tourist demands towards higher quality experiences.<sup>44</sup>

## Ecosystem Services

Ecosystem services are commonly defined as the benefits people obtain from nature. Forests provide a wide range of ecosystem services in addition to wood products and outdoor recreation. Forests clean the air, filter water supplies, control floods and erosion, sustain biodiversity and genetic resources, and sequester carbon.<sup>45</sup> These services have tremendous economic value, because without them, humans are forced to engineer systems to perform the same functions that otherwise occur naturally.

The Massachusetts Audubon Society has estimated that the nonmarket value of the natural areas within the State—for flood control, climate mitigation, and water filtration—is over \$6.3 billion annually. Ecosystem services such as carbon sequestration play a major role in mitigating climate change, but at the same time are vulnerable to the impacts of climate change. Focusing on ecosystem services as a management goal can help increase the resiliency and adaptive capacity of forests so that they can continue to provide these essential services.



*Forests clean the air, filter water supplies, control floods and erosion, sustain biodiversity and genetic resources, and sequester carbon.*

<sup>42</sup> Ibid.

<sup>43</sup> Reilly, Catherine J., and Henry Renski (2007). *Place and Prosperity*. Maine State Planning Office. Prepared for Governor's Council on Maine's Quality of Place.

<sup>44</sup> Vail, David (2010). "Economic Development Investments to Realize Rural Maine's Tourism Potential." Maine Center for Economic Policy. Augusta, Maine. *Choices*, Volume XI, No. 7. <http://www.mecep.org/publications.asp>.

<sup>45</sup> Balloffet, N; Deal, R; Hines, Sarah; Larry, B; Smith, N. 2012. *Ecosystem Services and Climate Change*. (February 4, 2012). U.S. Department of Agriculture, Forest Service, Climate Change Resource Center.

Ecosystem markets seek to place a marketable value on these services. Carbon markets are the most well-known example of existing markets, however accessing these markets can be complex. The City of West Springfield is currently receiving technical assistance to determine the value of a town-owned forested property for potential participation in a carbon cap and trade market.<sup>46</sup> To date there are no known carbon sequestration projects within the 21-Town region.

### Potential Impacts of Accessing or Developing Ecosystem Services Markets

Developing and accessing carbon markets could result in job growth in the inventory, qualification, verification, marketing, and sale of carbon credits.<sup>47</sup> Carbon markets can provide additional income to landowners, and create an incentive for private landowners to sustainably manage their forests. Forest management for carbon sequestration generally includes improvement harvests, which can support logging and wood products businesses.

Due to the relatively small size of forest ownership in the 21-Town region, aggregation of multiple landowners may be needed for the region's forest landowners to participate in current carbon markets.<sup>48</sup> Some regions are working on developing their own ecosystem services markets. Two pilot projects in northern New England are working on developing a carbon offset market in Vermont, and testing techniques for forest landowners in two watersheds within Vermont, New Hampshire, and Maine, to receive income for the watershed services provided by their land.<sup>49</sup>

## Summary and Key Findings

- Forests play an important role in the region's economy, and have done so for generations. A focus on rural economic development could benefit the region's communities, forestry industry, and support the sustainable management of forests.
- Over the last decade, the 21-Town region experienced a loss in population, jobs, and its labor force. The region has higher unemployment rates, and lower per capita incomes than Berkshire and Franklin Counties and the State, and the average wage in the region is 60% of the State average wage. Response to public outreach shows strong support for pursuing natural resource-based

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<sup>46</sup> West Springfield interested in plan to save and grow trees for carbon credits at Bear Hole Watershed. Christopher Goudreau. The Republican. May 20, 2014.

<sup>47</sup> Wildlands and Woodlands, A Vision for the New England Landscape. <http://www.wildlandsandwoodlands.org/home>.

<sup>48</sup> *Selling Forest Carbon: A Practical Guide to Developing Forest Carbon Offsets for Northeast Forest Owners*. Beane, Julie. Manomet Center for Conservation Sciences. September 2012.

<sup>49</sup> Northern Forest Center. [http://www.northernforest.org/pilot\\_projects.html](http://www.northernforest.org/pilot_projects.html).

economic development consistent with the 21-Town region's rural character, which could serve as a model for other rural regions experiencing similar issues.

- Over the last 10-15 years, jobs within the wood product and paper manufacturing industries declined in the State and 21-Town region. At the same time Massachusetts imports 98% of its wood products from out-of-state. An opportunity exists to increase the amount of wood that is sustainably harvested, processed, and consumed in the State and region, resulting in business and job growth, reduced transportation costs and environmental impacts, and improved forestry.
- The 21-Town region has a higher concentration of employment in forest product jobs than the State or Nation, representing an opportunity to build upon the industry in the region. Funding and technical assistance through this designation could provide support for the forest products industry, such as assistance for local sawmills and loggers to upgrade equipment, help develop more local markets for low-grade wood and other wood products, and assist marketing efforts of wood product businesses.
- Installing high-efficiency wood heating systems for buildings within the 21-Town region could reduce heating costs, fossil fuel use, and GHG emissions, keep money within the local economy, and, when wood is sourced locally, result in an increase in jobs, income to landowners, and improved forestry. Siting a wood pellet mill in the region to produce pellets with local wood could provide anywhere from 15 to 30 jobs, and support additional employment beyond the plant.
- Increasing forest-based tourism in the 21-Town region could result in an influx of dollars into the local economy, support for recreation and tourism businesses, an increase in local tax revenues, and improved recreational amenities for residents. There is a need for better marketing of the region to help keep recreational tourists in the area longer. Improved tourism infrastructure and access to recreation sites is also needed.
- Forests provide a wide range of ecosystem services, such as clean air and water that have tremendous economic value. Support and technical assistance in accessing or developing ecosystem services markets, such as carbon markets, could provide job growth, increase income to landowners, provide an incentive to sustainably manage forests, and contribute to forest products businesses.







## Chapter Five: Municipal Service and Tax Impacts

One of the goals of the Mohawk Trail Woodlands Partnership project is to support the financial health and sustainability of communities in the 21-Town region. As many towns in the region struggle to balance budgets, how can this project benefit them? Previous chapters have discussed the potential benefits and impacts from protecting the 21-Town region's forest resources, supporting working forests and forest-product businesses, and increasing tourism to the region. Healthy forests provide essential ecosystem services such as carbon sequestration, flood control and clean water; more jobs will help sustain the region's workforce and population; and an increase in visitor spending could bring in additional dollars to the economy and support local businesses. This chapter will analyze the potential impacts and benefits on municipalities, specifically addressing municipal services, tax revenue impacts, and overall municipal finance impacts.

### Municipal Services Impacts

Several of the potential outcomes of a federal designation in the 21-Town region are the establishment of a demonstration forest and a visitor information and technical resource center. Additionally, some private landowners choosing to place a Conservation Restriction (CR) on their land through the designation may allow for limited public access to their land. This, along with potential efforts to market the region and improve access to existing outdoor recreational sites including State Forests and Parks, could increase the amount of visitors to the region.

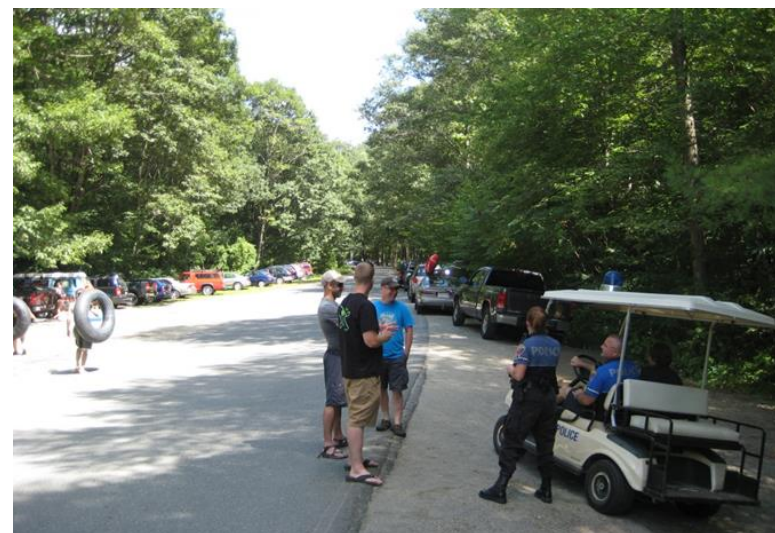
As discussed in Chapter 4: Economic Development Impacts, tourism contributes to the economy by bringing in outside dollars to the region. In 2012 tourism generated \$12 million in local tax receipts within Berkshire and Franklin Counties, and supported 3,750 jobs. Tourism also helps support local businesses, which in turn pay taxes to the municipality. More coordinated marketing of the region has also been identified as a need, which could help attract and keep visitors in the region longer, increasing the amount of money spent during their stay. Some towns in the region do not have existing businesses, however, or lack the water and sewer infrastructure needed to support an increase in businesses. For these towns, an increase in visitors to outdoor recreational areas will not result in an increase in tax revenues, but may require additional town services such as trash pick-up, road maintenance, and emergency response. Infrastructure to support tourism, such as public restrooms, ATMs, parking, signage, and other forms of public information, is also limited in many towns.

An increase in visitors to the 21-Town region, particularly tourists who are engaging in outdoor recreation activities, could result in an increase in demand for emergency services. Because of the volunteer nature of the region's fire departments and ambulance service, the cost of providing these services would not necessarily increase. However, finding enough volunteers to cover the increase in calls could place a strain on municipalities, many of which are already in need of more volunteers. The region also has a specialized rescue team made up of volunteers. Training for members is funded through the Western Region Homeland Security Advisory Council (WRHSAC), which allocates funds from the U.S. Department of Homeland Security.

Forest fires started by campfires and other human activities could also increase. According to the Massachusetts Department of Conservation and Recreation's Bureau of Forest Fire Control, roughly 9 out of 10 forest fires in the region are started by human activities. The Bureau provides aid and assistance to municipalities with forest fire prevention, detection, and suppression on State and private lands. During the public outreach for this project, the need for supplies, such as ATVs to assist in search and rescue and fire equipment for back-country fires, and training for volunteers was identified. The Bureau administers several U.S. Forest Service programs that provide funding, equipment, and training to town fire departments for forest fire suppression. DCR Bureau of Forest Fire Control staff identified an existing need for more funding and staff support for providing training to town volunteers, which would only increase if more volunteers are needed in the region.

