



# MONADNOCK REGION FUTURE:

*A Plan for Southwest New Hampshire*

2015

Prepared by Southwest Region Planning Commission

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# TABLE OF CONTENTS

FORWARD.....	1
INTRODUCTION.....	3
WHAT WE HEARD.....	7
VISION FOR THE FUTURE.....	14
PLANNING FOR THE FUTURE.....	15
COMMUNITY VITALITY.....	18
ECONOMIC PROSPERITY.....	32
STEWARDSHIP.....	49
PREPAREDNESS.....	65
IMPLEMENTATION.....	79
APPENDIX.....	94

# Small Towns, Large Questions

- Forward By Howard Mansfield

ON A FEW ACRES IN MY TOWN, *scientists are listening deep into space, sifting the static, trying to find the origin and the end of the universe. The big white dish of the radio antenna has the presence of a question mark.*

*Just down the road from the observatory, Thornton Wilder wrote Our Town more than 75 years ago, when the universe as we knew it was a smaller place, but the questions we all ask were just as large.*

*At the end of act I, Rebecca Gibbs tells her brother George how the minister addresses a letter: "It said: Jane Crofut; The Crofut Farm; Grover's Corners; Sutton County; New Hampshire; United States of America; Continent of North America; Western Hemisphere; the Earth; the Solar System; the Universe; the Mind of God — that's what it said on the envelope... And the postman brought it just the same."*

*The New England village, Grover's Corners, was nested securely in a series of ever larger spheres.*

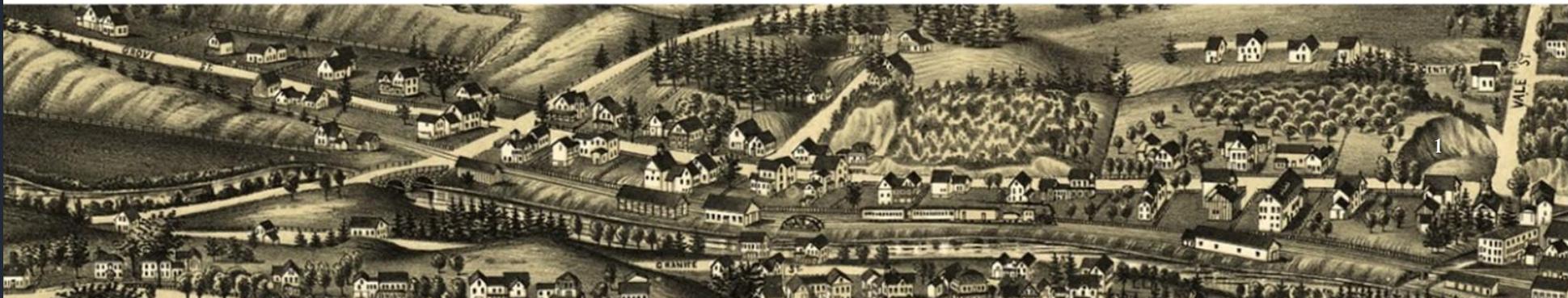
In modern cosmology, the universe dances. Nothing is fixed. Time bends. The short story of our settlement here in America tells a similar story: it's a constant nervous migration. Many of the villages we praise have been on the move most of their lives.

Open almost any guidebook or history of New England written in the last 250 years and you will find the village praised as "one of the most delightful prospects which this world can afford," as Yale president Timothy Dwight wrote of his travels in the 1790s. A place possessing the fitness and poise of a clipper ship, "the highest and choicest beauty," as the great landscape architect Frederick Law Olmsted said in the late 19<sup>th</sup> century.

Such praise casts the village as a beauty-pageant winner, all dressed up with no place to go. The village is seen as a finished work. But these villages, like all American places, are fluid, mercurial. Some were settled first on a hill, then moved down by the water to run the mills. When the railroad came, they followed the rails, and when the automobile came to rule, they slopped across the landscape in malls, condos, and food joints. At its debut in 1935, Yankee magazine lamented a New England "about to be sold, to be 'swallowed inter' a sea of chain stores, national releases, and nationwide hookups."

Some towns were a small Pleiades, a cluster of a half-dozen little villages, which was soon eclipsed by a growing central village, which itself burned brightly until the auto age.

Other villages are the story of the rise and fall of one commodity: clothespins, shoes, rocking chairs, buggy whips. American places are often but a rumor of community wrapped around the commerce of the moment. Walk a few rods into the woods around here and you will find the cellar holes of farms and small villages that long ago failed.



To the many villages pursuing a revival, this history is like the old joke: The bad news is that these villages have changed, and the good news is that they can change again. We are a restless people, suckers for those magazine lists of the “Best Ten Towns to Live in This Week.” “The lesson is this,” advised one real estate wizard, “when migration turns to a new region, do not clutch the dying past. Let go and move on.” We don’t settle a place as much as we experiment with it.

Some towns are as imperiled as the family farm, as sitting down to dinner together with the family – with no appliances talking at you. Many beautiful, important places are being lost; a few will be saved. In your lifetime you have likely seen small towns crumble like sand castles on the beach.

Tremendous forces are working against small communities. These have been well documented: the car, the TV, the net, the automatic teller machine, the entire growing electronic cocoon. We are more invisible to one another. Our inventions have atomizing effects and reinforce isolation. They celebrate individualism and starve the commons.

Every public policy we have set in motion since World War II works against the town: the model zoning codes, the funding and building of highways, the post office’s eagerness to move from town centers. We have built a machine to create sprawl and it is wickedly successful. We have taken our penchant for migration and magnified it a hundredfold. We love our cars and our roads more than our public places.

Against these odds, people are working to save small towns using innovative approaches like community loan funds, land banks, stewardship programs, and old-fashioned volunteerism with long committee hours. They are trying to stop sprawl and find a better way to build. Part of that bad news/good news joke is about newcomers in town:

THE VILLAGE IS SEEN AS  
FINISHED WORK. BUT  
THESE VILLAGES, LIKE  
ALL AMERICAN PLACES,  
ARE FLUID, MERCURIAL.

Even after this long antivillage era, the order and repose of many villages has survived. These villages are a story about that most un-American attribute: limits. They are built of a few simple materials, gathered in an ensemble about the streets and commons. Seen from afar, the New England landscape presents a harmonious prospect of village, farm, and forest, another set of nested spheres.

Yes, they don’t know the stories and old ways, but they also don’t know that things can’t be done. Often, in partnership with the oldest residents, they take on the toughest challenges.

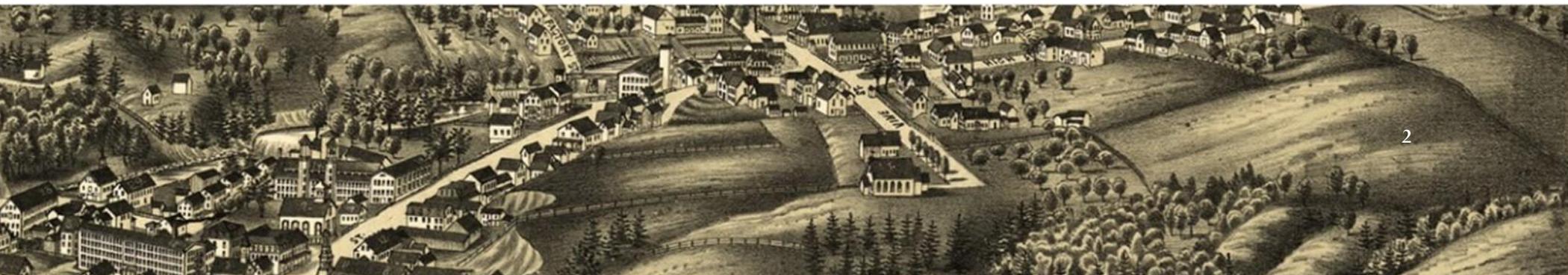
They see that the grace the guidebooks have spoken of is still there. Time and again they say: I lived out west, down south, etc. – but when I came here, I felt as though I were coming home. I felt as though I had always lived here.

From the top of one of our blueberry hills (which we proudly call mountains) you can see the white spire of the meetinghouse and the main street of the village, and at times you can see the big white dish poking up among the trees, moving on its quest. The Universe. The Mind of God.

That’s how we live these days. A small town riding in a universe expanding, racing away from the first moment of time, the big bang, to – what?

The astronomers have their questions and we have ours. Will these towns survive? The answers from both searches will be big news.

— *Howard lives in Hancock. He’s the author of seven books, including In the Memory House and Dwelling in Possibility: Searching for the Soul of Shelter. This essay first appeared in Yankee Magazine.*



INTRODUCTION



# INTRODUCTION

The Southwest Region is many things - natural beauty, arts and culture, historic villages, working landscapes, outdoor recreation, diverse economy, and, perhaps most importantly, a community of capable and highly-engaged residents. These assets - the things we value most about where we live, work and play in the Region - are both products of and subject to change.

By design and chance, change has continually shaped and transformed the Region's landscape. What was once open agricultural land in the early 19<sup>th</sup> Century, is today densely forested. The rise of the automobile and, more recently, the Internet have allowed for greater mobility and flexibility in where people choose to live and work as well as what they do with their spare time. The population boom that characterized the second half of the 20<sup>th</sup> century, has given way to dramatically slower growth. While these changes are inevitable and continual, they do not have to come at the expense of our greatest assets.

In 2015, the challenges facing our Region are unprecedented. An aging population, failing infrastructure, post-recession economy, outmigration of youth and families, and stretched state and local budgets, are merely a sample of the wide-ranging issues we are confronting. However, in these challenges lies great opportunity. Through effective planning and collaboration, communities can adapt and prepare for the future while still preserving the things that make our Region special.

Planning requires anticipating change, understanding relationships among forces of change and our community, and finding consensus on the best course of action. Our ability to prepare for and adapt to future conditions, while maintaining our unique character and identity, depends on the collective and individual action of the Region's 34 communities. In the wake of present day challenges, we must revisit and reexamine the solutions of the past together, to determine a course of action for meeting the needs of the future.

The Southwest Region Planning Commission (SWRPC) developed this document to provide information and guidance to anyone with an interest in planning for the future of the Southwest Region. This Plan maps out a vision for the future based on an understanding of the Region's assets and opportunities, ongoing initiatives and current challenges. It encourages the reader to think broadly about the Region and the factors affecting its success, and presents strategies that can enhance current efforts, as well as promote new and emerging opportunities.

While this Plan is advisory in nature, we are hopeful that it will stimulate discussion, action, and possibly, the exploration of new ways of doing community business. In particular, we hope it will serve to promote regional thinking, coordination, and action. In an increasingly connected society and a time of fiscal challenges, it is becoming ever more apparent that the well-being of our communities is tied to the well-being of the Region as a whole.



## PLAN STRUCTURE

This Plan divided into six sections. A brief overview of each section, in order of how they appear in the document, is described below.

- **What We Heard:** Following this *Introduction* is a summary of the extensive public outreach that was a critical component of the Plan’s design and development.
- **Regional Vision:** A *Vision Section* establishes an ideal future for the Region based on the priorities and concerns identified throughout the outreach process.
- **Planning for the Future:** The main body of this Plan is structured differently from previous regional plans and from the traditional master plan format. Instead of organizing content around topic areas, such as transportation, economic development, natural resources, etc., it is organized around the themes of *community vitality, economic prosperity, stewardship, and preparedness*.

Each section discusses the major challenges facing the Region around the theme area and identifies opportunities for addressing these issues and needs. Included within each section is information on what communities can do to support the theme area.

- **Implementation:** Concluding this Plan is an *Implementation Section*, which identifies strategies and action items that serve to support or advance the vision, goals, and objectives identified in the Plan. These strategies are for the Region’s municipalities, organizations, institutions, businesses and others to consider pursuing or supporting.
- **Appendices:** The *Appendix* of this document contains a number of technical plan components that can be used as reference for particular topics including housing, transportation, economic development, natural resources, water infrastructure, climate change, energy, and broadband.

## PLAN DEVELOPMENT

SWRPC is one of nine regional planning commissions (RPCs) in New Hampshire that provide technical planning assistance and coordination on ‘larger than local’ issues to municipalities. One of the responsibilities of an RPC is to “prepare a coordinated plan for the development of a region, taking into account present and future needs...” (NH RSA 36:45).

Since forming in 1971, SWRPC has developed and maintained a Plan for the Region. It has also undertaken several studies and created numerous topic-focused plans covering issues as wide-ranging as housing, transportation, economic development, broadband, and natural resources. As an advisory organization, SWRPC is not invested with the authority to establish policy or regulation; nor, is it within its mission to do so. These Plans are intended to be resources for communities and other partners in the Region to use in local decision making and planning.

In 2012, New Hampshire’s RPCs received a three-year commitment of support from the federal *Partnership for Sustainable Communities* to prepare and update their individual regional plans. This initiative, known as *Granite State Future*, emphasized a holistic and integrative approach to planning that involved extensive public outreach and engagement. It also supported coordination efforts between and among regions and multiple state agencies and partners.

Within the Southwest Region, SWRPC assembled a Leadership Team composed of representatives from diverse sectors, organizations, and locales in the Region to serve as advisors to the planning process. This team met quarterly over the Plan’s development to review as well as share information and feedback with SWRPC staff. Staff also sought the guidance of SWRPC’s Board of Directors and its Natural Resources, Economic Development and Transportation Advisory Committees throughout the development of this Plan.

## SOUTHWEST REGION OVERVIEW

The Southwest Region is geographically defined as the 34 municipalities in the southwest corner of New Hampshire that comprise all of Cheshire County and parts of Hillsborough and Sullivan Counties. According to the U.S. Census Bureau, there were 100,751 people living in the Region's 976 square miles in 2010 - roughly 103 persons per square-mile. Municipal populations ranged from 23,409 in the City of Keene to 224 in the Town of Windsor. Excluding Keene, the average town population size is 2,321.

A central and defining feature of the Region is Mount Monadnock, which rises 3,165' above sea level. The Mountain and its highlands shape the landscape, which is rolling hills and valley floors. Forests cover 83% of this land with rural and suburban residential development emanating from village centers and small downtown areas. With the exception of Keene and other small downtown centers, much of this development is dispersed with one house for every ten or more acres.