An increase in traffic on the region's roads may result in the need for more policing. The Deerfield River in Charlemont, Florida, and Monroe provide a current example in the region. Over the past decade, traffic along Zoar Road and River Road in these towns has increased steadily as the Deerfield River has become a popular destination for rafting, kayaking, and tubing. While several outfitter companies located off of Route 2 in Charlemont utilize their own vans and buses to shuttle their own patrons, many more people come to the region on their own to access the river at various points. Winding, narrow roads that typically carry a few hundred cars a day suddenly carry between 1,000-2,000 cars a day on weekends during the summer months. Speeding can be a problem, and parking areas become overcrowded, resulting in cars parked alongside the road. Litter, trespassing on private property to gain access to the river, lack of bathroom facilities, and unsafe river use are also major issues along the river.

In 2013, the Charlemont Police Department raised funds for a river patrol to be stationed at the Zoar Picnic Area on Zoar Road. Brookfield Renewable



*Parking for river-goers along Zoar Road in Charlemont has increased the need for Town services, such as police patrolling.*

Energy LP matched the Town funds to help support the patrol. The Town of Monroe has also identified the need for a police presence on weekends in the summer to address the influx of visitors.

Additional traffic on the region's rural roadways may also lead to a need for increased road maintenance and infrastructure projects to accommodate larger amounts of traffic. Many towns in the region already struggle to maintain roads within their budgets. Spending on public works is the second largest budget expenditure for most towns, after education.

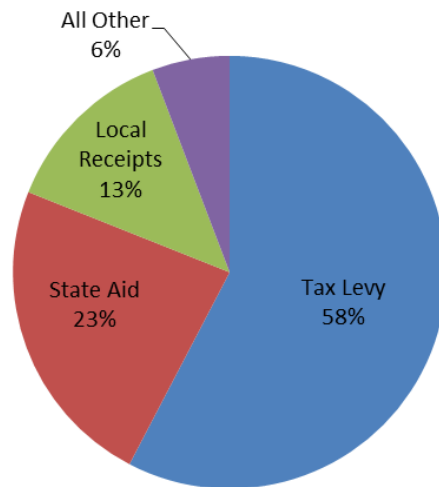
## Tax Revenue Impacts

Property taxes make up a significant percentage of a community's revenue in the 21-Town region. In FY2014, 58% of revenue in the 21-Town region came from property taxes (Figure 5-1). Several communities skew this figure: Clarksburg and North Adams both relied on property taxes for only 35% of revenue in FY014, while the share of State Aid was significantly higher in these communities. Most of the 21 communities relied on property tax revenues for 60% or more of their total revenue, with State Aid generally accounting for less than 20% of revenue (town by town information can be found in the Appendices).

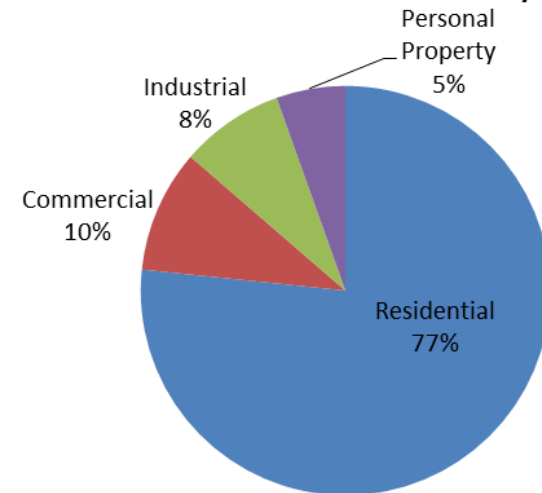
Given the rural nature of the region, most of the 21-Towns rely heavily upon residential property taxes compared to commercial, industrial, and personal property taxes. In FY2014, 77% of tax revenue in the 21-Town region was from residential property taxes (Figure 5-1). Most open space land would fall within the residential category. There are several communities that receive the majority of tax revenue from commercial and/or industrial uses, affecting the average for the 21-Towns. These communities include Rowe, Monroe, and Florida, which receive tax revenue from the utility companies that operate dams and a pumped storage facility along the Deerfield River to generate electricity. These communities received 75% or more of tax revenue from these sources. In contrast, 16 towns received 75% or more of tax revenue from residential land uses, with a total of ten towns relying on residential taxes for 90% or more of tax revenue.

**Figure 5-1: FY2014 21-Town Revenues**

**FY2014 21-Town Revenues by Source**



**FY2014 21-Town Tax Revenues by Class**



*Source: Massachusetts Department of Revenue Division of Local Services Municipal Databank/Local Aid Section.*

Many towns expressed concern during the public outreach for this project about the potential loss of property tax revenue from placing land under Conservation Restrictions (CR). Because a CR permanently removes the development rights from the land, the land is no longer valued for its potential for residential development. An analysis of assessed values within 14 of the 21 towns<sup>1</sup> in the region shows that on average, land with a CR (not enrolled in Chapter 61) is valued at roughly 32% of the value for all land in a town (Table 5-1). Land enrolled in the Chapter 61 program, which assesses land at its current use – either forestry, agriculture, or open space and recreation – is valued at roughly 8% of the Per Acre Assessed Value (see Table 5-1) of all land in a town, on average. Unlike a CR, the Chapter 61 program does not provide permanent protection for the land, which can be converted to another use if a town chooses not to exercise its right of first refusal and back taxes are paid.

**Table 5-1: Analysis of Assessed Values for Land under Different Levels of Protection in 13 of the 20 Towns within the Region**

	Total Acreage	Total Assessed Land Value	Per Acre Assessed Value
<b>All land</b>	243,937	\$837,813,456	\$3,435
<b>Land under a CR</b>	11,385	\$12,668,291	\$1,113
<b>Land under Ch. 61</b>	17,669	\$4,960,360	\$281

*\* Includes State-owned land.*

*Source: MassGIS Level-3 parcel data and town assessor data (multiple fiscal years), accessed February 2015.*

If land not currently enrolled in the Chapter 61 program were to be protected with a CR, then a town would likely experience a loss in property tax revenue. The CR being developed for the Mohawk Trail Woodlands Partnership is focused on encouraging active forest management. It is assumed, therefore, that many of the property owners who may be interested in pursuing a CR through the Partnership would already be enrolled in the Chapter 61 program for active forest management. In this case, a Town would not see a loss in tax revenue when the land is placed under a CR.

An increase in forestry and wood-product businesses could translate to more commercial, industrial, or personal property tax revenues for communities in the region. Types of businesses that might be supported through an increase in forestry activities include foresters, loggers, sawmills, wood product manufacturers, and artisans. Siting a pellet manufacturing facility in the region is one example of a business that would provide new tax revenue for the town where it is located.

<sup>1</sup> The 14 towns included are Ashfield, Buckland, Charlemont, Colrain, Conway, Hawley, Heath, Leyden, Monroe, North Adams, Peru, Rowe, Shelburne, and Windsor. The remaining seven towns had insufficient data to include in the analysis.

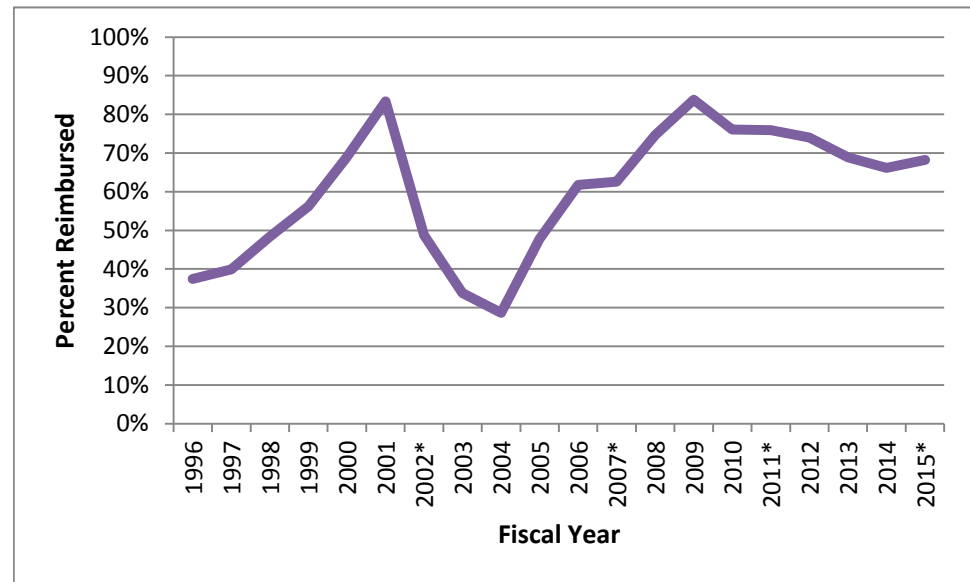
## Payment in Lieu of Taxes Reimbursement

As mentioned previously, on average 23% of municipal revenues in the 21-Town region in FY2014 came from State Aid. Included in this revenue source are payments to towns for State-owned land, known as Payment in Lieu of Taxes, or PILOT. Massachusetts General Law establishes reimbursement payments to towns and cities for tax-exempt State-owned land for the tax revenues lost. Eligibility depends on the land use and the State agency with jurisdiction over the property. Payments are for land only, and not for any buildings or other structures on the land. A formula based on property value and the latest 3-year State-wide average tax rate is used to determine the payment for each town. The Department of Revenue's (DOR) Bureau of Local Assessment estimates the fair market value of State-owned properties every four years. Cities and towns receive their payments annually every November through the Cherry Sheets.<sup>2</sup>

Payments are appropriated annually, and since Fiscal Year 1996, there has been a shortfall in the appropriation, resulting in reimbursements well below 100% State-wide (see Figure 5-2). In Fiscal Year 2014, communities in the 21-Town region were reimbursed a total of \$962,895, a rate of \$13.16 per acre of eligible State-owned land. These payments fell \$370,594 short of what the region would have received if the State had fully funded PILOT payments to communities (Table 5-2). PILOT payments per acre vary considerably by town, ranging from \$3 per acre in Monroe to \$45 per acre in North Adams.

In most towns, PILOT payments for State-owned land make up a small percentage of the State Aid being received. In FY2014, only 3% of State Aid came from PILOT payments for the 21-Town region. However there are several towns where PILOT made up a significant percent of State Aid in FY2014: Hawley (approximately 57% of \$113,122 in State aid); Windsor (approximately 47% of \$206,094 in State aid); Leyden (approximately 28% of \$94,943 in State aid); and Peru (approximately 24% of \$260,919 in State aid).

Figure 5-2: State-wide Percent Reimbursed for State-Owned Land, FY 1996-2015



\* Indicates a year when State-Owned Land value was reappraised. 2015 payments are preliminary.  
Source: Massachusetts Department of Revenue, Division of Local Services, Municipal Databank/Local Aid Section.

<sup>2</sup> *Cherry Sheet Manual*. Massachusetts Department of Revenue, Division of Local Services. <http://www.mass.gov/dor/docs/dls/cherry/cherrysheetmanual.pdf>.

The Federal government also provides Payment in Lieu of Taxes (PILT) payments to local governments to help offset losses in property taxes due to non-taxable Federal lands within their boundaries. These payments can help local governments carry out services such as firefighting and police protection, construction of public schools and roads, and search-and-rescue operations. The payments are made annually for tax-exempt Federal lands administered by the Bureau of Land Management, the National Park Service, the U.S. Fish and Wildlife Service (all agencies of the Interior Department), the U.S. Forest Service (part of the U.S. Department of Agriculture), and for Federal water projects and some military installations. Currently North Adams is the only community within the 21-Town region that has Federally-owned land (21 acres).<sup>3</sup>

Where there is Federal working land, states receive a 25-percent payment based on the 7-year rolling average of receipts from Federal land in the State. The 25-percent payments to states are redistributed to the counties in which Federally-owned working lands are situated to be used for the benefit of public schools and public roads. However, under the proposed designation (see the Framework in Chapter 7) ownership of land by the Federal government is not being considered. Under this new model, land remains in private ownership.

**Table 5-2: FY2014 PILOT Payments and Shortfall in the 21-Towns**

Town	Total State-Owned Land (Acres)	FY2014 State-Owned Land Value	FY2014 100% PILOT Payment	FY2014 Actual PILOT Payments	FY2014 Actual PILOT Payment Per Acre of State-Owned Land	FY2014 PILOT Shortfall
Adams	4,087	\$6,088,600	\$83,049	\$60,623	\$15	-\$22,426
Ashfield	554	\$995,200	\$13,575	\$9,909	\$18	-\$3,666
Buckland	152	\$258,400	\$3,525	\$2,573	\$17	-\$952
Charlemont	1,838	\$1,518,200	\$20,708	\$15,117	\$8	-\$5,591
Cheshire	4,805	\$10,962,400	\$149,527	\$109,150	\$23	-\$40,377
Clarksburg	3,540	\$2,072,900	\$28,274	\$20,639	\$6	-\$7,635
Colrain	2,721	\$4,295,500	\$58,591	\$42,770	\$16	-\$15,821
Conway	2,989	\$3,521,400	\$48,032	\$35,061	\$12	-\$12,971
Florida	5,102	\$2,957,600	\$40,342	\$29,448	\$6	-\$10,894
Hawley	7,989	\$6,455,700	\$88,056	\$64,278	\$8	-\$23,778
Heath	823	\$480,800	\$6,558	\$4,787	\$6	-\$1,771
Leyden	826	\$2,654,600	\$36,209	\$26,431	\$32	-\$9,778
Monroe	2,599	\$835,900	\$11,402	\$8,323	\$3	-\$3,079
New Ashford	3,214	\$3,141,700	\$42,853	\$31,281	\$10	-\$11,572
North Adams	1,732	\$7,819,000	\$106,651	\$77,852	\$45	-\$28,799
Peru	6,402	\$7,302,100	\$99,601	\$62,197	\$10	-\$37,404
Rowe	294	\$651,900	\$8,892	\$6,491	\$22	-\$2,401
Savoy	11,924	\$8,260,700	\$112,676	\$82,250	\$7	-\$30,426
Shelburne	75	\$223,800	\$3,053	\$2,228	\$30	-\$825
Williamstown	6,193	\$17,626,500	\$240,425	\$175,502	\$28	-\$64,923
Windsor	5,315	\$9,640,200	\$131,492	\$95,985	\$18	-\$35,507
<b>21-Towns</b>	<b>73,174</b>	<b>\$97,763,100</b>	<b>\$1,333,489</b>	<b>\$962,895</b>	<b>\$13.16</b>	<b>-\$370,594</b>

*\*Calculated using the FY2014 3-year state-wide average tax rate of 13.64.*

*Source: Massachusetts Department of Revenue FY2014 State-Owned Land valuations and payments.*

<sup>3</sup> In FY2014, the city did not receive a PILT payment, likely because the calculated payment did not reach a \$100 threshold required for reimbursement under Federal law.



## Community Finances

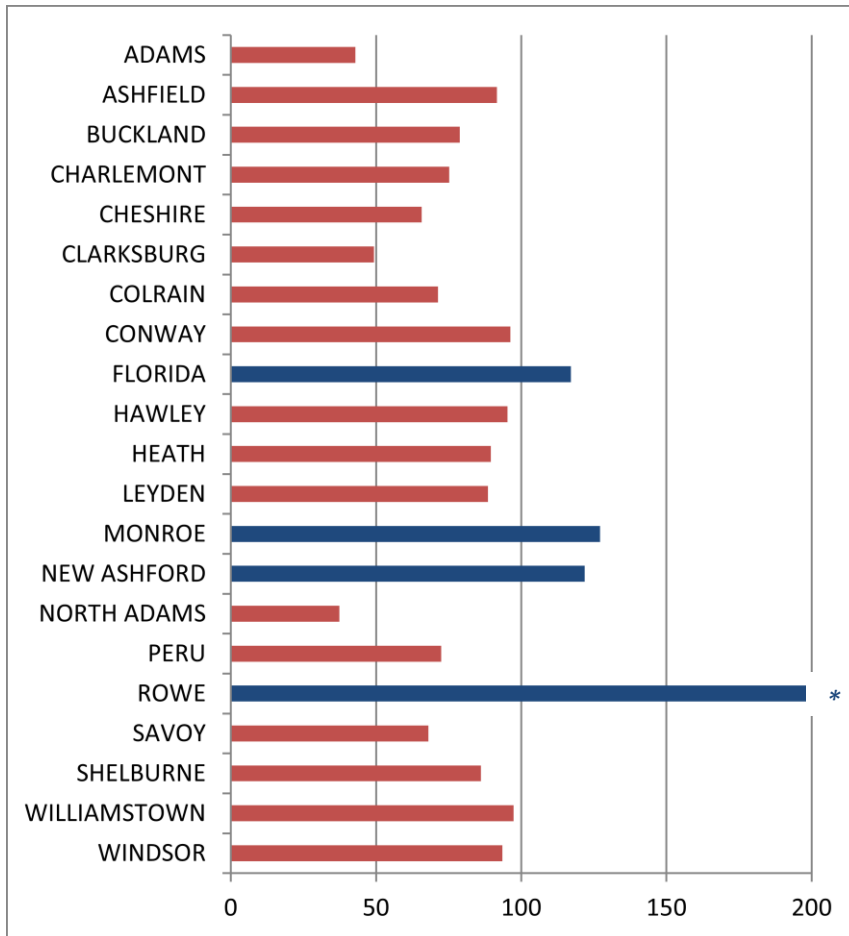
The overall financial health of the communities within the 21-Town region should be considered when evaluating the potential impacts of increased forestry, conservation, and tourism. Towns in the region have little room to absorb a loss in tax revenue from placing land under a CR, unless new revenue comes from elsewhere. They also have limited capacity to increase spending on policing, road maintenance, or other costs associated with an increase in visitors to the region. If the designation moves forward, a stable source of revenue needs to be identified to help municipalities provide these services.

As discussed above, most towns in the region rely heavily upon residential property taxes for revenue, and have limited ways to earn revenue from other sources. Figure 5-3 displays each town's per capita equalized value, representing the full and fair cash value of all taxable property in the town divided by the town's population, as a percentage of the State average (or 100%). The figure indicates that the value of taxable property for 17 of the 21 towns in the region is below the State average. Property taxes are the largest source of revenue for most of the towns in the region. Lower property values, combined with lower wages and incomes in the region (discussed in Chapter 4), make it difficult for towns to raise property taxes without placing further financial burden on their residents. Furthermore, the amount that taxes can be raised each year is limited by tax levy constraints imposed by Proposition 2 ½, and increases beyond the yearly limits require an override vote (both at Town Meeting and by election ballot) by the town.

Currently towns spend the most on education, followed by public works (Figure 5-4). On average, in FY2013 communities spent 46% of their budget on education, and 22% on public works. Very little of town budgets were spent on police (2%) and fire (1%), which reflects the small population of most communities and the volunteer nature of fire departments. Towns may be able to experience savings within the education budget if schools in the region were converted from oil or propane to high-efficiency wood heating systems. Chapter 4 provides more information on the savings that schools in other regions have experienced from switching to this form of heating.

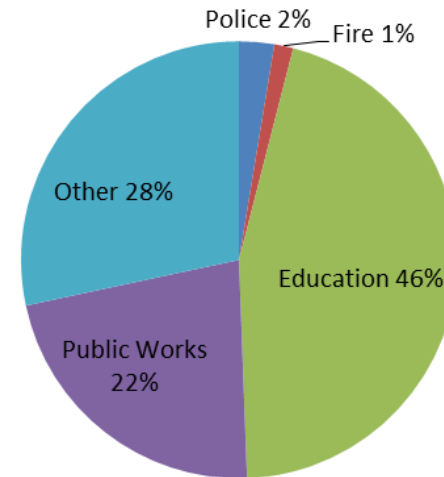


**Figure 5-3: 2012 Equalized Per Capita Taxable Property Value as a Percent of the State Average**



Source: Massachusetts Department of Revenue, Division of Local Services Municipal Databank/Local Aid Section:  
<https://dlsgateway.dor.state.ma.us/DLSReports/DLSReportViewer.aspx?ReportName=FinancialFlexibilityPriorYear&ReportTitle=Financial+Flexibility+Report+2014> .  
 \* Rowe has an Equalized Value per capita that is 529% of the State average, due to the presence of the pumped storage facility.

**Figure 5-4: Town Expenditures  
21-Town Expenditures**



\* Colrain, Hawley, Heath, and Monroe are FY2014 balances.  
 Source: Massachusetts Department of Revenue Division of Local Services Municipal Databank/Local Aid Section.