While a strong sense of local identity defined by municipal boundaries prevails, there is variety in where people work and shop, have social connections, and spend leisure time. Mount Monadnock and its highlands bisect the landscape into two sub-regions. One is dominated by the City of Keene as an employment, commercial and population center and the other is a more linear configuration of the Contoocook River Valley's population centers of Peterborough, Jaffrey, and Rindge. The majority of the Region's largest employers are located in these areas.

Approximately, 23,052 people (65% of the working population) live and work in the Region. Almost half of commuters travel less than 10 miles from home to work. Yet, there are approximately 5,500 workers or 13.5% of the Region's workforce that travel greater than 50 miles on a regular basis.

*More detailed information about the Region's housing, transportation, economic, and natural resource sectors is included in the following sections as well as in the Appendix of this document.*

FIGURE 1. MAP OF SOUTHWEST NEW HAMPSHIRE



- ✓ **100,751** Residents
- ✓ **976** Square Miles
- ✓ **44.7** Median Age
- ✓ **40,837** Residents Work
- ✓ **23,052** Live and Work in the Region
- ✓ **35,754** People Work in the Region
- ✓ **\$62,118** Median Household Income
- ✓ **45,744** Housing Units

WHAT WE HEARD



This page: Images from SWRPC's outreach efforts throughout the regional planning process.

## WHAT WE HEARD

In developing this Plan, SWRPC sought the opinions, ideas and perspectives of hundreds of residents, workers, and/or visitors of the Region. Early on in the process, we recognized that those who live and work here could provide valuable insight into the needs, concerns, and changes affecting our Region's communities. We also recognized that collecting this input from a diverse array of voices and perspectives would need to involve nontraditional forms of public participation and engagement.

Equipped with this knowledge, we embarked on one of the most extensive public outreach efforts undertaken by SWRPC in the Region. These efforts were largely focused on two questions - 'What do you like best about where you live?' and 'What could be better?' They were designed to ensure that a variety of individuals, not just those who attend traditional public meetings, could be a part of the process. Instead of expecting people to come to us, we went to them. By holding small focus groups in familiar settings for participants, we were able to create safe spaces for dialogue. We limited access barriers by holding public meetings in all reaches of the Region and offering alternative ways to share feedback and information.

The box to the right highlights the variety and range of outreach activities we undertook throughout the fall of 2012 and summer of 2013. In addition to the efforts listed, we utilized web-based tools, including an online survey and map forum, to provide an alternate way for citizens to share their input. We reviewed and analyzed the vision sections of the Region's local master plans to gain a better understanding of community goals and desires for the future. We also sought the ongoing input of diverse stakeholders serving on SWRPC's Board of Directors and advisory committees.

The results of these conversations were collected and analyzed by SWRPC staff, who identified the primary themes and topics that were most frequently mentioned. A brief summary of the key findings are documented on the following pages and a more detailed overview of this outreach is included in the Appendix of this Plan.

## PLAN OUTREACH EFFORTS (2012-2013)

### COMMUNITY CONVERSATIONS

- ✓ Facilitated 4 listening sessions, which were open to the public, in each corner of the Region.
- ✓ Partnered with NH Listens to conduct a listening session in the City of Keene.

### FOCUS GROUPS

- ✓ Traveled to different organizations and community places to conduct 13 focus group discussions with persons of different backgrounds, ages, and abilities (e.g. young professionals, seniors, individuals with disabilities, families, college students, etc.).
- ✓ Conducted a series of 8 topic-oriented focus groups with diverse and knowledgeable stakeholders. Topics included energy and climate change, housing, transportation, economic development, public health, natural resources, working landscapes, water infrastructure.

### SURVEYS

- ✓ Surveyed individuals at over 17 fairs, festivals and community events across the Region.
- ✓ Partnered with the University of New Hampshire Survey Center and the state's eight other regional planning commissions to conduct a household telephone survey of 2,935 adults statewide, with oversampling in the Southwest and Upper Valley Regions.

### SUGGESTION BOXES

- ✓ Distributed and collected responses from 30 suggestion boxes, which were placed in locations, such as stores, cafes, libraries, schools, etc., in each of the Region's communities.



We asked you, 'What makes the Southwest Region a great place to live?' Here's a sample of what we heard.

*"I enjoy the scenery of all the historic buildings along the ponds. I also enjoy the hospitality at the General Store. But, more importantly I love all the friendly townsfolk that complete the community." - Harrisville Resident*

*"Friendly people, healthy environment. Diverse mix of farms, technology, and manufacturing." - Jaffrey Resident*

*"Rich in cultural history, natural areas, and the arts." - Keene Resident*

*"The Camaraderie. People come together when they are needed." - Antrim Resident*

*"The school and our gem of a library. Both are community hubs, hearts of the community, to be held onto." - Stoddard Resident*





*“The relatively safe environment in which to raise a family. We have open space, forests, clean air and good communities.”*

*- Dublin Resident*

*“The abundance of open space and protected land for plants, animals, and humans to thrive. Undeveloped land helps maintain a food source, and cleans our air and water.”*

*- Hancock Resident*

*“Maintains a rural atmosphere while offering varied amenities (art, music, food, mountains and streams).” - Peterborough Resident*

*“Rural character and citizen volunteer ethic”*

*- Nelson Resident*

*“You can take a short drive and either be in a city or in a country location. We have the best of both worlds close together.”*

*- Swanzey Resident*



# What do people like best about the Region?



## COMMUNITY

- *Strong sense of community involvement & engagement*
- *Friendly, supportive people*
- *Feeling of safety*
- *Local control & decision making*
- *Historic preservation*



## RURAL LANDSCAPE

- *Quiet, rural atmosphere*
- *Scenic Beauty*
- *Unique regional identity*
- *Slow to moderate growth*
- *Rural but not remote*
- *Noncommercial appearance*



## RECREATION

- *Parks, trails & green space*
- *Easy access to outdoor recreation*
- *Availability of cultural activities & opportunities*
- *The variety of shops and restaurants*
- *Main Street in Keene and other downtown areas*



## NATURAL RESOURCES

- *Land in conservation & open space*
- *High quality natural resources such as clean air & water*
- *Mountains, forests, lakes & rivers*
- *Working landscapes*
- *Wildlife*

# What could be most improved about the Region?



## ECONOMIC OPPORTUNITY



- More job opportunities of a livable wage for diverse skills
- Job readiness & skills training
- Better promote tourism
- More diverse businesses
- Improved infrastructure, including broadband
- More things to do for all ages that are affordable
- Expand the local food system(s)
- More equitable tax structure



## TRANSPORTATION



- More housing located near transportation and services
- More affordable housing throughout the Region
- More housing options and types in good condition



## HOUSING OPTIONS

- More transportation options
- Improved roadway infrastructure
- More safe walking & biking infrastructure
- Increase trail connectivity



## RESOURCE MANAGEMENT

- Prevent severe flooding
- Conserve working landscapes
- Protect water quality
- Protect wildlife habitat
- Increase building energy efficiency



This plan is guided by a **VISION** of the **SOUTHWEST REGION** where:

**THRIVING COMMUNITIES RICH IN CULTURE, EDUCATIONAL OPPORTUNITIES AND  
NATURAL RESOURCES, WORK TOGETHER TO SUPPORT A RESILIENT AND ROBUST  
REGIONAL ECONOMY, WHICH OFFERS RESIDENTS FREEDOM OF CHOICE AND  
EMBRACES OUR HERITAGE AND DISTINCT SENSE OF PLACE.**



## VISION FOR THE FUTURE

In the context of this Plan, a regional vision describes a desired future for Southwest New Hampshire in terms of quality of life, the natural environment, social systems, the economy, infrastructure, governance, health, and safety. It addresses the question, ‘What do we want the Region to be like in five, ten, twenty or more years?’ In addition to painting a picture of an ideal future, this vision strives to inspire support for and action in pursuit of its attainment.

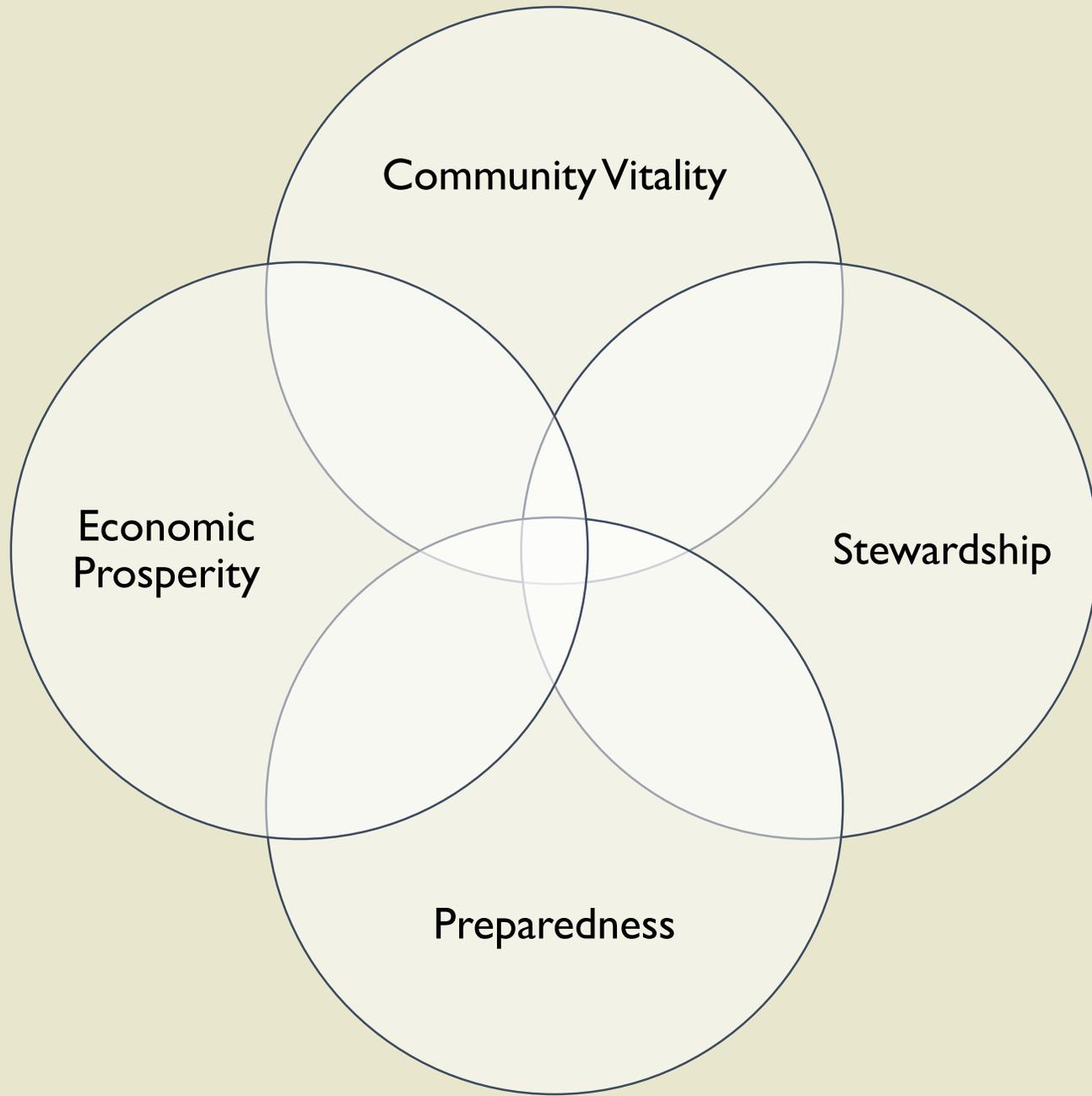
The Regional Vision established for the Southwest Region builds on the public input gathered throughout the planning process. The previous section of this Plan, *What We Heard*, illustrates some of the key themes that arose from our vast array of outreach efforts. Regardless of age, background, or place of residence, those we engaged in conversation often agreed on what makes the Region a great place to live. They also raised similar concerns and hopes for the Region’s future.

Drawing from these areas of widespread agreement, SWRPC staff worked with its Leadership Team to develop a vision that reflects what is valued most about the Region today as well as what could make it even greater in the future.

*This Plan envisions a Southwest Region where thriving communities rich in culture, educational opportunities and natural resources, work together to support a resilient and robust regional economy, which offers residents freedom of choice and embraces our heritage and distinct sense of place.*

This vision, which is broad and far-reaching, is supported by a number of interconnected factors. The succeeding sections of this Plan explore these factors in greater detail and outline potential strategies for communities and others to consider pursuing to ensure that this vision is achieved and maintained in the years to come.





## PLANNING FOR THE FUTURE

When we began this planning effort, we recognized that many of the issues affecting quality of life within our Region are interconnected. For example, decisions about where people choose to live are often influenced by a variety of factors. These might include the availability of employment, housing that is affordable, community services, safe transportation options, high speed-Internet, etc. Each of these elements can play an important role in supporting individuals and connecting them to their community and the greater Region.

Planning for the future must be considerate of the dynamics between social, economic, and environmental forces. An integrative and comprehensive approach to planning helps to highlight the relationships between diverse elements and forces in a community and Region. However, traditional planning documents tend to be organized in a categorical fashion with chapters dedicated to individual topic areas such as land use, transportation, economic development, natural resources, natural hazards, energy, housing, etc. While this structure can be a useful approach to sharing information and discussing each subject area in greater detail, it can also be limiting.

In preparing this Plan, we chose a format that we feel balances the need for integrative planning as well as the need to disseminate information in an organized manner. We have structured the following sections of this document around the themes that we feel are most important to achieving the Regional Vision. Each of these themes is interrelated, and all are critical components of the Region's quality of life.

The following sections explore some of the most significant trends and challenges impacting these themes, which include *community vitality*, *economic prosperity*, *stewardship*, and *preparedness*. This information is intended to highlight issues that communities might consider as they plan for the future. Also included in these sections is information on potential solutions or opportunities for addressing these challenges.



COMMUNITY VITALITY



## COMMUNITY VITALITY

While many identify the Region with its most prominent physical feature, Mount Monadnock, it is much more than a mountain's backdrop. It is a collection of highly engaged communities that have built and fervently maintain strong identities and sense of place. When asked, 'What do you like most about where you live?' residents most commonly respond that it is the people and the small-town feel that they value the most. Whether you live in the Region or are just visiting, the sense of vibrancy and community is unavoidable - from the familiarity of the village general store to the buzz of the local transfer station to the well cared for historic buildings and community centers.