**Table 5-3: FY2013 Chapter 90 Apportionments**

Town	FY 2013 Ch. 90 Apportionment	FY 2013 Public Works Expenditures
Adams	\$292,975	\$3,877,214
Ashfield	\$298,565	\$787,364
Buckland	\$188,417	\$1,220,791
Charlemont	\$185,579	\$496,353
Cheshire	\$205,083	\$1,560,395
Clarksburg	\$75,411	\$698,720
Colrain	\$327,140	\$1,042,570
Conway	\$270,255	\$720,211
Florida	\$164,267	\$990,521
Hawley	\$181,071	\$545,976
Heath	\$213,212	\$587,621
Leyden	\$147,018	\$377,715
Monroe	\$67,620	\$343,174
New Ashford	\$43,928	\$86,110
North Adams	\$452,676	\$5,492,815
Peru	\$146,993	\$560,862
Rowe	\$147,811	\$917,076
Savoy	\$200,929	\$335,906
Shelburne	\$220,294	\$804,876
Williamstown	\$306,328	\$4,473,132
Windsor	\$255,229	\$277,942
<b>21-Towns</b>	<b>\$4,390,801</b>	<b>\$26,197,344</b>

Source: MassDOT Chapter 90 Program:

<http://www.mhd.state.ma.us/default.asp?pgid=content/stateaid01a&sid=about>. Massachusetts Department of Revenue Division of Local Services Municipal Databank/Local Aid Section.

Towns can get reimbursed for some public works expenses through the State Chapter 90 program. This program reimburses municipalities for capital improvement projects for road construction, preservation, and improvements that create or extend the life of capital facilities. The funds can be used for maintaining, repairing, improving, or constructing town and county ways and bridges that qualify under the State Aid Highway Guidelines issued by the Public Works Commission. Items eligible for Chapter 90 funding include roadways, sidewalks, right-of-way acquisition, shoulders, landscaping and tree planting, roadside drainage, street lighting, and traffic control devices.

Each municipality in Massachusetts is granted an annual allocation of Chapter 90 reimbursement funding based on roadway miles (city or town-accepted), population, and employment. In FY2013, Chapter 90 reimbursement allocations ranged from \$43,928 in New Ashford, to \$452,676 in North Adams, with an average allocation of \$209,086 per town.<sup>4</sup>

<sup>4</sup> <http://www.mhd.state.ma.us/default.asp?pgid=content/stateaid01a&sid=about>

## Summary and Key Findings

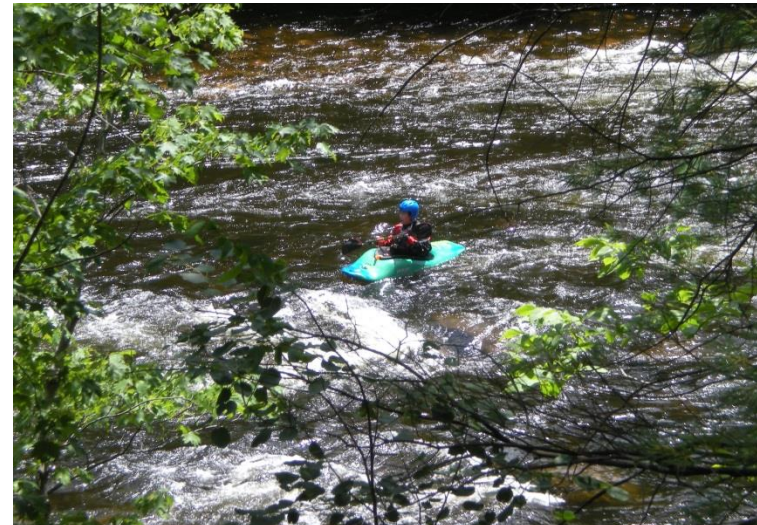
- Focusing resources to protect the 21-Town region's forests, support working forests and forest-product businesses, and increase tourism can benefit municipalities by: providing clean drinking water and other essential ecosystem services; growing local businesses, which in turn provide commercial and industrial tax revenue; sustaining the region's workforce, population, and rural way of life; and bringing outside dollars into the region.
- PILOT (Payment in Lieu of Taxes) payments to towns for tax-exempt State-owned land vary from year to year, and do not make up the difference in tax revenue loss experienced by towns.
- An increase in visitation and active forest management may require more road maintenance, emergency response capacity, and tourism or business infrastructure. Many towns in the region operate on a tight budget, and would benefit from a stable source of revenue to help pay for these municipal services and to help make up for the shortfall in PILOT payments.
- Increasing land conservation in the region with Conservation Restrictions could result in tax revenue loss for towns if the land is not currently enrolled in the Chapter 61 program. The CR for this project, however, focuses on working woodlands, which would appeal to landowners already enrolled in Chapter 61 for active forest management, resulting in no tax revenue loss to towns.



## Chapter Six: Benefits of a Partnership with the United States Forest Service and the State

### Introduction

A primary purpose of a State and Federal forest designation is to obtain additional financial and technical resources for the 21-town region. The community and regional meetings held for this project identified the need and desire for additional assistance to increase natural resource-based economic development, improve the fiscal stability of municipalities, support sustainable forestry practices, and conserve forest land. Some State and Federal programs exist that help to meet the needs in the 21-town region. However, many are not fully applicable to the stated project goals or have limited resources. In addition, they can be difficult to access, such as requiring a local match for grant funds which many rural towns cannot afford. Additional financial resources could be provided through this Partnership to leverage existing grant programs. Many grant programs are also extremely competitive and rural communities acting alone frequently do not contain enough competitive clout to secure them.



*Natural resource-based economic development is a project goal.*

The Mohawk Trail Woodlands Partnership can support collaboration between towns and Federal, State, and regional organizations to advance the goals of the 21-town region with respect to natural resource-based economic development and forest conservation. Many similar collaborative projects between towns and Federal, State and regional agencies have led to successful partnerships that advanced goals parallel to those presented in this plan, and have benefitted towns and organizations. This section outlines examples of other Federal Partnerships to illustrate the wide variety of existing models, followed by the potential programs that could provide benefits related to four important categories identified by towns in the 21-town region. These categories are: 1) Natural Resource-Based Economic Development and Tourism; 2) Municipal Financial Stability; 3) Sustainable Forestry Practices; and 4) Conservation of Land for Sustainable Forestry. These sections identify existing programs and benefits available but also gaps that exist to address project goals.

## **Examples of Federal Partnerships and Benefits of a New Federal Designation**

Existing funding sources do not adequately meet the needs and goals of the 21-town project area. New funding sources could do much to aid natural resource-based economic development, sustainable forestry practices, land conservation, and the fiscal stability of municipalities. Several prior projects and organizations have worked to address similar project goals with success. These partnerships have achieved goals that could not be fully realized by individual towns or organizations working independently. Only through a collaborative process and collective endeavor could these towns and organizations ensure that the needs of multiple stakeholders and natural resource concerns were met simultaneously.

### **New Mexico Collaborative Forest Restoration Program**

The New Mexico Collaborative Forest Restoration Program was authorized by Congress in 2000. Legislation established up to \$5 million annually towards cost-share grants to stakeholders for experimental restoration projects on publically owned lands. These projects were designed collaboratively, to promote healthy watersheds and reduce threats to forests including wildfire and insect infestation. The results of the program have been tremendous, particularly the collaborative aspect. An advisory panel made up of Federal and State officials, scientists, conservation groups and community members works to craft projects that are then presented for approval. This has helped to reduce project litigation and conflicts between conservation groups and logging organizations. The program has awarded nearly 150 grants to 99 organizations working in 20 New Mexico counties, resulting in the restoration of over 23,700 acres of forest. Approximately 600 forest related jobs have been created as a result of the program. While the 21-town project area contains no U.S. Forest Service forest lands, it is envisioned that a Special Designation (see Chapter 7) could be designed to direct funding to State or private lands.

### **Valles Caldera National Preserve**

The Valles Caldera Preservation Act (PL-101-556) authorized the Federal government to purchase the 89,000-acre Baca Ranch nestled inside a volcanic caldera in New Mexico. It also created a unique experiment in public land management. A management structure made up of a board of directors allows for self-governance with an emphasis on financial sustainability. Seven of its members are appointed by the President of the United States. Federal funds allow for land purchases and management activities, while the Board manages the preserve as a nonprofit ranch and collects fees relating to cattle grazing, hunting and recreation. The Treasury of the United States established a special interest-bearing fund under the Act. The



interest generated is available for advancing the purposes of the Valles Caldera Preservation Act without further appropriation from Congress.

### **National Forest Foundation / National Fish and Wildlife Foundation**

These foundations were created by Congress to be the official non-profit partners of the U.S. Forest Service and U.S. Fish and Wildlife Service respectively. In addition to receiving federal funds, these foundations can solicit outside donations, something the U.S. Forest Service and U.S. Fish & Wildlife Service are prohibited from doing. A similar model could be used in the creation of a Trust that would operate in the 21-Town project area to fund forestry and tourism related projects and forest land conservation as well as to support municipal services. Initial Federal and State funding could support an endowment which could help to ensure the long term viability of the Mohawk Trail Woodlands Partnership.

### **Highlands Conservation Act**

The Highlands Conservation Act helped a four-state region including Connecticut, New York, New Jersey, and Pennsylvania to protect natural resources and conserve land. Up to 100 million dollars of funding for land acquisition and 10 million dollars for technical assistance were allocated for a 10-year period. Land and conservation easements (CRs) were purchased by State entities and had to be consistent with areas identified as having significant resource value. Land or CRs were purchased only from willing sellers. While purchase of land in fee is not being proposed for the Mohawk Trail Woodlands Partnership, this program exemplifies State and Federal governments working together for land conservation by providing technical assistance and using CRs as one tool to conserve lands.



*Valhalla Hemlock Glen is one of many parcels of land conserved via the Highlands Conservation Act.*

### **Silvio Conte National Wildlife Refuge**

This wildlife refuge covering the entire Connecticut River watershed has created strong partnerships between landowners, nonprofits and State and Federal conservation agencies in Massachusetts. The collaborative approach has worked to help private landowners leverage federal funds to improve wildlife habitat, including fish habitat. Additionally, it has worked to create recreational opportunities including publically accessible trail development through collaboration with local land trusts and private landowners.



*The Connecticut River watershed is encompassed by the Silvio Conte National Wildlife Refuge, established to improve wildlife habitat and recreational opportunities. Photo Source: US Fish and Wildlife , [www.fws.gov](http://www.fws.gov)*

### **New York City Urban Field Station**

This organization is a partnership between the NYC Parks Department and the U.S. Forest Service. Its mission is to improve quality of life in urban areas through research and management. The organization works on applied research projects throughout NYC with adaptive management to allow for flexible decision making and planning. The collaborative approach helps to solve issues relating to urban ecology as well as improve life for NYC residents through improvement of ecosystem services.



### ***Federal Partnerships and Benefits of a New Federal Designation***

Partnerships between towns and Federal, State, regional and local organizations have realized benefits not possible by individual groups or communities. These collaborative initiatives have helped to achieve natural resource and economic goals while creating lasting benefits. Within the Mohawk Trail Woodlands Partnership project area, a Special Designation by the U.S. Forest Service and associated funds could advance the sustainability of local communities while concurrently improving forests and the social and ecological benefits they provide. Moreover, the opportunity for collaboration has the potential to benefit the towns, region and State through the creation of a new model of forest conservation and resource-based economic development.

### **Benefits of the Partnership with the U.S. Forest Service**

Within the U.S. Forest Service, the executive leadership of the Eastern Region, National Forest System; Northeastern Area, State and Private Forestry; and Northern Research Station and Forest Products Laboratory have recognized the significant promise of a new model for forest conservation and natural resource-based economic development focused on private forest lands and sustainable rural communities based on the work of the Mohawk Trail Woodlands Partnership project. They have assigned a U.S. Forest Service Liaison to assist with the Mohawk Trail Woodlands Partnership project. The executive leadership provided the following statement:

"The Mohawk Trail Woodlands Partnership enables the Forest Service, America's premier conservation organization, to offer an assistance role through a new model of forest conservation. This unique opportunity in shared leadership provides the U.S. Forest Service an exciting way to help care for the land and improve people's lives. The partnership forms a focal point for conserving private-land forests on a landscape scale among communities willing to share conservation leadership. The U.S. Forest Service can provide skilled capacity in land stewardship allowing a true public-private partnership to flourish, effectively connecting environmental health with community resiliency."

### **Benefits of the Partnership with the Executive Office of Energy and Environmental Affairs**

The Mohawk Trail Woodlands Partnership has already resulted in positive collaboration with the State, with resources being directed to the 21-Town region through the Mohawk Trail Renewable Heat Initiative. Launched in 2015 by the Massachusetts

Department of Energy Resources (DOER), the initiative builds upon the momentum of the Mohawk Trail Woodlands Partnership project by seeking to support rural economic development within the 21-Town region through expanding the local market for low-quality wood as a heating source for municipal buildings, businesses, and homes. The initiative will produce the following studies: an assessment of the forest resources that can be sustainably harvested in the region; a quantification of the carbon balance of the region's forests; a market analysis and strategic plan for implementing renewable heating in the region; a feasibility study and business plan for the manufacture and distribution of wood pellets; and a regional economic impact study. Anticipated next steps include funding for converting municipal buildings to energy efficient renewable wood heat in the 21 towns.

Other potential benefits of partnering with the State include providing matching funds for Federal grant programs to be directed towards projects within the region, and improving the management of State-owned forests in the 21-Town region, a need that was communicated often during the development of this plan. For example, since January 2015 the Massachusetts Executive Office of Energy and Environmental Affairs (EEA) and Massachusetts Department of Conservation and Recreation (DCR) have received two USDA NRCS grants totaling \$1.5 million in two grants to offer incentives to interested woodland owners in the MTWP region to implement forestry projects that will benefit declining species and to invite the public to their woods to showcase the benefits of forest management via wildlife observation, hunting and fishing activities.

## **Natural Resource-Based Economic Development and Tourism**

Central to the Mohawk Trail Woodlands Partnership Project is the goal to support economic development for forestry and recreational tourism. While forests have long played an important role in economic development, the region lacks some of the programmatic and financial resources necessary to increase this sector. Listed below are some current programs and initiatives related to natural resource-based economic development and tourism that could be used to accomplish the program goals.<sup>1</sup> A more detailed description of these programs is located in Appendix D.

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<sup>1</sup> For the purposes of USDA programs listed below, farms are considered to be any place from which \$1,000 or more of agricultural products were produced and sold or normally would have been sold during the course of a year. For Massachusetts programs, both 'farming' and 'agriculture' include the growing and harvesting of forest products upon forest lands, as well as forestry and lumber operations performed by a farmer or as incidental to farming operations.)

- **Voluntary Public Access and Habitat Incentive Program (Natural Resources Conservation Service, U.S. Department of Agriculture) -** This program, authorized under the 2014 Farm Bill, aims to improve wildlife habitat and enhance public access for recreational opportunities on privately held and operated farm, ranch and forest lands.
- **Recreational Trails Program (U.S. Department of Transportation's Federal Highway Administration / MA Department of Conservation and Recreation) -** This program provides funds to states to develop and maintain recreational trails and trail-related facilities for both non-motorized and motorized recreational trail uses.
- **Wood Utilization Assistance Program (Forest Service, U.S. Department of Agriculture) -** The program provides technical and financial assistance to State foresters, tribes, and public and private organizations regarding new and emerging technologies to effectively manage forests and extend the most efficient and effective economic opportunities to forest landowners.
- **Renewable Energy & Energy Efficiency (Rural Energy for America Program, U.S. Department of Agriculture) -** This program provides guaranteed loan financing and grant funding to agricultural producers and rural small businesses to purchase or install renewable energy systems (including renewable wood heat) or to make energy efficiency improvements, thereby reducing operating costs.

While there are several grant programs for economic development, renewable energy, and forestry, the challenges in accessing funds are great. For example: 1) agency funding goals may not be well aligned with those of the Mohawk Trail Woodland Partnership Project, 2) programs are highly competitive and may be limited in scope, 3) many programs are designed for non-forestry farmers or for heavily processed bio-products, 4) programs require a high percentage of matching funds, and 5) there is a limited amount of programs available to small businesses, private landowners and/or municipalities. The region would benefit from additional technical assistance to private landowners for forest management, financial or technical



*Development and maintenance of trails is a necessary investment for improved natural-resource based tourism.*

assistance targeted to small businesses whose focus is forestry, forest product processing, or tourism, and technical assistance and funding for rural communities for natural resource-based economic development activities.

## **Municipal Financial Sustainability**

The overall financial health and sustainability of the communities within the 21-Town region is intrinsically linked to the health and sustainability of the region's forests. The ecological benefits that forests supply to communities, including clean water, clean air, and flood control, are essential for long-term community health and resilience. A robust forest business sector based on sustainable forestry practices could provide jobs that help keep more of the region's population employed.

At the same time, efforts to protect forests for these and other benefits must take into account a community's need for an adequate tax base. Towns in the region have little room to expand their tax base because they rely heavily upon residential property taxes for revenue (77% in 2014) and have limited ways to earn revenue from other sources. Lower property values, combined with lower wages and incomes in the region (discussed in Chapter 4), make it difficult for towns to raise property taxes without placing further financial burden on their residents. In addition, the amount that taxes can be raised each year is constrained by tax levy limits imposed by Proposition 2 ½, and increases beyond the yearly limits require an override vote (both at Town Meeting and by election ballot) by the town. As discussed in Chapter 5, 17 of the 21 towns in the region have per capita equalized value (EQV) below the State average. EQV represents the full and fair cash value of all taxable property in the town divided by the town's population. Currently towns spend the most on education, followed by public works. On average, in FY2013 communities spent 46% of their budget on education, and 22% on public works. Very little of town budgets were spent on police (2%) and fire (1%), which reflects the small population of most communities and the volunteer nature of fire departments.

The towns in the region do not have the necessary capacity to increase spending on policing, road maintenance, and other costs potentially associated with increased tourism in this area. As noted above, a large expenditure in the 21-town region is for education, and includes the heating and maintenance of school buildings. Municipalities could experience savings if schools were to be converted from oil or propane to high-efficiency wood heating. If the wood is sourced locally, the community could experience additional economic benefits such as an increase in forestry sector jobs and businesses, and greater support for long-term sustainable forestry in the region. Listed below are several programs aimed towards assisting communities with various projects that fall within the scope of this project. More details about each program can be found in Appendix D.

- **Mohawk Trail Renewable Heat Initiative (MA Department of Energy Resources Funding)** - MA DOER has committed \$350,000 to work with the 21-town region to evaluate the potential for expanding the use of energy efficient renewable wood heating systems and the feasibility of establishing a wood pellet manufacturing facility to utilize low-quality wood from the region's forests to support demand for wood heat. Converting municipal buildings to wood heat could help reduce operating expenses and can provide more stable energy costs into the future. It can also shift the region's reliance away from oil and reduce related greenhouse gas emissions. This funding is specifically targeted to the 21-town region and is an outcome of the Mohawk Trail Woodlands Partnership Project. Without a large enough geographic area it is unlikely this study would have been conducted.

This initiative will cover the five tasks outlined below:

1. Resource assessment for the MTWP region. The assessment conducted will utilize forestry data, cutting plans for past 10 years, Ch. 61 lands and management plans. An estimate of currently available forests and the amount which can be sustainably harvested over the long-term will be provided. Current carbon sequestration will be measured and will be compared with anticipated carbon sequestration if harvesting of wood for heating is increased.

2. Market analysis and plan for development of a wood pellet manufacturing facility in the MTWP region. The plan will include: a) meetings with municipal officials to gauge interest in converting schools and municipal buildings to energy efficient renewable wood heat; b) evaluation of the potential for converting schools and municipal buildings to energy efficient renewable wood heat; c) a survey of homeowners and businesses in the region regarding type of fuel used and potential interest in converting to an energy efficient renewable wood heat system; d) determination of the appropriate scale and feasibility of a wood pellet manufacturing facility based on the estimated supply and demand, and e) stakeholder meetings for community input on potential locations for a wood pellet manufacturing facility if there is enough supply and demand.

3. Evaluation of the reduction in fossil fuel use and GHG reduction and the potential air impacts of increased use of energy efficient renewable wood heat systems. An analysis will be conducted to project the greenhouse gas reduction and air quality benefits from increased use of wood heat.

4. Creation of a business plan for the development of wood pellet plant in this region. A business plan will be prepared that examines both a private ownership model and a community owned model, such as a cooperative.

5. Regional Economic Impact Study. A regional economic impact study will be prepared, assessing the impacts of a new wood processing distribution center in the region, for foresters, truckers, and the local economy.

DOER has indicated an initial interest in assisting the communities to implement the study recommendations, should they prove favorable. Based on findings for other State programs such as Vermont, this could result in significant savings for municipalities in the 21-town region.