Unlike the physical landscape, which has changed continually over time, collaboration and camaraderie has been a constant defining feature of the Region. Somewhat isolated from the major cities of New Hampshire and New England, residents have long looked to their local communities as a source of support and have come to value interdependence as much as self-reliance. In a similar way, communities have relied on their residents to volunteer their time and resources to sustain important services such as town government and emergency services, and to participate in local-decision making.

This sense of community partnership extends beyond neighbors-helping-neighbors. Organizations and businesses within the Region often work together to conserve and leverage limited resources, and communities coordinate across boundaries to protect assets such as clean water and quality education.

However, our Region is experiencing demographic changes such as slower population growth, an aging population, and the outmigration of young adults that might impact the composition and vitality of our community life. The sections below describe some of these trends in more detail and outline ways municipalities, organizations, residents and others can promote, sustain, and grow vibrant communities in the wake of these potential challenges.



## SLOWING POPULATION GROWTH

The trend of high population growth that characterized much of the mid to late 20<sup>th</sup> century in the Southwest Region has substantially decelerated. Although our Region’s population of 100,751 grew by 54% between 1970 and 2010, the vast majority of this growth occurred before 1990. Prior to 1990, the Region’s population growth had far outpaced that of the nation. Since 2000, the population has grown by only 5%, well below the national average of 10%.

According to the most recent projections from the NH Office of Energy and Planning (OEP), this trend of slow growth is anticipated to continue into the future. These 30-year projections indicate both dramatically lower population growth and some declining populations over the short and long terms. OEP estimates that there will be a 6% increase in the Region’s population between 2010 and 2040, a growth of 0.2% per year (see Figure 2).

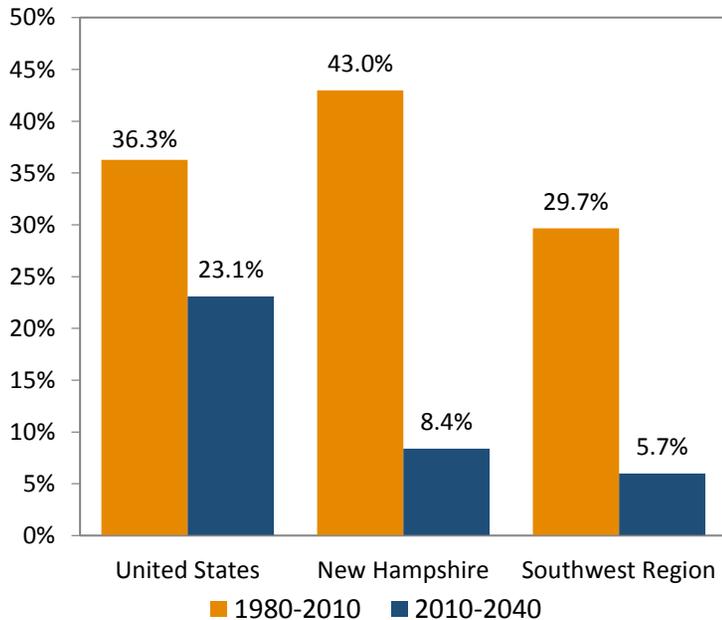
## AGING POPULATION

The proportion of the Region’s population that is 65 and older is growing more rapidly than any other age group. OEP estimates that this segment of the population will increase from 15% to 26% between 2010 and 2040.

This is a trend occurring throughout New Hampshire and the rest of New England. In the most recent Decennial Census, New Hampshire surpassed Florida in median age and advanced from the eighth oldest state in the nation to the fourth. As of 2010, over 80% of the Region’s municipalities had median ages exceeding the state median of 41.1 years.

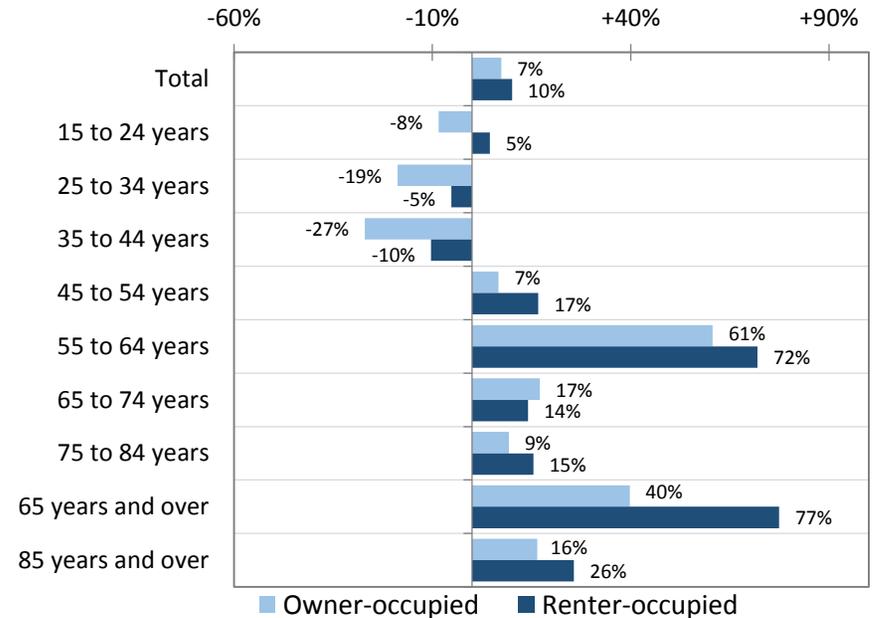
The aging population is apparent in the average age of householders in the Region. In 2010, 51% of owner-occupied households in the Region had householders over the age of 54, and 26% had a householder 65 years or older. Although total housing units have increased since 2000, younger householders are in decline, and older ones are growing (see Figure 3).

FIGURE 2. PAST AND FUTURE POPULATION GROWTH



Sources: NH OEP Population Projections; US Census Bureau Decennial Census

FIGURE 3. SOUTHWEST REGION CHANGE IN HOUSING UNITS BY HOUSEHOLDER AGE, 2000-2010



Source: US Census Bureau Decennial Census 19

## DECLINING SCHOOL ENROLLMENT

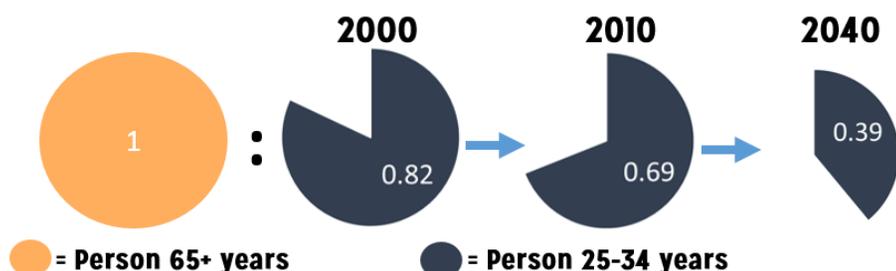
In contrast to our growing senior population, the number of children under the age of 15 in the Region decreased by 14% between 2000 and 2010. Most indicative of this trend is the decline in public school enrollments.

Public schools in the Region and across New Hampshire have experienced significant declines in K-12 enrollments in the past decade. Between the 2005/2006 and 2013/2014 school years, enrollment in the Region dropped by 17% or 2,520 students. Only two towns, Surry and Stoddard, added enrollment - an increase of 19 students. Over the same time period state enrollment dropped by 11%.

## LOSS OF YOUNG ADULTS

One of the most significant trends facing the Region, is the decline of young adults. Between 2000 and 2010, the Region's young adult and family-age population (ages 24-39) decreased by 14%. Over this same period, New Hampshire experienced a 10.6% net loss of 20-29 year olds. For every person age 65 and older in the Region in 2000 there were 0.82 persons age 25-34. This figure decreased to 0.69 persons in 2010, and is estimated to drop to 0.39 in 2040.

FIGURE 4. CHANGE IN THE NUMBER OF PERSONS 25-34 YEARS FOR EVERY PERSON AGED 65+ IN SOUTHWEST NH (2000-2040)



## ECONOMIC & SOCIAL IMPLICATIONS

Although these trends are not unique to the Region, they do present potential social and economic challenges for its future. Imbalanced growth in older populations could leave the Region vulnerable to a host of health care and social services costs without a productive base to support them.

As the aging Baby Boomer population approaches retirement, new workers will be needed to fill their places and, eventually, to take care of them. In addition, local governments will face challenges in providing social and health care services to this growing population of seniors. The NH Center for Public Policy Studies estimates that by 2018, health care will account for almost 24% of New Hampshire's Gross State Product - an increase from 13% in 1998. Although healthcare use varies by age and gender, it is becoming more expensive as people overall are receiving more care, more often. It is likely that these costs will only continue to rise into the future.

*Generational balance is important to maintaining and enhancing community vibrancy.*

Generational balance is important to maintaining and enhancing community vibrancy. Communities need younger workers and citizens, not just to support aging seniors but for their diverse knowledge, creativity and energy. The Region's businesses, industries, institutions, and organizations rely on the availability of a skilled workforce for sustainable and balanced economic growth. Local schools need younger families to support and advocate for the quality education that is needed to prepare future generations for success.

Communities also need older generations to share their unique experiences and skills with current and future residents. The identity of a place is rooted in history and the stories people tell about the area. The knowledge that older residents have acquired of a locality over time can be a tremendous resource for a community in planning for its future and in documenting and preserving its heritage.

### SUSTAINING COMMUNITY VITALITY

As our Region's population ages, the need for appropriate housing, transportation, health care, delivery and supportive services will continue to increase. While seniors and Baby Boomers generally want to grow old in their own homes or locale, many of our communities do not currently support the appropriate housing, social services, and transportation these older adults need to live independently. Nor do they support the housing or transportation preferences of younger generations, who are generally more inclined towards renting and short commuting distances.

Sustaining community vitality depends on our ability to anticipate change and respond appropriately. We should be prepared to meet the diverse needs of an aging population, and at the same time, identify opportunities to attract younger families and workers. Although cultural and generational differences exist between and among these groups, there are opportunities to make communities attractive and livable places for a range of ages, abilities, and income levels.

Solutions involve examining the services and amenities currently available in our communities to see if they meet the basic needs of residents. These features include safe and affordable housing options, convenient access to goods and services, and opportunities for social and civic engagement.

#### *Expand Housing Options*

To attract younger professionals and families and to accommodate those seeking to 'age in place,' communities might consider employing creative solutions that support the development of diverse and affordable housing options in proximity to service and employment centers. How we planned for housing in the past - an era when high rates of population growth and school enrollment caused some communities to place more limits on residential development, especially, on the types of housing that is attractive to or more affordable for younger or working people - may need to be reexamined. Some considerations for communities seeking to expand or enhance opportunities for housing are explored in the following sections.

#### *Ensure the Supply of Housing Meets Current or Anticipated Need*

- **The current supply and location of housing in the Region is not well aligned with the evolving preferences among different age groups.** Both younger and older populations generally tend to prefer, and to some degree require, housing that is smaller in size, and located near goods and services or flexible transportation options. However, the Region's housing stock is composed mostly of owner-occupied structures that are between 3-4 bedrooms (51%). Even though the majority of households (64%) are composed of 1 or 2 persons.
- **Nearly 1 in 3 housing units in the Region are older than 75 years old and lack characteristics that are conducive to aging in place or to individuals with limited mobility, such as bedrooms and bathrooms at the street level, entrances without steps, wide doorways, etc.** These older homes are generally more expensive to own, especially with respect to wintertime heating costs.
- **Communities can support the development of a more adaptable housing inventory** by creating a regulatory environment that allows for accessory dwellings and/or the conversion of single family units to multi-family units; supports innovative land use controls such as mixed use development; and, is clear and easy to navigate. In addition, communities might consider working with regional housing coalitions, the development community and other partners to rehabilitate the existing housing stock to better meet the needs and preferences of a variety of ages and abilities.

#### *Reduce Economic Barriers to Housing*

- **Irrespective of supply, many individuals face economic challenges fulfilling their housing preferences.** Traditionally, the home purchases of first time buyers would have enabled older homeowners who were selling their homes to downsize or seek alternative housing options. However, high levels of student debt, mediocre wage growth, rising property taxes, and lending standards can limit buying options for younger generations.

*“Good, affordable housing is the most fundamental requirement for living - you can’t focus on anything else until that’s taken care of.”* - Linda Mangones, CDBG Administrator at Keene Housing



## LOCATION IS KEY TO SUCCESS FOR KEENE'S BROOKBEND HOUSING

Location is often the key to success, and the site of the former Cheshire Homes located in Keene is no exception to this rule. Situated adjacent to public transportation, bicycle paths, shopping centers, community services, and employment, the neighborhood is opportune for workforce and family housing. Although, this site had been home to affordable rental housing since 1971, it was vulnerable to a host of issues, including loss of federal housing assistance.

Recognizing that the importance of this well-located housing resource and the effect its loss would have on the surrounding community, its owners sought to rehabilitate and redevelop it. This proved no easy task as several design and construction flaws were identified within the buildings. Dysfunctional floor plans, insufficient handicapped accessibility, and limited parking access were challenges for residents. Additionally, the buildings were not able to meet modern safety, energy, and housing regulation codes.

Because of time and funding constraints, the Cheshire Home proprietors and Board of Trustees decided to donate the property to Keene Housing in 2011. However, the estimated \$14 million rehabilitation project wasn't an easy undertaking, at least not without help. Keene Housing partnered with Southwestern Community Services (SCS), the City of Keene, Cheshire County, the State of New Hampshire and non-profit organizations to acquire the necessary funding. They relied on Low Income Housing Tax Credits through the New Hampshire Housing Finance Authority (NHHFA) and capital reserves to support 75% of the project. Additionally, two \$500,000 Community Development Block Grants (CDBG) from the New Hampshire Community Development Finance Authority (CDFA) helped to bridge remaining funding gaps.

In 2013, 75 housing units were entirely reconstructed to develop what is known today as Brookbend Housing. While additional units were not created, the goal of producing quality, energy efficient, attractive, and convenient affordable housing was met with enthusiasm from stakeholders, funders, the community, and, most importantly, the residents. The redeveloped site includes a playground, green space, and a community pavilion. Furthermore, it's estimated that the planning and construction of Brookbend generated about \$13 million in local commerce and jobs.