- **MA Green Communities Program** - Designated Green Communities (Ashfield, Buckland, Conway, Rowe, and Williamstown) can apply for funding of up to \$250,000 for the 2015 Competitive Grant Program (\$7.9 million available). Eligible projects include energy conservation/energy efficiency measures and renewable energy projects (including energy efficient renewable wood heat) on municipal property. Additional technical assistance could be used to help the other towns in the region qualify for Green Community status and resulting grant funds.
- **Volunteer Fire Assistance (VFA) Grants (MA Department of Conservation and Recreation)** - VFA grants are available to non-profit rural call or volunteer fire departments that serve a population of 10,000 or less. The department must be comprised of at least 80% volunteer firefighters. Eligible projects include firefighter safety, technology transfer, and rural fire defense.

## Sustainable Forestry Practices

Several State technical assistance programs are targeted to assist with sustainable forestry and management in northern Massachusetts. While financial assistance helps to prepare forest management plans for landowners, the implementation of these plans is the responsibility of private landowners or municipalities who wish to practice active forest management and sustainable forestry on their property. An additional fund or increased technical assistance may be needed for landowners or towns to support



implementation of the forest management plans that increase sustainable forestry practices in the region. Sustainable forestry would also benefit the local economy by sustaining forest-based businesses. These increased activities could also have associated ecological benefits, such as habitat improvement and improved climate change resilience. Additional information about the below programs can be found in Appendix D.

- **Regional Conservation Partnership Program (US Department of Agriculture)** - Authorized under the 2014 Farm Bill, the Regional Conservation Partnership Program (RCPP) is USDA's new, innovative program that promotes coordination between the Natural Resources Conservation Service (NRCS) and its partners to deliver conservation assistance. Through this program, extensive partnerships have been established to assist landowners to conserve working woodlands and to integrate sustainable forestry and energy practices. In January 2015 DCR was awarded \$637,860 from the RCPP for the 21-Town region as well as seven adjacent towns. Only 110 applications were funded nationally. The Mohawk Trail Woodlands Partnership effort was instrumental in the State submitting an application for western Massachusetts and contributed to its National competitiveness. The project will provide a number of environmental and community benefits, including:
  - Creating and enhancing forest habitat for at-risk species
  - Restoring degraded habitat conditions by landscape-scale invasive plant treatments
  - Reducing fossil fuel use and improving energy efficiency by utilizing low quality forest products to heat schools, municipal buildings, and homes with energy efficient renewable wood heat
  - Increasing the carbon sequestration of the region and reducing carbon emissions by retaining land in long-term forest use
  - Encouraging private forest landowners to apply regional woody material retention guidelines during harvesting operations

**Creating a Buy-Local Model for Working Forests in the Northern Berkshires (MA Department of Conservation and Recreation)** - This DCR program, funded through the U.S. Forest Service, helped to build and promote the forest product industry in the northern Berkshires through March 2015. The project worked to create a type of homegrown “Forestry Stewardship Council” certification of Massachusetts wood products through harvesting standards, and included much of the proposed 21-town project area. In addition, marketing assistance was provided to wood and

forest product producers, and outreach to architects and other professionals encouraged the use of locally-available wood products.

- **Small Forest Landowner Outreach Initiative for Communities Located in the Urban-Rural Interface of the Quabbin to Cardigan Priority Landscape (MA Department of Conservation and Recreation)** - This DCR program is funded by the U.S. Forest Service, and provides outreach and technical assistance to engage landowners to train landowners in invasive species removal, safe equipment use, and micro-logging techniques with an emphasis on forest improvement. An innovative aspect of the program is the creation of “Wood Banks” in several towns. These Wood Banks follow the food bank model to provide emergency home heating assistance for local residents. Wood is donated by local landowners.
- **Forest Stewardship Program (MA Department of Conservation and Recreation)**- The DCR provides cost reimbursement to individuals, groups and associations who wish to develop a 10-year forest management plan. However, this program is only open to landowners with parcels of 10 acres or more and municipalities with parcels larger than 25 acres. Additionally, land enrolled in Chapter 61A or 61B that does not have a current forest management plan is eligible.
- **Foresters for the Birds (MA Department of Conservation and Recreation)** - Landowners can be reimbursed for Bird Habitat Assessment on their properties conducted by a licensed Forester. Reimbursement is eligible to those currently enrolled or seeking to enroll in the Forest Stewardship program (through creation of a 10-year forest management plan), and living within the Northern Hardwood focus area towns.



*Lands can be used for timber production while managing for bird habitat for species such as the Eastern Towhee.*

- **Community Forest Stewardship Implementation Grants (MA Dept. of Conservation and Recreation) -** Municipalities that have a town forest or water supply land and are currently enrolled in the Forest Stewardship Program are eligible for 50-50 matching reimbursement grants from DCR of up to \$15,000. This fund helps communities to put forest stewardship into practice and connect citizenry with their forests and its benefits.

Massachusetts landowners and municipalities have options if they wish to practice sustainable forestry and forest management on their woodlands. At the State level, successful grant programs such as the Forest Stewardship Program work to reduce the financial costs that potential applicants face to create forest management plans for their properties. However, property owners may need additional assistance to implement the recommendations of the forest management plan. Only one grant for implementation is available through DCR and is only open to municipalities, thus excluding potential participation from private landowners. Other innovative State technical assistance programs such as the Buy Local and Quabbin Reservoir models are either limited to geographic areas beyond the proposed 21-town region or have ended. At the Federal level, little funding is available to individual landowners and municipalities. The 21-town Mohawk Trail Woodlands Partnership as a collective entity would be more competitive to compete for large federal programs that could benefit the entire project area.

## **Conservation of Land for Sustainable Forestry**

One of the stated goals of the project is to conserve forest land in private ownership. The creation of a forest conservation program, comparable to the Agricultural Preservation Restriction (APR) program, that would provide funding for the conservation of working woodlands would be a major benefit to the landowners of the region. Currently, landowners who wish to permanently conserve their land, but cannot afford to donate a Conservation Restriction, have few options. The programs that landowners in the 21-town region can currently utilize if their land is eligible are described below, as well as their limitations.

- **Agricultural Preservation Restriction Program -** The Massachusetts Department of Agricultural Resources has an active program of purchasing agricultural preservation restrictions (APR's) on active farmland that is comprised primarily of prime agricultural soils or soils of statewide importance. The property involved must also be no more than 2/3's wooded. Much of the land in this focus region does not meet these requirements, especially land that has historically been managed for forest products.

- **MA Land Conservation Tax Credit** - Rewards landowners who donate their land or place a conservation restriction on it with a State tax credit provided the land is determined by the State to be eligible, based upon its natural resource values. The program pays landowners up to 50% of the appraised donated value of the restriction or land, or \$75,000 whichever is less. This program is currently very popular statewide and has a two year waiting list. In addition, landowners typically need to spend roughly \$5,000 in due diligence costs (appraisal, survey, legal representation, etc.) to take advantage of the program.
- **MA Landscape Partnership Program** - The MA Executive Office of Energy and Environmental Affairs' Landscape Partnership Program will pay up to 50% of the appraised value of land or a Conservation Restriction. This program, however, has a requirement that the application involve a minimum of 500 contiguous acres, and that the interest in land (e.g. Conservation Restriction) be held by more than a single entity (e.g. State, town and/or land trust). The Franklin Land Trust has successfully utilized this program to conserve working woodlands in the region but the projects are very complex and take several years to come to fruition. The successful projects also relied on multiple funding sources, including bargain sales and donations by some of the involved landowners and grants from foundations.
- **US Forest Legacy Program** - The U.S. Forest Service's Forest Legacy Program has been suggested as a potential source of funding for working woodland Conservation Restrictions rather than the proposed Special Designation (see Chapter 7). The program provides funding for the acquisition of Conservation Restrictions on working woodlands in eight designated forested regions in Massachusetts. The 21-town region is currently not a designated region. However, with limited funding and a priority placed on large areas of forested land, the Forest Legacy program is extremely competitive nationwide. Massachusetts land trusts seeking Forest Legacy funds must aggregate as many smaller parcels of land as possible, and include multi-state partners if possible. While doable, these projects can take many years to assemble, and carry no guarantee of success for the years of effort.

Though Massachusetts landowners do have several options to sell or recoup some of the value of a donation of a Conservation Restriction, they are relatively complex and time consuming programs that require the assistance of a land trust partner, and much of the land in the 21-town region does not qualify for these programs. The creation of a new funding source for the conservation of smaller parcels of forest land that have a history of active forest management would be a huge benefit to many landowners in this region.

## Summary and Key Findings

- Partnerships between towns and Federal, State, regional and local organizations have realized benefits not possible by individual groups or communities. A Special Designation by the U.S. Forest Service of the Mohawk Trail Woodlands Partnership project area could provide funding to advance the sustainability of local communities while concurrently improving forests and the social and ecological benefits they provide. Moreover, the opportunity for collaboration has the potential to benefit the towns, region and State through the creation of a new model of forest conservation and resource-based economic development.
- The Mohawk Trail Woodlands Partnership has already resulted in positive collaboration with the State, with funding and resources being directed to the 21-Town region through the Mohawk Trail Renewable Heat Initiative and two USDA NRCS grant programs.
- Some State and Federal programs exist that help to meet the needs in the 21-town region. However, not all of the programs are fully applicable to the stated project goals, or have limited resources. In addition, they can be difficult to access, such as requiring a local match for grant funds which many rural towns cannot afford. Many grant programs are also extremely competitive and rural communities acting alone frequently do not contain enough competitive clout to secure them.
- Additional financial resources could be provided through this Partnership to leverage existing grant programs, and to fill in the gaps within existing programs to better meet the goals of the Partnership.







## Chapter Seven: Framework

### Introduction

The purpose of this Chapter is to outline the key elements that form a framework for a potential Federal and State designation of the 21-town region. The Mohawk Trail Woodlands Partnership has recommended that the 21 towns consider a Special Designation. This Special Designation would recognize the 21-town region as an important area and create a new model for forest conservation and natural resource based economic development. The proposed designation would not create a National Forest nor would it result in the adoption of the Weeks Act by the State, a requirement to create a National Forest. Rather the objective of the Special Designation is to allow and support a partnership between the towns, the State and the U.S. Forest Service, primarily the State & Private Forestry and Research & Development branches.