This project has been deemed a success, and has stimulated further discussion about other affordable housing projects in the Region. Keith Thibault, Chief Development Officer at SCS, emphasizes the importance of projects like this one. He notes, "Housing is an economic issue. Communities that embrace this and act accordingly are going to be better places to live."

- **High property taxes can be a substantial portion of housing cost burden,** and are an economic obstacle for both first-time home buyers and older home owners. Nearly every municipality in the Region has experienced an increase in their property taxes since 1990, and in 2010, the average equalized property tax rate for Southwest Region was \$22.51 per \$1,000 of valuation. Between 1990 and 2010, Cheshire County's average equalized property tax rate rose by 19%, a significantly higher increase than Hillsborough County's 5% and Sullivan County's 1%.
- **The rental market has grown less affordable in recent years.** Between 2000 and 2011, the Region's median monthly gross rent rose by 52% and rental vacancy rates fell below 3%, meaning renters are paying more with fewer options to choose from. Approximately 21% of renter households in the Region are paying greater than 50% of their income on rent alone.
- **Zoning ordinances and land use regulations can increase development costs** and can influence housing affordability in a certain area through requirements such as minimum lot sizes and density of development, road frontage, building setbacks, etc.
- **Communities can conduct an audit of local land use regulations** to review the impact that these laws might have on the cost of housing, and to determine if reasonable and realistic opportunities exist to construct workforce housing. Workforce housing can be viewed as housing affordable to households with an earned income that is insufficient to secure quality housing in reasonable proximity to the workplace.

*“If we want to promote individual self-sufficiency and independence, then we clearly need transport alternatives to support a significant proportion of the population.”*

- J.B. Mack, Monadnock Region Transportation Management Association

### *Enhance Access to Goods, Services, and Other Destinations*

Having safe and convenient options for accessing employment, goods, services, and social and recreational activities is integral to maintaining a healthy, vibrant community. While maintaining adequate roadway infrastructure is critical to enhancing safe access, it is also important to improve the travel options available for getting around the Region. These options are especially important in the Southwest Region, where low population density, hilly terrain, far distances between service centers, and limited public transportation are significant challenges to getting around. For many living in the Region, the only safe or practical way to access destinations, is by automobile. Some considerations for improving mobility and access to services in the Region are described below.

*In 2012, American households spent an average of \$8,998 or 14% of their income before taxes on transportation-related expenses.*

### *Expand Public Transportation Options*

- **Within the Region, public transportation in the form of fixed-route service is limited** to Keene and small portions of Hinsdale and Walpole. Most residents in need of transportation rely on family members and friends, or volunteer driver networks, such as those operated by the American Red Cross (ARC), Contoocook Valley Transportation Company (CVTC), and faith based institutions such as churches. These services, which primarily provide rides to medical appointments, meet only some of the demand for transportation options.
- **Residents seeking transportation options for commuting to work have fewer options available.** Only 0.9% (17.6 miles) of the Region's roadways are served by public bus routes, and night and weekend transit service is extremely limited. Aside from carpooling, there are few reliable and affordable travel options for commuters. The vast majority of residents in the Region (86%) rely on driving an automobile to get to work.

- As the population grows older and the ability to own or operate a vehicle diminishes, the need for enhanced mobility options will only increase. It is estimated that 1 in 5 individuals over the age of 65 in the Region are non-drivers and that this population tends to drive less. For individuals to maintain their independence and/or remain in their homes as they grow older, they need to have the ability to get to doctor appointments and the grocery store, and to connect with friends and others in the community.
- The solutions to addressing transportation needs and preferences need to be both cost effective and capable of adapting to changing demands. Currently, the state funding generated by motor vehicle fees and taxes in New Hampshire is restricted by statute to highway and bridge construction and maintenance programs. Funding for other modes of transportation such as public bus service, walking and bicycling infrastructure and rail comes primarily from federal and local funding.
- The financing tools available to local government to fund transportation include property taxes, bonding, or special revenue funding through user fees such as vehicle registration fees, parking fees, airport fees, or solid waste fees. A noteworthy example is NH RSA 261:153, which grants municipalities the ability to institute a surcharge on all motor vehicle registrations (up to \$5.00) to support transportation including transit services, sidewalks, bicycle paths, etc.



*A 2011 study showed that New Hampshire was tied for 4<sup>th</sup> place among the States with the lowest state funding for transit in the nation at \$0.32 per capita.*

## COALITION ADDRESSES REGION'S TRANSPORTATION NEEDS

Getting around the Monadnock Region without a car can be a challenge, even for the most capable of residents. Identifying the need for a creative and integrative approach to transportation planning, a coalition of organizations and individuals formed the Monadnock Region Transportation Management Association (MRTMA). MRTMA recognizes that residents want improved transportation infrastructure and healthier, safer, and more affordable travel options. Its members, who represent a wide array of interest areas, have been working to consider and respond to these needs.

Cooperation has propelled this organization to where it is today. The group acquired a grant through the New Hampshire Charitable Foundation to support the Rack It Up! Program: a project to increase the convenience of bicycling in the Keene area by purchasing and installing bicycle racks. This grant supported the purchase of 90 bicycle parking spaces. In addition, MRTMA's collaboration with local colleges, the City of Keene, community members, and other organizations helped elevate the conversation about sustaining and expanding intercity bus service in the Region. "Even though we're not a big urban place, the Region is isolated and [intercity transportation] is important to us" says J.B. Mack, a participant of MRTMA. This effort assisted in the creation of a Greyhound bus route between Keene and Boston, MA.

MRTMA also is focusing efforts on expanding the Region's park-and-ride availability. The only park-and-ride lot in the Region is located at Chesterfield Gorge, a 45-space parking lot off of Route 9 between Brattleboro and Keene. The MRTMA is seeking to change that by exploring the potential for a lot in Peterborough along the Greyhound Bus route that connects Keene to Boston.

The group wants others to know they are here to provide further advocacy, assistance, and support on transportation related topics. Mack continues, "Think of us as a resource for information on implementing sustainable and alternative transportation solutions for communities."

### *Increase Non-Motorized Transportation Options*

- **Depending on where you live and where you need to go, non-motorized transportation options in the Region are limited.** Sidewalks line approximately 5.5% (103 miles) of the Region's roadways and most are concentrated in downtown areas and some village centers. For even the most physically fit residents, bicycling can be a challenge. There are steep hills, narrow shoulders along roadways, variable weather, and few bicycle racks and dedicated bicycle lanes.
- **Some communities including Keene, Peterborough, Jaffrey, and Swanzey, have been establishing multiuse paths that can accommodate both bicycles and pedestrians** for recreational and daily trips. These pathways, are integral components of the Region's transportation system. They provide safe alternatives for travel between places and to downtown areas. They also promote opportunities for physical exercise and tourism. Currently, there are 45.4 miles of hard-pack or paved multiuse trails in the Region.

### *Integrate Mobility Considerations in Land Use Planning*

- **Local governments have the authority to create policies that can have an impact on mobility and accessibility.** Land use controls such as zoning ordinances and subdivision and site plan regulations allow local governments to guide the types of transportation modes available by way



of community design. Through these regulations, communities can determine a site's connectivity with neighboring land uses, decide whether multiple modes of transportation can be accommodated at a particular location, and guide how a site's design and layout interfaces with the transportation system.

- **Communities can adopt Complete Streets policies to improve walking, biking and transit conditions** as part of new capital improvement projects or even road maintenance activities. A Complete Streets policy provides a framework for ensuring that local decision makers, planners, engineers, and others involved with community development consistently design and operate the entire roadway and streetscape with all users in mind - including motorists, bicyclists, public transportation vehicles and riders, and pedestrians of all ages and abilities.

### *Encourage the Use of Broadband and Emerging Technologies*

- **The rise of the Internet has expanded the ways in which individuals can access goods and services from even the remotest of areas.** It has prompted a resurgence of delivery-models similar to those of the early 20<sup>th</sup> Century, when groceries and prescriptions were commonly delivered to the home and doctors would make house calls. With the expanding availability of the Internet to homes and significant advances in technology, many residents have options in how they can access certain goods and services. Doctors can remotely visit with and monitor patients in their home, eliminating the need to travel to access routine care. Individuals can order groceries, prescriptions, and other goods online at their convenience. They can also connect with friends and family from far away or conduct business and work from home.
- **However, these options depend on the widespread availability of high-performing Internet service.** Within the Region, there are still many areas that do not have access to adequate high-speed Internet. There is also a need for increased training on how to utilize and become comfortable with these services and opportunities.

## Promote Social and Civic Engagement

Although technological advancements have made distance less of a factor in people's daily lives, there is still a need for in-person connections and relationships. The presence of strong and diverse social networks can increase individual well-being by linking people more strongly to their community and to each other. It is through these face-to-face interactions, which may be formal (e.g. clubs or town committees) or informal (e.g. a group of friends meeting for lunch), that people have the opportunity to connect, interact and form social ties. These networks are especially important in rural areas, where your nearest neighbor could be a far distance away.

We are fortunate in the Southwest Region to have robust social and civic associations. Communities have historically relied on residents to volunteer their time and resources to oversee local government, operate fire departments and emergency services, raise funds for schools, steward natural resources and open space, among many other activities. Citizens have also played an important role in supporting the Region's nonprofit sector through volunteerism, charitable giving, advocacy, and other means of support. Through these connections and countless others, which have been built up over the years and passed down from generation to generation, the Region has developed a strong culture of civic and social engagement.

Investment in these networks will become even more critical in the future. As communities grow older in age, there will be fewer younger residents to assume volunteer positions. The expanding role of the Internet in our daily lives, despite its many benefits, could lessen the importance of relationship building or establishing community ties. People are also busier today, and their obligations to work and family life are not expected to decrease. This section explores opportunities for communities and others to sustain and increase social and civic engagement.



### *Create Space for Social Interaction*

- **Having space for residents to connect with each other, meet accidentally, or be engaged in conversation is important for community vitality.** In many communities public spaces for interaction include the local post office, general store, schools, farmers markets, community center, town hall, or faith-based institutions such as churches. Events, such as contra dances, bandstand concerts, pancake breakfasts, festivals, and community dinners, also provide an opportunity to gather and connect with others.
- **Communities should encourage the creation and preservation of inviting and safe spaces** for building and maintaining social and civic connections. They might consider expanding use of existing facilities such as the local school, library, or meeting hall to host additional programs or gatherings.

### *Encourage and Support Volunteerism*

- **Having volunteers of a variety of ages, abilities, and backgrounds active in a community enlarges the pool of skills, knowledge, and perspectives available.** The energy and insights that new volunteers offer to a community can be incredibly valuable. Particularly, in areas where there is limited participation from residents on boards and committees.
- **Some organizations and businesses in the Region have found ways to help individuals find the time to give back to the greater community.** The Works Bakery and Cafe in Keene will pay employees for up to 20 hours per year to volunteer at their favorite local non-profit. C&S Wholesale Grocers sponsors a “Dollars for Doers” program where the company donates one dollar for each hour of service up to \$1,000 to community organizations where their employees volunteer. There are many other examples of these employer-sponsored volunteer programs in the Region. These programs can serve as examples for businesses and organizations looking to strengthen community connections in the Region.

- **Organizations like the Monadnock Volunteer Center play an important role in identifying and connecting individuals with potential volunteer opportunities.** The Volunteer Center is a regional clearinghouse of both short and long term volunteer opportunities that citizens or organizations seeking to volunteer their time can utilize.
- **Time banks are an interesting model for people to volunteer their time and/or resources.** A time-bank operating in the Region is the People’s Service Exchange, based out of the Grapevine Center in Antrim. Participants in the program earn a ‘time credit’ by doing a service (e.g. chop wood, lend a ride to the store, paint a room, etc.) for another person. In return, they can utilize their earned or ‘banked’ credits to receive services from others.

### *Cultivate the Next Generation of Volunteers and Leaders*

- **The Region’s educational institutions are important resources for cultivating the next generation of community volunteers and leaders.** If they are not already, schools should consider promoting social and civic engagement as part of in-classroom activities and curriculum. Many of the Region’s high schools encourage or require students to participate in community service prior to graduating. Communities might consider partnering with local schools to recruit youth to serve on local boards and committees. There may be opportunities for multiple generations to volunteer together. Imparting the value of these social, civic and cultural networks early on is vital to sustaining them into the future.

*“It’s important to have appreciation for where you are and where you came from...contra dancing is special to New England, and it provides a greater community connection within the Region.”*

– Roger Treat, Nelson Contra Dance Coordinator



## TRADITION & CULTURE KEPT ALIVE ON THE DANCE FLOOR

The night is dark, but the room is filled with light, laughter, and fiddle music. The chairs that line the walls are empty because everyone is packed onto the dance floor, gearing up for the next round. It’s hot in here, but there isn’t a complaint to be heard. For most people, this is the regular Nelson Monday Night Contra Dance. There are no age requirements or income limitations. People flock to the dances for many reasons, but none surpass the encompassing sense of community.

A \$3 donation goes to paying the hall rental, and each week a community member volunteers to make a large batch of cookies. It’s hosted by the Monadnock Folklore Society (MFS), and it’s one of multiple contra dances in the area, along with Peterborough’s First Saturday Dance and Nelson’s Second Saturday Dance.

While there is some debate about the actual date of origin, contra dancing is a tradition that has carried on in the Region since the 1800s. In its most recent incarnation, the Nelson Contra Dance has been a consistent get-together at Nelson’s Town Hall for nearly 40 years. And some folks have been in attendance for much of that time.

For 30 of those years, Bob “Mac” McQuillen, was the beloved and acclaimed “boom-chuck” piano player/composer at the events, performing at any Nelson or Peterborough dance he could. The anchor of the music, fiddler Harvey Tolman, started as a fill-in and has been captivating contra-goers for a similar length of time.

Then there’s Don Primrose, who first became acquainted with the Nelson Contra dance as a kid. Don has been calling the dance with a warm, commanding voice for years now. But the floor is open to anyone who wants to call, dance, or play music. The official coordinator, Roger Treat, is an experienced bow-maker and fiddler and is always happy to see new faces.

In recent years, a renewed interest and commitment has encouraged the younger generations to engage in the fun and spirit of contra dancing. Once again, new and experienced dancers join hands to sustain the long-standing tradition of their community. In response to the desire of these young dancers and musicians, “Mac” and the MFS created the Johnny Trombly Memorial Scholarship in 2001- a fund designed to financially assist individuals under 18 years old who are interested in studying traditional New England contra dance music.

*Goal 1: The Region's communities will be vibrant and affordable places for people of all ages and abilities to live, work, and recreate.*



Objective A: Ensure the supply of diverse housing types that meet the needs and preferences of multiple generations, diverse abilities, and a range of income levels.



Objective B: Provide safe and convenient options for people of all ages, abilities, and income levels to access goods, services, and places of employment, education, health care, etc.



Objective C: Promote opportunities for social and civic engagement that foster relationship building and community involvement among a variety of sectors and populations.

## WHAT YOUR COMMUNITY CAN DO TO SUSTAIN COMMUNITY VITALITY:

## EXPAND HOUSING OPTIONS

- ✓ *Review local land use regulations and building codes to address potential barriers to housing diversity and affordability.*
- ✓ *Adopt innovative land use approaches such as performance standards, flexible zoning, environmental characteristics zoning, and others described in NH RSA 674:21.*
- ✓ *Repurpose or redevelop vacant lots and abandoned buildings located in or near village centers.*
- ✓ *Form a municipal housing commission pursuant to NH RSA 673:4-c and/or participate in regional housing coalitions.*
- ✓ *Establish a fund to support the development of new or the maintenance of existing affordable housing units.*
- ✓ *Stay informed of regional and local housing trends including the needs of residents of all ages, incomes, etc.*
- ✓ *Offer incentives to promote housing that is diverse in size and tenure, affordable, and/or energy efficient.*

## ENHANCE ACCESS TO GOODS, SERVICES, &amp; OTHER DESTINATIONS

- ✓ *Support organizations that provide volunteer driver services such as Contoocook Valley Transportation Company (CVTC) and the American Red Cross.*
- ✓ *Develop and implement plans and projects that support innovative parking practices (e.g. bicycle parking, shared parking, maximum parking limits, etc.).*
- ✓ *Adopt a Complete Streets policy for streets that accommodates multiple users such as vehicles, bicycles, pedestrians, transit, etc.*
- ✓ *Preserve mobility on major state highways through municipal land use planning best practices (e.g. access management, land use regulations, coordination with NH Department of Transportation on driveway permits, multi-town coordination, etc.).*
- ✓ *Support and expand programs that offer services for healthy aging and aging in place (e.g. ServiceLink, Monadnock at Home, Monadnock RSVP, etc.).*
- ✓ *Support programs that promote ridesharing, vanpooling, carsharing, etc.*

## PROMOTE SOCIAL &amp; CIVIC ENGAGEMENT

- ✓ *Encourage community board members to attend trainings and receive technical assistance on relevant topics such as community governance, land use planning, economic development, conservation, etc.*
- ✓ *Actively recruit and support diverse representation on local government boards and committees (e.g. different ages, ethnicities, genders, incomes, experiences, etc.).*
- ✓ *Utilize community buildings and outdoor spaces to support additional activities and programs such as fitness classes, workshops, community gardens, etc.*
- ✓ *Support existing and establish new events that bring together people of all ages (e.g. old home festivals, contra dances, community performances, etc.).*
- ✓ *Support and expand programs that facilitate the sharing of skills, services, and experiences between people of different ages, abilities, and incomes (e.g. time banks, service exchanges, community gardens, etc.).*



## ECONOMIC PROSPERITY

A community's well-being is inextricably linked to the economy in which residents participate. In vibrant communities, people have sufficient income for essentials, businesses and organizations are able to hire new employees, and jobs are relatively easy to obtain. Despite its remote location and rural landscape, the Monadnock Region has had success with building and maintaining a diverse and resilient regional economy. However, like most local economies, its continued success is strongly influenced by larger regional, national, and even global trends in technology, finance, regulation, politics and consumer behavior.

In recent years, the economy has faced some of the most significant economic challenges since the Great Depression - the collapse of the housing market, a global recession, and over a decade of stagnant wages. While the Region has weathered these conditions moderately well compared to the rest of the country, the loss of locally owned business and industry, specifically in the manufacturing sector, and the trends of slower growth and an aging population present mounting challenges to future economic development.

When asked what could be better about the Region, the importance of improving the availability and quality of employment options was emphasized by a vast majority of residents. Many addressed the need to increase employment opportunities that offer a living wage for diverse skills and abilities as a priority for the future. Those interviewed expressed strong support for growing and strengthening local businesses in the Region and for reviving the local manufacturing sector. Overall, there was acknowledgement that more could be done to improve and strengthen the Regional economy.

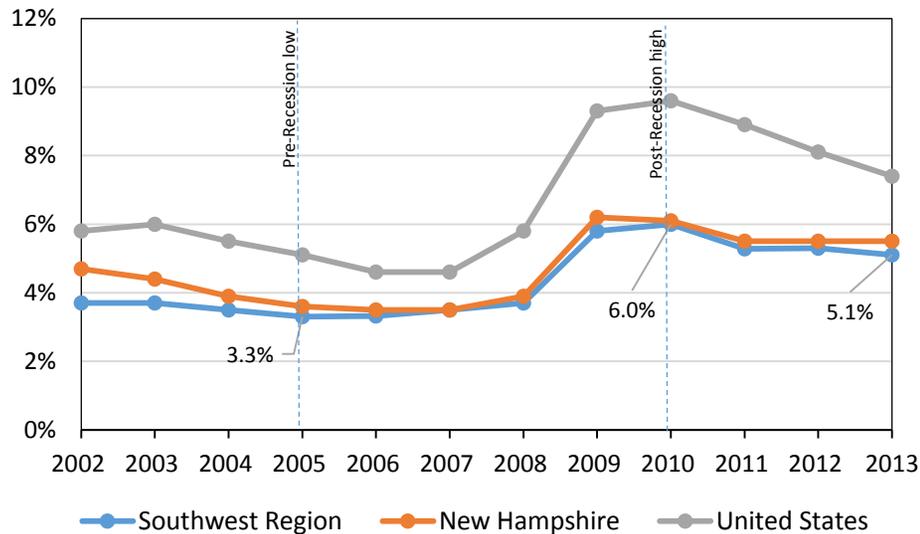


## SLOW ECONOMIC RECOVERY

Between 2007 and 2009, the United States experienced the most severe economic downturn in the post-World War II era. Although the Region fared this Recession better than the state and most of the country, it has left a lasting impression on our economy. Still today, five years after the Recession's official end, the average annual unemployment rate in the Region was 5.1% in 2013. While this rate is lower than the state (5.3%) and nation (7.4%), it is still 1.8 percentage points higher than the prerecession low of 3.3% in 2006.

Job growth also remains slow. In 2011, there were 1,813 fewer people employed in the Region than in 2006, a 5% decrease. Over this same time period, the number of residents that live and work in the Region decreased by 3.4%, and there was a 35% increase in residents employed outside the Region.

FIGURE 5. AVERAGE ANNUAL UNEMPLOYMENT RATES



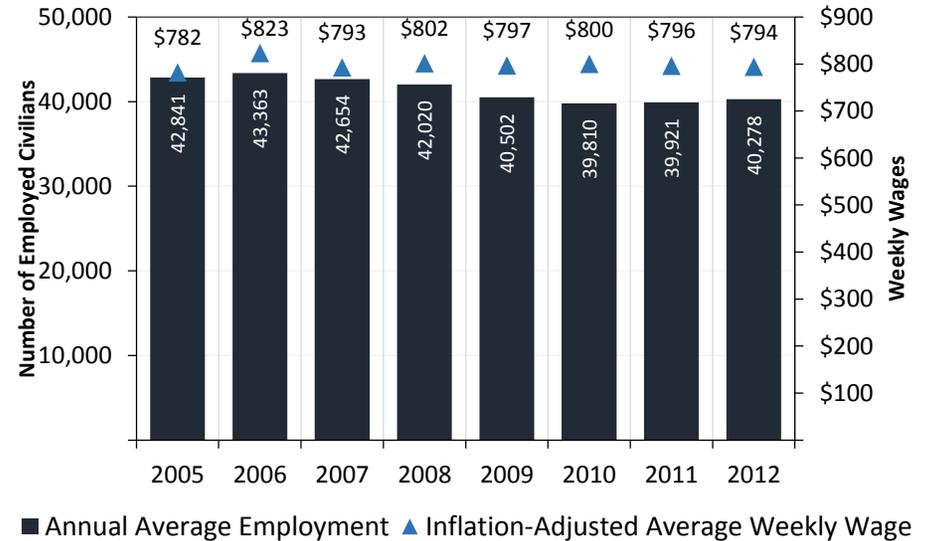
Source: U.S. Bureau of Labor Statistics

## STAGNANT WAGES

For more than the past decade, wage growth in the Region has remained relatively flat. Between 2005 and 2012, the average weekly wages for all private and government jobs in the Region increased from \$665 per week to \$794 per week, respectively. After accounting for inflation, this difference represents a 1.6% increase in wages over a seven year period.

Wages in the Region are low when compared to other parts of the state and to calculations for a livable wage. In 2012, the Region's average weekly wage of \$794 was 17% less than the statewide average of \$928. An individual living in Cheshire County, working full-time, must earn a minimum of \$18.14 an hour or \$726 weekly to support a family of two adults and one child.

FIGURE 6. SOUTHWEST REGION AVERAGE ANNUAL EMPLOYMENT & WEEKLY WAGES



Source: NH Department of Employment Security

## DECLINING MANUFACTURING SECTOR

Between 2004 and 2012, Cheshire County manufacturing jobs decreased by 22% or 1,262 jobs. Although this sector has been decreasing at both the state and national level, this trend is particularly significant for the Southwest Region, which has the highest concentration of manufacturing employment in the state. In 2012, manufacturing was the Region's largest employment sector, comprising 19% of all jobs in the Region. It was also one of the highest paying employment sectors.

Decline in this sector is forecasted to continue at an annual rate of 0.4% statewide for the next five years. Given the high wages offered by this sector and its contribution to local economic activity, it will be difficult for the Region to find jobs of similar economic value to replace those lost in manufacturing.

## LOSS OF LOCALLY OWNED BUSINESS

In recent years, the Region has experienced a decline in local business ownership. Many businesses are now managed from offices outside of the Region, and numerous locally owned businesses are suppliers to larger, out-of-region companies. Owners of local and independent businesses are participants in the community as well as the economy. As a result, they are more likely to assist in charitable giving and more dollars are circulated longer in the local economy. Research conducted by the firm, Civic Economics, found that local retailers return an average of 52% of their revenue to the local economy, compared with just 14% for the chain retailers. In a 2011 Monadnock Buy Local survey of locally owned and independent businesses in the Southwest Region, 84% donate products, 63% volunteer their time and 38% donate services to non-profits.

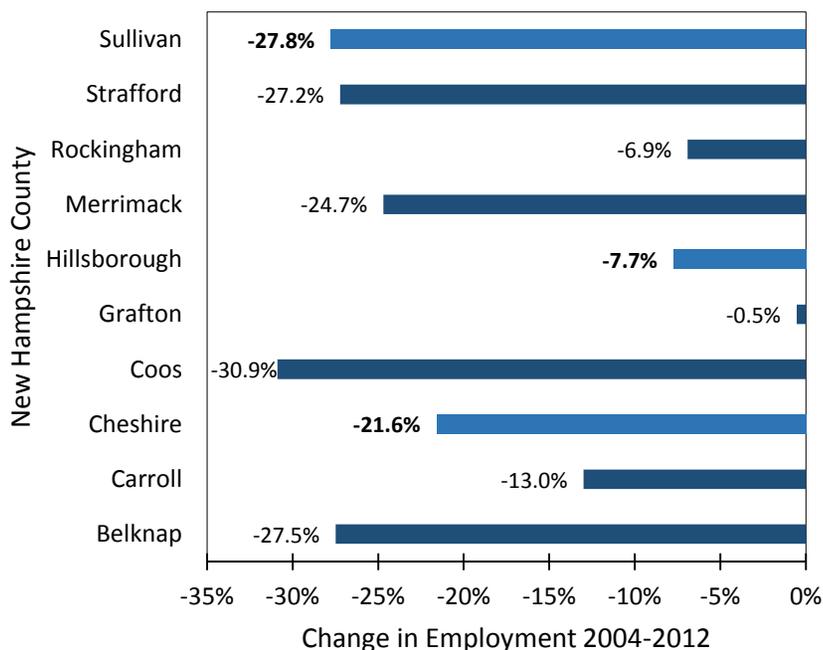
## ECONOMIC & SOCIAL IMPLICATIONS

Maintaining a strong and stable regional economy has direct implications on the social and economic well-being of the Region and its communities. A vibrant economy impacts multiple aspects of community life including the ability to earn a living, develop skills and access training, attract new residents and businesses to an area, and access services.

Residents need access to employment opportunities that are of a living wage in order to be self-sufficient. If workers are not earning enough to pay for essential needs such as housing, transportation, health care, food, taxes, etc., they must seek support from other resources, such as family, friends, government programs, or move out of the Region. Furthermore, those unable to earn a living wage will have less disposable income available to spend and reinvest in other areas of the local economy.

The availability of high-paying jobs in the Region is important for attracting and retaining young professionals. As the share of the population over the age of 65 continues to grow, these younger workers are needed to replace older ones as they leave the workforce and to support this aging population. However, the Region is competing with other parts of New England and the world for attracting these workers.

FIGURE 7. CHANGE IN MANUFACTURING EMPLOYMENT BY COUNTY, 2004-2012



Source: NH Department of Employment Security

### BUILDING A PROSPEROUS REGIONAL ECONOMY

Creativity, efficiency, accountability and adaptability are hallmarks of both private and public enterprise in the Region. These attributes, which apply equally to cutting-edge technologies and traditional New England lifestyles such as agriculture, forestry and the arts, have been important factors of our regional economic success. Yet, over the last decade, we have seen our competitive advantage decline as we face greater global competition, demographic pressures, and fiscal constraints than ever before.