*The 21-town region is important for forest conservation and natural resource-based economic development.*

The framework was developed in response to key issues and concerns (see page 2) raised during the regional and community meetings and also by members of the Mohawk Trail Woodlands Partnership Advisory Committee. Throughout the course of the planning process, public input and conversations with key forestry stakeholders shaped the elements that a potential Federal designation would need to include. These elements make up the “Framework” (see page 3) for a new model.

## Key Issues and Concerns

As discussed in Chapter One, in addition to goals, land owners, municipal leaders, foresters and other stakeholders identified key issues and concerns related to a potential Federal designation including:

- Potential loss of local tax revenues for land in Federal or State ownership
- Potential impact on municipal services such as road maintenance or provision of emergency response services for visitors
- Lack of reliable Payment in Lieu of Taxes (PILOT) to support town services for existing publicly owned lands
- Need for the process to be locally driven and supported
- Lack of information about actual incentives or support that could be provided to the towns, private landowners and forest-based businesses by the U.S. Forest Service and/or the State
- Need to understand how sustainable this project will be given the budgetary challenges faced by the Federal government
- Need for the State to better manage and maintain their own forests and recreational facilities
- Need for reduced regulations to support sustainable forestry
- Need for flexible Conservation Restrictions that allow landowners to decide whether the parcel should be managed to provide forest products (lumber, firewood, etc.), habitat protection, and/or recreational opportunities and the level of public access
- Need for towns to be able to review and comment on any legislation proposed for the Federal Designation to determine if they want to participate



*Concerns about costs of municipal services such as road maintenance and the need for better management of State-owned land were two key concerns identified during the public input process.*

## Framework

In response to the Key Issues and Concerns the following key elements form the Framework that would guide the drafting of State and/or Federal legislation to create a new model for forest conservation and natural resource based economic development if towns would like to pursue the creation of a Special Designation for the 21-town region.

1. All 21 towns would be eligible for participation but would need to “opt in” in order to receive incentives and to allow private landowners to access funding for Conservation Restrictions (CR).
2. Forest land remains in private tax-paying ownership to generate revenues for the municipality.
3. State and Federal incentives or payments for forest Conservation Restrictions with willing sellers only – no eminent domain and no Federal right of first refusal.
4. Flexible Conservation Restrictions based on a model CR (see Appendix B) that allow for forest management, habitat protection, passive recreation, agricultural activities, or a combination of those activities that are held by the State, town and/or local land trust.
5. Provision of tax incentives or technical assistance programs for sustainable forestry practices to private landowners and towns including preparation of forest management plans.
6. Promotion of forestry, forestry-related manufacturing (e.g. wood pellet facility) and/or research for new technologies related to forest-based products by providing State and Federal incentives (e.g. tax credits, grants, etc.).
7. Provision of incentives/funding by the State and/or the U.S. Forest Service to improve tourism infrastructure (recreational trails, access roads, campground facilities), collaborative marketing of the region, tourism business training, and other initiatives.
8. Provision of financial support by the State and/or Federal agencies for conversion of oil based heating systems in municipal buildings, schools, and other institutional facilities to wood chip or pellet based energy efficient heating systems to increase the market for low grade wood and to decrease municipal and school operating costs. <sup>1</sup>
9. Development of a Visitor/Education/Technical Resource Center to provide: (1) public education about forest management and the ecological services that forests provide; (2) technical assistance to private landowners to increase sustainable forest management practices; (3) research and development for wood products and to address climate change and invasive species; (4) a showcase for local wood products; and (5) for tourism services.
10. The Visitor/Education/Technical Resource Center building would be staffed and maintained by a partnership of the U.S. Forest Service and/ or the State under a long-term lease. The building and associated land would be owned by the State, a town, or a private individual.
11. Land for a Demonstration Forest would be leased from the State, a town, or private landowners.

<sup>1</sup> The average percent savings on fuel costs was 46% for Vermont schools heating with wood chips, as compared to oil, during the 2009-10 heating season.

12. Creation of a notification process to municipalities for new Conservation Restrictions on forested land funded by the U.S. Forest Service and/or State agencies and an approval process for Towns where the amount of permanently protected open space exceeds 40% or more of the land area of the town.

13. Establishment of “Municipal Cooperative Agreements” that provide annual grants to participating towns to support municipal services or operations related to the program such as road maintenance, conversion to energy efficient wood based heat, or emergency response related to tourism.

## A New Model

The proposed model focuses on privately-owned forests. One element of the model is to conserve important forest areas using Conservation Restrictions (CR or easement.). Willing landowners could sell their development rights under a Conservation Restriction. A Conservation Restriction permanently removes the right to develop a property, but preserves the right to conduct forestry operations, farm, log, create trails, or protect habitat. Landowners of qualified projects may be paid an amount close to or at the appraised value of the development potential of their land. This would keep land in private ownership and on the tax rolls while providing the landowner with funding to invest as they see fit. Land with a CR can be sold or passed on to another private owner. For towns, tax revenues collected on land with a CR in most cases would be equal to or greater than revenues collected from land enrolled in Chapter 61, 61A, or 61B. Chapter 61/61A/61B is a State program that reduces property taxes for landowners who agree to keep their land in forestry or farming. Forest management practices for land with a CR in many cases would be the same as those called for under Chapter 61. Designation under this model would not provide for eminent domain powers by the U.S. Forest Service or result in additional regulations. CRs would be held by the State, a town, and/or a qualified local or regional land trust.

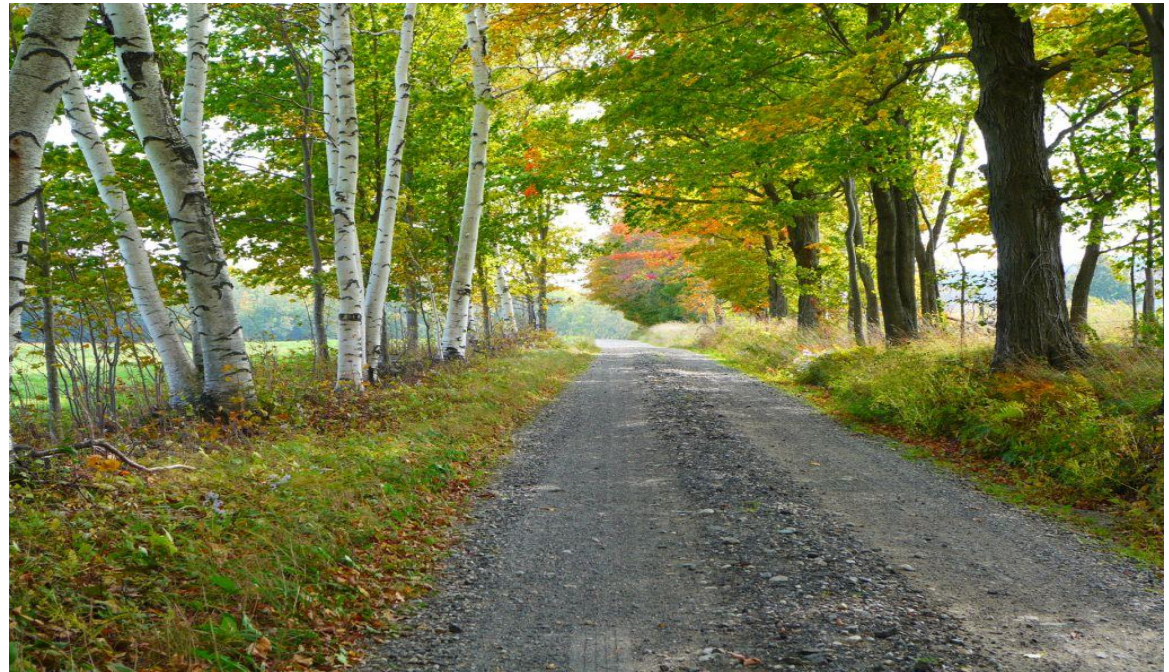
There are several other elements of the proposed model in addition to conservation of forests. The partnership could serve as a focal point to increase technical assistance to private landowners through the U.S. Forest Service State & Private Forestry and Research & Development branches as well as the State. This technical assistance would be focused on increasing sustainable forestry management practices and would address climate change and invasive species and pests that could threaten forests in the region. This technical assistance could also help with improving the management of State or town-owned forests.

In addition, there would be an emphasis on economic development related to forest resources and tourism. For example, the State has committed funding to a renewable wood heat initiative as a result of the Mohawk Trail Woodlands Partnership 21-town effort. This initiative will evaluate the forests in the 21-town region to determine the sustainable supply of forest resources. The project will also look at potential demand by evaluating municipal buildings and schools for conversion to wood heat from oil based heat. It will also survey homes and businesses for potential conversion to renewable wood heat. Finally, it will evaluate the feasibility of establishing a wood pellet



manufacturing facility in the region based on potential demand and different business models including a cooperative. This project has significant potential to create work for foresters and jobs in the manufacturing sector and to reduce heating costs for towns and schools.

Finally, the model would support the financial stability of towns in the region by creating a trust fund that is initially capitalized by the U.S. Forest Service and/or the State to provide some minimum municipal payment amount. “Municipal Cooperative Agreements” would provide annual grants to participating towns to support municipal services or operations related to the program, such as road maintenance, conversion to energy efficient wood-based heat, or emergency response related to tourism. This funding to towns could help offset potential increases in municipal services needed, if for example there is a significant increase in tourism, and/or to help offset some of the shortfalls in PILOT payments for publically-owned land.



*An element of the framework is the provision of grants or technical assistance programs for sustainable forestry practices to private landowners and towns.*







## Chapter Eight: Proposed Projects and Recommendations

Throughout the planning process for the Mohawk Trail Woodlands Partnership Project, participants at the regional and community meetings and Advisory Committee meetings have been asked how a potential designation could benefit the region. Specifically, participants were asked to provide suggestions in the following focus areas:

- Economic development projects
- Technical assistance for landowners
- Assistance to municipalities
- Conservation priorities
- Potential locations for a demonstration forest and/or forest-focused visitor center in the region

On the following pages is a compilation of proposed projects and recommendations, which have emerged from the planning process as well as from research conducted to complete this plan. It is envisioned that many of these recommendations could be pursued (and in some cases are being pursued) whether a federal designation moves forward or not, but that a partnership with the U.S. Forest Service could provide much needed funding and resources to move these initiatives forward. Below is a key to the abbreviations used for potential partners in the tables on the following pages.