While the Region has a strong base of diverse industries, civic engagement, and high quality of life to build on, this alone cannot ensure future prosperity and economic resilience. We have the opportunity to identify what it takes to build a competitive regional economy in a post-recession, globalized economy and to address areas that we know need improvement. To do so, we might consider building a skilled workforce; growing business and industry; strengthening our existing assets; and maintaining adequate infrastructure.

#### *Build a Skilled and Educated Workforce*

Ready access to a high-quality workforce has become one of the most important criteria for companies in deciding where to locate. Without a diverse base of skilled and educated workers, the Region will have difficulty growing existing industries and will be less able to compete with other areas for attracting and retaining new businesses. Although the Southwest Region is fortunate to have a well-educated and skilled workforce for many of our industry sectors, there is continual need to improve these skills in order to sustain current and future economic trends. Some considerations for achieving this objective are described below.

#### *Ensure Skills Meet Changing Needs*

- **As technology rapidly evolves and the demands of the labor market change, many workers will need to learn new skills to match jobs requirements.** Creating skilled workers for an economy that is constantly changing will require strategic and innovative investments in education and workforce development that are aligned with employers' needs.

- **Coordination and partnerships among the Region's business community with high schools, colleges, career training programs, and other workforce intermediaries will be important to keep worker's skills current.** The Region has already made waves in this area with the formation of the Regional Center for Advanced Manufacturing (RCAM). RCAM is a consortium of the Greater Keene Chamber of Commerce, Keene School District (through its Keene Community Education program), River Valley Community College, and Keene State College. Its goal is to establish a clearly defined set of training opportunities for both potential and incumbent workers in the manufacturing sector. The courses, certificate, and apprenticeship programs have been designed to maximize training that meets the needs of current and future manufacturing employees. In addition, companies can contract with RCAM to develop training that is customized to their specific needs.
- **The use of apprenticeship programs by businesses that pay workers for on-the-job skill development should be encouraged where applicable.** Many workers who are willing and able to perform skilled work are unable to pay for the education necessary to apply for available jobs. Under apprenticeship programs developed in other parts of the world, trainees split their time between on-the-job work at a company and classroom instruction in a vocational program, and are paid for their time in both settings. These programs reinforce classroom concepts by practice at work, efficiently match the skills of the workforce to the needs of the employer, provide income to workers for work skills development, and reduce the social costs associated with work skill education and chronic unemployment. This model aims to provide businesses with the skilled and flexible workforce needed to thrive in a constantly changing economy.

#### *Provide Quality Education for All Learners*

- **Workforce development should not be limited to vocational training.** There should also be opportunities for education and training that foster personal growth, social development, an appreciation for the culture, history, and other interests. These programs should be affordable and easy to access for all learners.

## AT WARWICK MILLS, THE GEARS OF INNOVATION ARE STILL TURNING

Charlie Howland insists there was no “eureka moment.” The idea came about gradually, after much reflection about the kind of skills the next generation of workers at the Warwick Mill in New Ipswich would need to possess. Charlie observed that not every young trainee had the ability or the attitude necessary to work in a modern textile factory. “How does that transformation occur?” he asked. “Getting kids to that level of expertise and critical decision-making capability really provides upward mobility for them.”

Charlie says high school can provide some of the skills, but it can’t provide the context and hands-on experience that spending time on a factory floor can. That’s where the High Bridge Foundation comes in. The program provides at-risk students from area high schools with training in all aspects of plant operations including green energy technologies.

In July 2011, Warwick Mills and the High Bridge Foundation were awarded \$81,250 in NH CDFA tax credits to start up the project. While not a direct cash award, businesses that contributed money to the High Bridge Foundation received tax credits worth 75% of their donation. Later, the Town of New Ipswich received CDBG funding in the amount of \$500,000. About half was sub-granted to High Bridge for operational capital; the balance was loaned to Warwick Mills to purchase a new biomass boiler system. Eleven new jobs were created, with 14 more positions on the way.

Shifting to the high-efficiency wet chip boiler to heat the 100,000 square foot facility is a key component of the curriculum, giving students real-life exposure to the latest in green technology. The upgrade will also save the mill \$300,000 a year in #6 heating fuel.

As the first group of students goes through the program, Charlie says their success will be measured not in letter grades, but on whether they’ve developed people who could be valued employees in businesses like their own. “Our yardstick is whether we have students that we would want to hire,” says Charlie. “And we’ve done that already. We’ve hired students in from the program.” So while the inspiration for a program that combines vocational training, job creation, and renewable energy may not have come in a flash, the better question may be, “why didn’t anyone think of this before?”

*-Case study and photos courtesy of the NH CDFA*

*Above photo: Warwick Mills Facility; Below photo: Charlie Howland (left) shows his nephew how to operate a machine on the floor of the Mill.*



*“A diverse, local economy is the foundation to a vibrant, healthy community.”*

– Mary Ann Kristiansen, Executive Director, Hannah Grimes Center



- **Quality education at all levels has economic and social benefits beyond workforce development.** Individuals who graduate and have access to quality education throughout primary and secondary school are more likely to have stable families and be active and productive citizens. A population that is better educated has less unemployment, reduced dependence on public assistance programs, and greater tax revenue. Education also plays a key role in the reduction of crime, improved public health, and greater political and civic engagement.

### *Retain, Grow, and Attract Business*

Beyond developing a skilled and educated labor pool, the Southwest Region also needs abundant economic opportunities to retain and support its workforce. As mentioned earlier, the Region is losing high-paying manufacturing jobs as well as its base of locally owned business and industry. Currently, there are fewer jobs in the Region than working residents. In 2006, there were 1.01 jobs available for every resident of working age, or 557 more jobs than workers in the Region. In 2011, this ratio decreased to 0.88, when there were 5,083 fewer jobs than workers. Although these trends are not as severe as those experienced at the state and national levels, they warrant consideration.

Expanding employment options and economic opportunity for the Region’s workers, requires strategies that grow and support existing businesses as well as those that serve to attract new companies to the Region. It also requires promoting a balanced and diverse mix of business and industry that offers quality employment for a range of skills and abilities.

### *Promote Diverse Mix of Business & Industry*

- **Much of the Region’s success at weathering changing economic conditions can be attributed to its ability to cultivate and support a diverse range of businesses** including health services, advanced manufacturing, community banks, and insurance companies. More than 90% of these businesses are small in size, with fewer than 50 employees.

- **Having a greater number of different types of industries makes the Region less susceptible to economic volatility.** For every one industry type that is negatively impacted, it is likely that there are two or three others that are prospering.

### *Support & Grow Local Businesses*

- **To maintain this diversity, emerging and established businesses need opportunities to form and grow.** Within the Region a number of groups, including the Region's five chambers of commerce, have developed support networks and services to assist businesses - new and existing, large and small. Other resources available to establish support for local businesses include but are not limited to: Monadnock Buy Local, a coalition of locally owned businesses, nonprofits and citizens focused on raising public awareness and support for shopping locally; and, Monadnock SCORE, which provides business counseling free-of-charge to residents and businesses in the Region.
- **Business Incubators are a valuable resource for entrepreneurs and business start-ups.** These facilities provide a range of services including educational programming, peer learning, professional networking, office space, high-speed Internet, meeting facilities, supplies and equipment, etc. The Hannah Grimes Center in Keene is an example of a successful incubator in the Region.
- **Some in the Region have sought to reduce expensive overhead costs, which can be a significant barrier to starting a business, by sharing the cost of goods and services via collaborative partnerships and consumption models.** There are a number of ways organizations and businesses can partner with each other to rent or share materials including office space, equipment, electricity or heating fuel, etc. For example, producers of food products are renting space at commercial kitchens, versus building their own. Farmers are sharing heavy equipment, versus making expensive capital investments for machines they may only use a few times a year. These models can be cost-effective and efficient solutions to help smaller businesses and individuals succeed, especially in their formative years.

## HANNAH GRIMES CENTER: WEAVING TOGETHER LOCAL ECONOMY & COMMUNITY

As an organization whose trade is weaving together business, local economy, and community, the Hannah Grimes Center is a hub for information, education, support, and assistance for the Region's entrepreneurs and business community.

The Marketplace, located on Main Street in downtown Keene, opened in 1997 as a store that supported local farmers, artisans, and commerce. It also paved the way for the non-profit Hannah Grimes Center, which broke ground in 2006. Funding from the New Hampshire Community Loan Fund, NH CDFA, Marketplace revenue, and fundraising has allowed the two establishments to work toward the goal of building community wealth.

The Center provides educational resources, networking opportunities, and extended development to local companies and organizations. Additionally, Hannah Grimes offers physical office space and amenities at their location on Roxbury Street. This dynamic organization allows start-up business owners and associates a professional, focused, and supportive environment in which to work, network, and collaborate. The Center also bolsters the local economy by offering highly-focused entrepreneurship and business start-up programs.

Hannah Grimes founder and Executive Director, Mary Ann Kristiansen, understood the challenges that new small businesses face in this Region. She explains, "We want to help businesses understand resilience, agility, and the continuum of being a successful organization. The Hannah Grimes Center itself has grown because it's in a community that supports good ideas. Challenges present opportunities, and collaboration allows flexibility in local commerce."

*Photo Below: Mary Ann Kristiansen (right) sits outside the Hannah Grimes Center in Keene.*



### Attract New Business & Industry

- **While strengthening local businesses is a necessary part of economic development, it is also important to attract new companies to the Region.** In order to compete with other parts of the state and nation, the Region needs to identify incentives for new businesses and industries to choose to locate here. In return for low taxes, the state of New Hampshire does not offer many subsidies, exemptions or other cash allowances to new businesses.
- **The state-level tax incentives available to encourage business growth include the Economic Revitalization Zone (ERZ) tax credit and the Research and Development (R&D) tax credit.** The ERZ is a short-term tax credit for qualified companies in a locally designated Economic Revitalization Zone (NH RSA 162-N). To qualify, the location must meet certain demographic criteria or be located in an unused or under-utilized industrial park, in structures once used for industrial/commercial/retail uses, on vacant land, or on a brownfield site. Small and large businesses that have made expenditures for certain types of manufacturing research and development can apply for the R&D tax credit. These businesses can receive a credit of up to 10% of qualified expenditures not to exceed \$50,000.
- **To encourage businesses to locate to our corner of the state, we should promote and market the Region,** not just as a place to do business but as a great place to live and visit. In New Hampshire, the North Country is known for the White Mountains, the Seacoast is known for its waterfront, and the Upper Valley is home to a renowned research institution and major hospital. Although we identify the Southwest Region with its historic villages, arts and culture, working landscapes, and outdoor recreation, do those from outside the Region know what we have to offer? We have the opportunity to establish a brand for the Region that showcases our assets but also communicates what we value and the types of businesses we would like to see grow here.

## BUILDING SUPPORT FOR BUYING LOCAL

If you haven't heard of Monadnock Buy Local (MBL), chances are you've seen their green, white, and black stickers affixed to the windows and doors of various establishments throughout the Region. These stickers are displayed by MBL members - citizens and companies in the Region that have pledged their commitment to MBL's vision to build a stronger local economy.

Since forming in 2009, this volunteer-driven group has organized, printed, and distributed the Region's first Buy Local Guide, which is a comprehensive directory of participating local businesses, and sends a monthly e-newsletter full of updates, articles, and events to 151 members and over 100 non-members. Also, the group sponsors the Region's version of "Plaid Friday", the "Black Friday" alternative that promotes shopping at local and independently owned businesses.

Jen Risley, one of the founders of Monadnock Buy Local, explains that "Promotion and education are [MBL's] main focus right now, but [they] are also starting the discussion of what can be done at the regional and state policy level."

The biggest challenge, notes Jen, is the lack of funding and staffing capabilities. They've received financial assistance through sponsorships, grassroots grants, and ad-revenue, but more needs to be done. The group, however, is confident that developing partnerships with more established organizations overtime will help provide and leverage necessary resources. For now, they're happy to be spreading the word about buying local.

*Photo courtesy of Monadnock Buy Local*



## Strengthen and Build on Existing Assets

Although we want to support and foster economic development, it should not be at the expense of our greatest assets. Part of our Region's competitive advantage is its rich scenic, recreational, cultural, and historic resources. In addition to marketing these assets to companies outside the Region, we should find economic opportunities to protect and celebrate these important resources and build our competitive advantage. Some of the ways in which the Region might pursue this objective are explored below.

### Increase Opportunities for Tourism

- **Tourism is often underestimated as a source of economic development for the Region.** This may be due in part to our close proximity to high-volume tourist areas in New Hampshire and Vermont, which possess well-known landmarks such as the White Mountains, Green Mountains or New Hampshire's seacoast.
- **Although it's not the largest tourism market in the state, the occupancy rates for the Region's hotels, motels, and inns are more consistent throughout the year than in other parts of New Hampshire.** In fiscal year 2012, travelers and tourists spent approximately \$242 million in the Southwest Region, the majority of which was on rooms and meals, according to the Institute for New Hampshire Studies. This amount represents only 5.5% of tourism-based spending statewide.
- **There are opportunities for attracting larger numbers of tourists to the Region,** thereby strengthening the Region's economic base. The challenge is to connect and leverage tourism with our existing assets in new and different ways.

*The Region's arts and creative economy sector is a \$16.6 million annual industry – one that supports 477 full-time equivalent jobs and generates \$1.3 million in local and state government revenue.*

### Strengthen the Creative Economy

- **One area of opportunity is to increase investment in and support for our creative economy and cultural tourism.** In 2008, Monadnock Arts Alive! commissioned an economic impact study of the arts in the Southwest Region. This study found that the arts and creative economy sector contributes more than \$16 million annually to the Region's economy.
- **There are numerous groups and organizations building support for the arts through educational programming, events, and festivals.** The Thing in the Spring, an annual event in Peterborough, which includes a concert series and affordable art fair, and the Keene Music Festival are examples of events that can attract visitors of all ages from near and far. Other events that draw visitors to the Region to celebrate the arts include annual art walks and tours, summer concerts hosted by the Monandock Music Festival and the Apple Hill Center for Chamber Music, MacDowell Colony's annual Medal Day, and the Monadnock International Film Festival.
- **Artists and creative types in the Region need places and opportunities to create, showcase, and sell their work.** The Sharon Arts Center's gallery in downtown Peterborough and Hannah Grimes Marketplace in Keene are two year-round storefronts for individuals to access hand-made goods and art. Although area restaurants and cafes are the most popular venues for local musicians to perform, other spaces include the Colonial Theatre in Keene, the Redfern Center for the Arts at Keene State College, Bass Hall in Peterborough, the Mole Hill Theatre in Alstead, Potash Bowl in Swanzey, Peterborough Players Theatre, and the Community House in Marlborough, to name a few. Since 2006, community members in Jaffrey have been working to rebuild and reopen the Park Theatre, a 90 year old building in the heart of Town, as a regional center for the arts and entertainment. When opened it will offer year-round programming, movies, plays, and concerts by local artists, schools and touring companies.

- Given the lack of studio space and affordable access to tools, supplies, and equipment in the Region, there is interest among different groups to establish maker spaces. Maker spaces are similar to business incubators, whereby they are a space for individuals to access equipment, tools, education, and other services. They can take on many different forms and models, but many offer tools and equipment related to technology and engineering, computer science, traditional arts, and craft trades such as woodworking. These spaces can be an opportunity to spur innovation and to connect individuals with an interest or talent in these fields with the resources and community needed to make and share their creations.

### *Promote Working Landscapes*

- The Region's productive agricultural and forested lands are not only important to the Region's character and quality of life, they also play a valuable role in its economy. In 2011, the North East State Foresters Association released a report that estimated the economic value of forest-based components of the state's economy to be \$2.26 billion annually, nearly 4% of the Gross State Product. A study conducted by the Institute for New Hampshire Studies on behalf of the New Hampshire Department of Agriculture estimated that there was \$647 million in direct spending in the state on agriculture, horticulture plant sales, wineries, and agriculture-related tourism in 2011. This was equal to 1% of the Gross State Product. It is likely that these estimates are conservative because they do not take into account the role these landscapes play in attracting and retaining businesses and visitors, and in providing important environmental benefits.
- Despite strong support for protecting and maintaining agricultural and forest lands, the economic viability of these landscapes is continually challenged. The Region's working lands face considerable threats including high land values, regulatory barriers, and climate changes. As many farmers and foresters approach older age, there are significant fiscal hurdles for the next generation to take over these enterprises. There can also be considerable pressure to sell or convert these lands, which are often ideal for development.

*In 2011, there was an estimated \$645 million in direct spending in New Hampshire on agriculture, horticulture plant sales, wineries and agriculture related tourism.*

- In recent years, a number of organizations and groups with an interest or stake in the working landscape have partnered to identify opportunities for growing a local food economy. The Monadnock Farm to Community Coalition (MFCC), which has over thirty-five organizational members, has developed a strategic plan for building collaboration and community action around supporting a sustainable local food system. Some of their Plan's strategies include improving the financial ability of farmers to expand production and distribute food to markets throughout the Region, encouraging new agricultural entrepreneurs, and conserving farmland and forests.
- Part of developing a local food system involves establishing the infrastructure needed to process, store, and transport local food and food products to markets and distributors across the Region. Groups like Hannah Grimes and the MFCC have been working to assess the feasibility of developing this infrastructure as a step towards creating a food hub.
- There has also been an increase in the opportunities available for the public to connect with and form a connection to our working landscapes. Many of the Region's farmers and producers of agricultural products participate in weekly and year-round farmers markets. Farm tours and open farm days, farm stands, and pick-your-own crops attract individuals and families to the farms and, in some cases, the farmers directly. Some farms offer supplementary activities such as educational programming, summer camps, or weekend activities. Some have inns or bed-and-breakfasts on site that allow visitors to extend their visit and help farms bring in additional sources of income. Each of these activities helps educate the public about the value of our local food systems and agricultural products, and can be an opportunity to attract tourists and additional revenue into the Region.

*“There’s a reason why people live here... art is part of our cultural cloth, and that’s important not only for ourselves, but for our businesses as well.”* – Carl Jacobs, Board Chair, Monadnock Arts Alive!



## MONADNOCK ARTS ALIVE!: ADVANCING ARTS, CULTURE & ECONOMIC PROSPERITY

The vibrant history and beauty of the Southwest Region is painted on canvas, filmed and photographed, written in poems, and sang in songs. For hundreds of years, artists including Henry David Thoreau, Ralph Waldo Emerson, Mark Twain, Willa Cather, Abbot Thayer, and Thornton Wilder have been inspired by and attracted to the Region. However, arts and culture are more than a source of creativity and originality, they are a \$16.6 million industry in the Region – one that supports 477 full-time equivalent jobs and generates \$1.3 million in local and state government revenue.

In 2007, a small group of active members in the arts community decided to explore the value and potential of the Region’s creative base. They partnered with Americans for the Arts to conduct an economic impact study on the value of the Region’s creative economy. Through this study they were able to demonstrate that investing in the arts and culture sector yields significant economic benefits - putting to rest the misconception that communities support for the arts must come at the expense of local economic development.

In 2009, this group established Monadnock Arts Alive! a non-profit organization whose mission is “to sustain, promote, and expand access to arts and cultural resources in the Monadnock Region.” Though their budget is modest, it has not stopped them from making forward progress. The group has developed a searchable and comprehensive community calendar that allows the public to learn about upcoming performances and events in the Region. It also serves as a source for artists and musicians to know where and when space is available for projects. Arts Alive! is currently working to establish a multi-purpose arts center - a place where artists, musicians, and community members can practice, perform, teach, and collaborate on projects.

Carl Jacobs, Chairperson of Arts Alive! emphasizes the valuable resources that the organization offers - they encourage group discussions and collaboration among local artists, musicians, and creators on ways to improve their business presence and professional relationships, and they offer fiscal sponsorship to organizations and others for events. Into the future, Arts Alive! seeks to develop their online presence, design a newsletter, and is planning to revise and update their Strategic Plan.

### *Maintain Adequate Infrastructure*

High-performing and reliable infrastructure is a vital component of a robust regional economy. Without functioning roads and bridges, businesses would be unable to transport materials to markets, employees would not be able to travel to and from work, and consumers would be less able to purchase goods. Similarly, without access to clean and safe drinking water, uninterrupted supplies of energy, high-performing Internet, and other critical support services, most businesses would be unable to function, let alone compete in a global economy.

In the Southwest Region, our infrastructure needs are great; however, we are severely challenged in our ability to repair, maintain, and upgrade these systems and structures. The condition of public infrastructure (e.g. roads, broadband, sewer and water) in many towns is generally unsatisfactory. This is due largely to the lack of funding or financing options available and, in part, to public resistance to increased expenditures for maintenance and upgrades. Some of the various types of infrastructure concerns and needs facing our Region are described in the sections below.

#### *Improve Transportation Infrastructure*

- **Mobility is one of the most fundamental and important characteristics of economic activity** as it satisfies the basic need of going from one location to another - a need shared by passengers, freight and information. Today in the Region, there are approximately 1,800 miles of highways (class I-V), 468 bridges, 11 miles of active rail lines, 100 miles of sidewalks, 45 miles of paved or hard-pack multiuse paths, and 2 airports.

- **Much of this infrastructure is aging and needs to be repaired or replaced.** Nearly 20% of bridges in the Region are on the State Department of Transportation's (DOT) red list. These bridges require interim inspections due to known deficiencies, poor conditions, weight restrictions, or type of construction.
- **Transportation infrastructure is vulnerable to damage from events like severe flooding and heavy rainfalls.** Over the past decade, a series of severe storm events with unprecedented heavy rainfalls have washed out highways, blocked culverts, and damaged bridges. Although the most impact has been felt in the northwest parts of the Region, much of our infrastructure, which was not designed to handle such extreme conditions, is vulnerable to these threats. Since the December 2008 Ice Storm, over 280 roads and highways have been closed in the Region due to natural disasters. It is likely these events and associated damages will continue, potentially with greater frequency and severity.

#### *Expand Broadband Availability*

- **The availability of high-speed Internet, also known as broadband, has a significant impact on the Region's long-term economic growth.** The majority of businesses in the Region rely on broadband to keep up to speed with competitors both locally and globally. Broadband has become a critical utility for nearly every sector, whether it be education, health care, public safety, local government, or economic development. In addition, broadband availability is becoming an increasingly important factor in the Region's ability to attract new residents and businesses.
- **However, access to reliable broadband in the Region varies significantly.** While most densely developed areas have good coverage, there are still areas without any broadband access and many more areas with service that is not capable of meeting the current needs of residents and businesses.

*“There’s so much amazing potential here in the Southwest Region. It would be great to see broadband Internet unleash that.”*

– Carole Monroe, Executive Director, New Hampshire FastRoads

- **Deploying broadband infrastructure in rural areas with low population density and difficult terrain can be immensely cost prohibitive.** With the exception of NH FastRoad's recently completed fiber network, the vast majority of the Region's broadband infrastructure is owned and managed by private companies. It is not always economical for these companies to expand their service areas to reach every household or business, given the high costs and modest subscribership volumes.
- **As technology rapidly evolves, so too does the broadband speeds required to run certain devices and applications.** It is not likely that much of our existing broadband infrastructure will be sufficient for meeting our needs in the near future. Only 15 years ago, a 56 kbps connection was sufficient to conduct most business on the Internet. Today, in order to use many Internet applications successfully, a minimum download speed of 6 Mbps is required.



## NH FASTROADS' FIBER FUELS ACCESS & CHOICE

Difficult terrain, expensive equipment, and the lack of competition between Internet providers makes the deployment of broadband in the Region a burdensome and costly endeavor. Since 2009, NH FastRoads has been working to confront these challenges in the interest of expanding access to high-speed Internet in our Region.

As a Limited Liability Corporation under the Monadnock Economic Development Corporation, FastRoads has developed a network of 161 miles of middle-mile fiber-optic broadband infrastructure and 86 miles of last-mile fiber-to-the-home. This network provides a fiber connection to 233 Community Anchor Institutions in 19 towns as well as 1,300 homes in Rindge and Enfield, NH.

What is unique about FastRoads is that it does not sell Internet service to individuals or businesses. Instead, it leases space on its network to Internet companies that market and sell service to customers directly. Profits received by FastRoads will be used to maintain existing infrastructure and to continue to expand the network to other communities. This open-access model is intended to encourage competition in the market for broadband service, potentially decreasing costs for consumers and reducing some of the economic and technological barriers to future broadband. Currently, there are four Internet companies leasing space on the network to provide service. These include WiValley, BayRing, G4 Communications, and Sovernet.

"The open-access network is working very well, but it would work better if more residences were connected," says Carole Monroe, Executive Director of FastRoads. She explains that many customers are not aware that options for Internet service exist other than their current service provider. Carole Monroe cites community advocacy as NH FastRoad's next step in bridging that gap of understanding. She emphasizes the importance of broadband to maintaining a strong economy. She notes that "if we want to encourage young people to stay here, we need to make sure they have a reason to do so. Younger generations, in particular, have higher technological expectations than those held by previous ones."

Funding for this project was through the National Telecommunications and Information Administration with support from the American Recovery and Reinvestment Act as well as the NH CDFR, NH Business Finance Authority, a consortium of local banks, and others.

### *Upgrade Water Infrastructure*

- Many of our Region's drinking water and wastewater systems are aging and there is limited funding available to support necessary maintenance and upgrades. Most of the Region's wastewater treatment plants were originally built during the 1970s and 1980s, with only 3 having been built during the past 20 years. The majority of these plants are using 50% or more of their available flow capacities, with one using 90% of its available flow capacity. As such, many of these wastewater treatment plants are due to be upgraded, repaired, or replaced in the near future.
- Capital improvement plans can help communities manage the costs for upgrades; however, many are finding it difficult to keep up with their repair needs. The estimated cost of wastewater treatment upgrades, new sewers, and sewer rehabilitation work needed in the Region over the next 10-20 years is \$47,300,000.<sup>1</sup> In addition, the ability to detect and analyze contaminants has increased over time, leading to more regulatory requirements and the need for costly infrastructure upgrades.

### *Reduce Energy Costs*

- Energy costs in the Region, particularly for electricity, gasoline and home heating fuel, are some of the highest in the nation. These high costs can place companies in the Region at a disadvantage to other parts of the nation and world.
- Long winter heating seasons, generally long commute times of workers, and distances from more concentrated urban markets are some of the contributing factors to these high energy costs. Given the current lack of local, renewable energy alternatives and the limited capacity of existing natural gas pipelines in the state, energy costs are likely to be of increasing concern in the years to come.

### *Expand the Offering of Child and Elder Care Services*

- Support services such as high quality and affordable child and elder care are part of the infrastructure needed for economic development in the Region. These services broaden economic opportunities by enabling parents and caregivers to work.
- Childcare receives little public subsidy and depends primarily on parent fees to cover costs. This creates a price structure too low to support the quality of care we may desire and too high for many parents to afford.
- As our population grows older, the need for more care options and support services for seniors and caregivers will likely increase.

### *Undertake Asset Management*

- With limited state or federal funding available, the Region's communities will be pressed to identify cost-effective and practical solutions to meet its mounting infrastructure needs. One opportunity available to communities to is undertake an asset management program. Broadly defined, asset management is a systematic process of deploying, operating, maintaining, upgrading and disposing of assets cost-effectively.
- Asset management can be a tool to develop capital improvements budgets that more accurately reflect the replacement costs and life expectancy schedule of various infrastructure in a community. It involves inventorying the location and conditions of assets such as roads, culverts, bridges, wells, sewer lines, etc., prioritizing assets, and developing a plan to rehabilitate and replace these assets as needed.

*In New Hampshire the average annual cost of full-time child care for an infant in a licensed child care center is 41% of a single mother's median family income, compared to 12% of married couple's family income.*

## RAILROAD SQUARE: FROM BROWNFIELD TO THRIVING DOWNTOWN DESTINATION

Upon its closure in 1983, the once vital and bustling Railroad Yard in Keene turned to a nearly deserted brownfield, useful only as a public parking lot. The City of Keene purchased the historic parcel in 1988 with the hopes of one day revitalizing it. In 1997, the City organized the property as a Tax Increment Financing District (TIF), to encourage investment and create a source of revenue for utility upgrades. However, as the years passed, bricks crumbled, weeds permeated, and the lot became an eyesore to the downtown community. Nearly a decade later, the City issued a request for proposals on ideas and designs for redeveloping the space.