BCC	Berkshire Chamber of Commerce
BRPC	Berkshire Regional Planning Commission
DCR	Massachusetts Division of Conservation Resources
DOER	Massachusetts Department of Energy Resources
EOEEA	Massachusetts Executive Office of Energy and Environmental Affairs
FCCC	Franklin County Chamber of Commerce
FLT	Franklin Land Trust
FRCOG	Franklin Regional Council of Governments
MCLA	Massachusetts College of Liberal Arts
MOTT	Massachusetts Office of Travel & Tourism
GSFABA	Greater Shelburne Falls Area Business Association
USFS NFS	United States Forest Service National Forest System
USFS R&D	United States Forest Service Research and Development
USFS S&PF	United States Forest Service State and Private Forestry
UMass	University of Massachusetts

## Economic Development in the Region

PROJECTS OR RECOMMENDATIONS	PARTNERS
<b>Forest Products</b>	
Conduct a feasibility study for locating a wood pellet manufacturing plant in the 21-Town region to determine the current and potential pellet market, availability of a sustainable supply of wood, and possible sites.	EOEEA, DOER, FRCOG, BRPC, USFS R&D
Provide financial and technical assistance to towns, non-profits, businesses, and homeowners to convert existing heating systems to high-efficiency wood heating systems.	EOEEA, DOER , USFS R&D
Build local markets for wood products, including those made from low-grade wood. Develop a marketing campaign for locally-produced wood products, modeled on successful buy-local food campaigns.	EOEEA, DCR, USFS R&D, UMass
Provide funding for new forest products business start-up costs and for upgrades to equipment at existing businesses.	DCR, USFS R&D
Provide technical assistance to forest product businesses including training on low-impact logging techniques and portable sawmills, and marketing and business plan development.	DCR, USFS R&D
Conduct a study of the local wood industry to determine equipment, infrastructure and marketing needs and strategies to address them.	DCR, UMass
Conduct education and outreach to landowners and the public about the benefits of forest management and sustainable forestry practices.	DCR, USFS S&PF, FLT, UMass Extension
<b>Tourism</b>	
Provide funding for outdoor recreation tourism infrastructure improvements, including accessible trail development and maintenance, public restrooms, parking, signage, and maps.	EOEEA, DCR, USFS NFS
Work with local and regional partners on collectively marketing the region. Bring together tourism and outdoor recreation businesses to develop travel packages, and provide training and business assistance.	DCR, MOTT, business associations and chambers of commerce
<b>Ecosystem Services</b>	
Provide assistance to interested landowners with accessing carbon markets and other ecosystem markets as applicable. Provide education and training for foresters and landowners on best practices in forest management for carbon sequestration and other ecosystem services.	DCR, USFS S&PF, USFS R&D

## Economic Development in Specific Towns

During the community meetings, participants were given the opportunity to identify specific economic development projects that would benefit their town. Following are the town-specific projects identified.

TOWN	PROJECTS OR RECOMMENDATIONS
Adams	Create a campground and visitor center at Greylock Glen.
Charlemont	Work with the Regional Health Agent and the DEP to obtain water quality records of existing public water supplies in Town to develop strategies for increasing the water supply needed in the village center to support new development and redevelopment related to tourism.
	Determine a funding source to pay for police during the rafting season on the Deerfield River.
	Improve and create visitor amenities such as parking, public restrooms, ATMs, and trash collection.
	Create a visitor/education/technical resource center in one of the vacant downtown buildings.
Cheshire	Create links from the rail trail to conservation lands, and extend the trail north.
Monroe	Develop a designated paid parking area for Deerfield River users, with restrooms and possibly a food stand. Rafting companies could pay for reserved parking spaces and the facility could provide revenue to the town.
North Adams	Develop a North Adams entrance to the Mt. Greylock State Reservation.
	Complete design and pursue construction of a bike/ped path that will serve as an extension of the Ashuwillticook Rail Trail linking the city with Adams to the south and Williamstown to the west.
Savoy	Re-open and expand the Shady Pines campground.
	Provide assistance for trail development and maintenance.
	Create improved or additional signage to highlight attractions, tourism and recreation in Savoy such as fishing, hiking, hunting, and snowmobiling.
Williamstown	Provide planning and implementation assistance to connect existing trails.
	Complete design and construction for a bike/ped path in Williamstown that will lead to future extension of the Ashuwillticook Rail Trail in North Adams.

## Technical Assistance / Research and Development in the Region

PROJECTS OR RECOMMENDATIONS	PARTNERS
Conduct research and provide technical assistance to landowners and foresters on invasive species, climate change impacts and adaptation, and emerging best practices in forest management.	DCR, USFS R&D, USFS S&PF, UMass, Williams College, MCLA, Licensed consulting foresters
Provide funding and assistance to landowners for writing forest management plans.	DCR, USFS S&PF, Licensed consulting foresters
Conduct research on new wood product technology.	DCR, USFS R&D, UMass
Improve the forest management of the State forests, including road, trail and facility maintenance.	DCR, USFS S&PF

## Municipal Assistance in the Region

PROJECTS OR RECOMMENDATIONS	PARTNERS
Provide maintenance assistance for town-owned and State Forest roads.	DCR, USFS S&PF
Provide funding for equipment and training for fire departments and first responders related to tourism.	DCR, USFS S&PF, EOEEA



*Forest areas surrounding water bodies were identified as priority protection areas*

## Land Protection in the Region and in Specific Towns

When asked about land protection priorities in their town or the region as a whole, the following priorities emerged:

- forest areas surrounding water bodies
- wildlife corridors and BioMap2 Core Habitat
- recreation corridors and trails

Town-specific land protection projects and priorities were also identified during the community meetings, shown in the following table.

TOWN	LAND PROTECTION PROJECTS AND PRIORITIES
Colrain	Green River Valley
	West Branch of the North River / North River Watershed
Heath	Funding and technical assistance to manage Town-owned conservation land
Rowe	Re-establish communications with Yankee Rowe regarding the future of the approximately 2,000 acres of forested land surrounding the former nuclear power plant site. This land is not currently protected.
Savoy	Hiking corridors
	The old Shady Pines campground
	Areas surrounding sensitive water bodies
Shelburne	Old growth forests
	Wildlife corridors along the eastern part of town

## Visitor / Education / Technical Resource Center

Through discussions at the community meetings and with the Advisory Committee, the concept of a visitor center for the Mohawk Trail Woodlands Partnership 21-Town region evolved into an idea for a center that would not only provide information to visitors about the region, but would also provide educational programming for the communities in the region, be a clearinghouse for technical assistance for landowners, and a showcase for local wood products. Following are some of the functions that the center could serve. It is envisioned that the center would be staffed by forestry experts who could be a resource to visitors, residents, and landowners interested in forestry.

POTENTIAL VISITOR/EDUCATION/TECHNICAL RESOURCE CENTER POTENTIAL FUNCTIONS, PROJECTS OR RECOMMENDATIONS	PARTNERS
Provide information to visitors and residents about the outdoor recreation and nature-based activities in the region, as well as local accommodations and businesses.	SFABA, Berkshire Chamber of Commerce, Franklin County Chamber of Commerce, Mohawk Trail Association, MOTT
Provide technical assistance to landowners about forest management (see also Technical Assistance / Research and Development).	DCR, USFS S&PF, UMass Extension
Create educational exhibits and materials about the forests of the region and sustainable forestry practices (see also Economic Development).	DCR, USFS S&PF, FLT, UMass Extension
Develop educational programming for schools about the forests of the region and their benefits, including sustainable forestry practices, ecosystem services and tourism.	DCR, USFS S&PF, Williams College, MCLA
Display local wood products with information about where each product came from and who made it.	DCR, USFS R&D, GSFABA, FCCC, BCC, wood product businesses and artisans
Use local wood in the construction/renovation of the visitor / education / technical resource center.	EOEEA, DCR, local landowners and wood product businesses

The location for a visitor center was also discussed during community meetings and at the Advisory Committee meetings. There was general consensus that the center should be located either on Route 2 or within easy access from Route 2. It could be housed within an existing building or be a newly constructed building. As noted in the table above, there is a strong desire to make the center a showcase of local wood, including as part of the construction or renovation of a building for the center. The idea of housing the center within a school, such as the Mohawk Trail Regional School in Buckland, was also suggested as a way to better leverage the educational component of the center.

There were also several specific places suggested for the center, listed to the right. It is important to note that these are just suggestions and more study is needed to determine the feasibility and appropriateness of using any of these locations.

TOWN	LOCATION
Adams	Greylock Glen
Buckland	Mohawk Trail Regional High School
Charlemont	Charlemont Inn
New Ashford	Former Brodie Mountain Ski Area
Savoy	Former Shady Pines campground

### Demonstration Forest

A demonstration forest in the region could serve as both an educational tool and a research laboratory. Visitors, school groups, landowners, and residents could learn about forests and different forestry practices. Partnerships between the schools in the region could result in stimulating research and training opportunities for students interested in careers in the forestry industry. Forestry businesses could benefit from demonstrations on new logging techniques and equipment.

Several themes about the ownership structure of a demonstration forest emerged from the public outreach for this project including:

- The U. S. Forest Service could partner with a private landowner to focus on education, research and technical assistance for private forest landowners.
- Existing State Forest land could be utilized for a demonstration forest and could serve as a model for improved State Forest management in the region, a need that was repeatedly expressed throughout this project.

Several specific locations were suggested as possible sites for a demonstration forest, listed to the right. As with the visitor center, these sites require more study as to their feasibility and appropriateness for a demonstration forest.

TOWN	LOCATION
Adams	Greylock Glen
Charlemont	Mohawk Trail State Forest
Heath	Town-owned conservation land
Williamstown	Partner with Williams College to utilize the Hopkins Forest

### Conclusion

The Mohawk Trail Woodlands Partnership Advisory Committee recommends that the 21 towns consider a Special Designation. This Special Designation would recognize the 21-town region as an important area and create a new model for forest conservation and natural resource based economic development. A primary purpose of a State and Federal forest designation would be to obtain additional financial and technical resources for the 21-town region. The community and regional meetings held for this project identified the need and desire for additional assistance to: 1) increase natural resource-based economic development; 2) improve the fiscal stability of municipalities; 3) support sustainable forestry practices; and 4) conserve forest land. This Chapter summarizes the many projects and recommendations that the Partnership can pursue and Chapter 6 outlines other potential benefits that a Special Designation could provide. A Special Designation can support collaboration between towns and Federal, State, and regional and organizations to advance the goals of the 21-town region with respect to natural resource based economic development and forest conservation.