That's when the Monadnock Economic Development Corporation (MEDC) stepped in. A previous environmental assessment showed that the area was contaminated with various chemicals left over from its railroad days. MEDC had an idea – they proposed the development of an entirely new Railroad Square neighborhood, complete with housing, access to medical and social services, employment, office and retail space, transportation, a hotel, and restaurants.

The City liked the idea, and allowed MEDC to purchase the property in 2006. The first order of business was the site assessment and cleanup, which was funded by the Southwest Region Brownfields Assessment Program administered by SWRPC and the NH Department of Environmental Services (DES) Brownfields Cleanup Revolving Loan Fund. Following remediation efforts, the project was divided into three phases, two of which have been completed.

Phase I included the creation of the Marriot Courtyard Hotel, Railroad Square Senior Housing, the 51 Railroad Square building (which houses Nicola's Trattoria), business suites and medical offices, and the rehabilitation of the former Wright Silver Polish building. Phase II included the development of the Monadnock Food Co-Op, with additional infrastructure improvements. Phase III, which is set to begin in 2015, will incorporate high-end rental apartments, commercial space, veteran housing, and additional parking.

The project has been supported by CDBG funding, Green Gap Funding LLC, state tax credits, U.S. Department of Agriculture (USDA) Rural Development loans, and financing from the NH Business Finance Authority, along with private investments and other sources. MEDC President, Jack Dugan, notes that although the project's financing collaboration was monumental in the success of the site's redevelopment, it was the desire and commitment of community members that made it possible.

Millions of dollars of new tax revenue, over 150 new jobs, and an investment in a healthy future were generated through this project. Permeable pavement, the maintenance of the bike trail, a Silver LEED certified hotel, and a recreational green space complete with a small outdoor stage, all contribute to the prosperity and vitality of the downtown community.



*“We wanted to create a vital, healthy extension of the downtown Keene community. You do that by bringing people closer together.”* - Jack Dugan, President, Monadnock

Economic Development Corporation

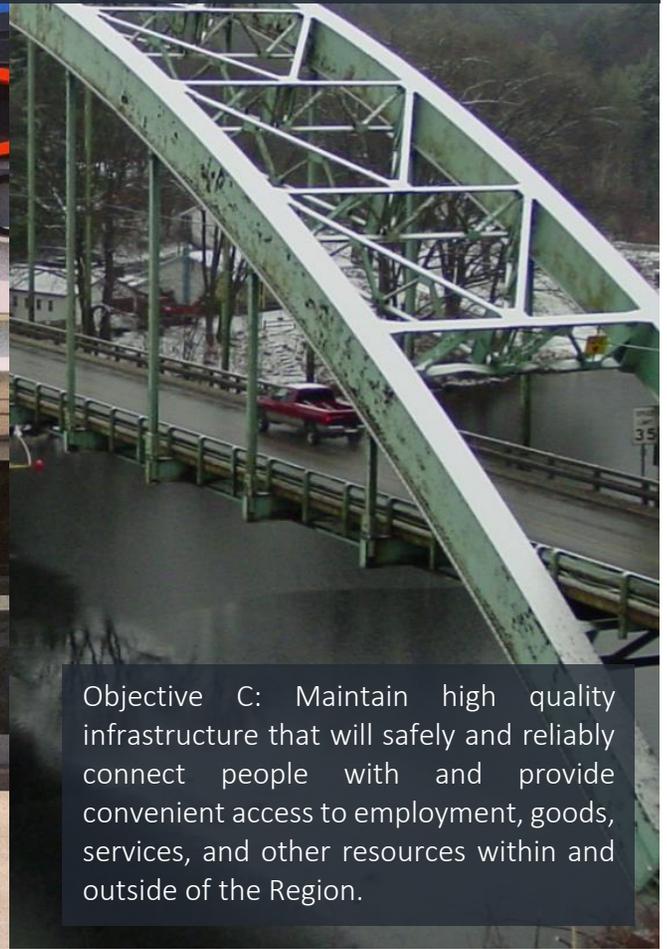
*Goal II: A competitive and prospering regional economy will create diverse opportunities for current and future residents and workers.*



Objective A: Ensure that the Region's residents and workers have access to the education, skills, and support services necessary to thrive.



Objective B: Retain, grow, and attract a diverse base of business and industry that provides opportunities for growth and workforce development.



Objective C: Maintain high quality infrastructure that will safely and reliably connect people with and provide convenient access to employment, goods, services, and other resources within and outside of the Region.

## WHAT YOUR COMMUNITY CAN DO TO HELP BUILD A PROSPEROUS ECONOMY:

### BUILD A SKILLED & EDUCATED WORKFORCE

- ✓ *Support programs that connect youth and other ages and abilities with apprenticeship and internship opportunities.*
- ✓ *Collaborate with businesses, educational institutions, and other partners to help meet workforce training needs.*
- ✓ *Ensure the availability of affordable and accessible educational opportunities for all levels of learners including early childhood education.*
- ✓ *Strengthen training programs that focus on the needs of the Region's leading industry clusters.*
- ✓ *Expand and support programs that match workers and employers based on available skills and needs.*
- ✓ *Establish incentives to attract, retain and support young professionals and skilled workers.*

### RETAIN, GROW, & ATTRACT BUSINESS

- ✓ *Develop programs and/or facilities that support small and emerging businesses such as business incubators, maker spaces, shared commercial kitchens, etc.*
- ✓ *Share and/or jointly procure resources and materials such as electricity with local businesses and organizations.*
- ✓ *Pursue projects and funding to revitalize under-utilized or vacant properties or buildings.*
- ✓ *Consider utilizing tools such as the NH Community Revitalization Tax Credit (RSA 79-E), the formation of an Economic Revitalization Zone (RSA 162-N), Brownfields Assessment Grants, CDBG, NH CDFA loans, etc.*
- ✓ *Support programs like Monadnock SCORE that provide technical assistance to local businesses and entrepreneurs.*
- ✓ *Develop and implement strategies to market and promote the Region and/or your community to attract new businesses and skilled workers.*
- ✓ *Support or develop opportunities to strengthen and promote the creative economy, agriculture/working landscape, tourism, and manufacturing sectors.*

### MAINTAIN ADEQUATE INFRASTRUCTURE

- ✓ *Identify and advocate for community transportation needs and pursue funding solutions which may include the New Hampshire Ten Year Transportation Improvement Plan, federal funding programs, vehicle registration fees, etc.*
- ✓ *Pursue multi-town coordination and collaboration on shared infrastructure needs such as sewer and water, sidewalks, schools, transfer stations, etc.*
- ✓ *Support efforts to expand the availability and quality of broadband infrastructure through local broadband planning.*
- ✓ *Adopt programs to strategically maintain and upgrade municipal infrastructure and facilities such as tax increment financing, asset management, capital improvement plans, etc.*
- ✓ *Support opportunities for diversifying energy supplies including renewable resources such as biomass, solar, wind, etc.*
- ✓ *Ensure the availability of affordable child and elder care programs including evening services as well as services near employment centers.*

STEWARDSHIP



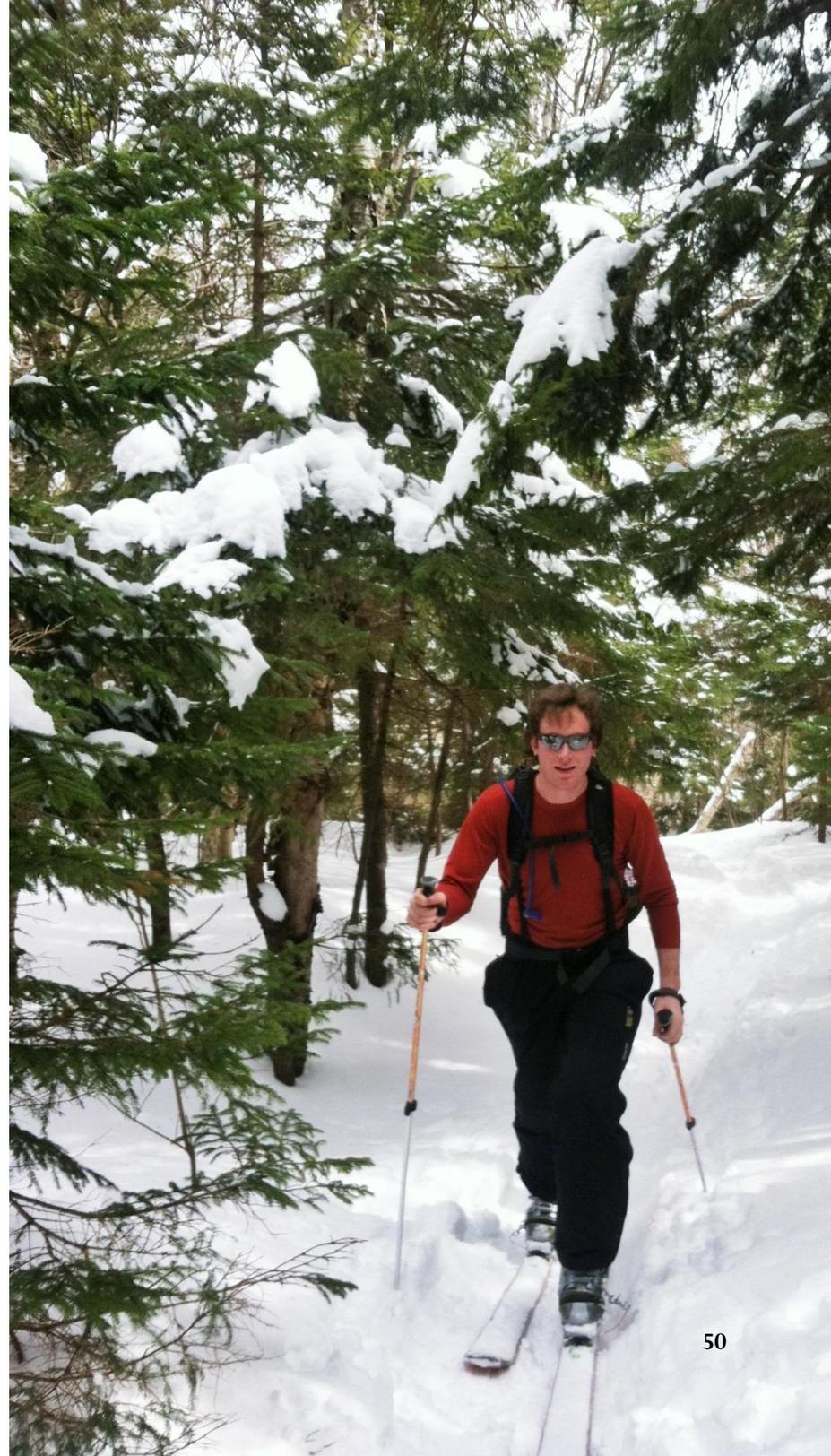
## STEWARDSHIP

The quality and accessibility of the Monadnock Region's natural and cultural resources are an important component of how many residents and visitors define quality of life. When asked, "What do you like best about where you live?" residents frequently describe attributes of the Region's landscape - scenic beauty, productive farms and forests, lakes and ponds, Mount Monadnock, etc. They also make mention of the unique historic and cultural features that shape our sense of place and community identity. These rich and varied resources serve not only as links to the past, but contribute to our economic prosperity and overall quality of life.

Yet, with this appreciation comes concern for the protection and sound management of these assets. As a rural area, we have not experienced the same degree of development and growth as other parts of Southern New Hampshire. We are fortunate to have abundant natural resources and well preserved historic features. However, these assets should not be taken for granted.

If our resources were to disappear or degrade, much of what is valued about the Region would be threatened. There would also be significant impacts on public health and the regional economy. For these reasons and many others, it is important to care for and protect our natural and cultural resources to ensure that future generations can experience the same benefits from them as we do today.

This section of the Plan provides an overview of the significant conditions, trends, and issues facing the Region's diverse natural and cultural resources. It goes on to highlight strategies for communities, organizations, and others to consider in addressing these challenges at the regional and local level, and it addresses opportunities for regional coordination and action.

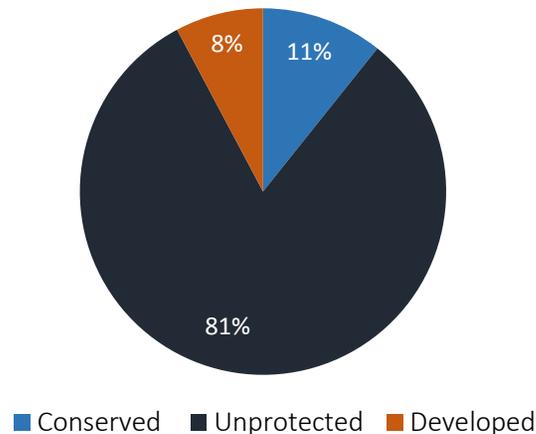


## FRAGMENTATION AND DEVELOPMENT

Throughout the population boom of the 1960s-1980s, the Region faced tremendous development activity, most of which was in the form of single family houses. These new homes, businesses, parking lots, roads, etc. often fragmented and replaced valuable forests, wetlands, and agricultural lands - resources that provide important wildlife habitat, protect water and air quality, and have substantial economic value. New development also impacted the look and feel of historical villages and rural roadways.

Although the Region’s population is not growing as rapidly as it did in previous decades, our resources are still vulnerable to the impacts of land use activities and development. Of the 49,300 acres of prime farmland and farmland of statewide importance in the Region, 8% are developed, and 11% are conserved from future development. These agricultural soils, which are mostly flat and clear of forest, are most vulnerable to development pressure. In 2012, there were 62% fewer acres of land in farms and 1,150 fewer farms in Cheshire County than there were in 1940.

FIGURE 8. STATUS OF IMPORTANT AGRICULTURAL SOILS IN THE SOUTHWEST REGION



Source: Society for the Protection of New Hampshire Forests Changing Landscapes Database

## WATER QUALITY

Non-point source pollution is the primary cause of water quality impairments in the Region and contributes to over 90% of water pollution in New Hampshire. It occurs when water from rainfall or snowmelt picks up and carries pollutants on the surface of the ground into lakes, rivers, and groundwater. Pollutants can include chemicals (e.g. pesticides, petroleum), nutrients (e.g. phosphorous and nitrogen from fertilizers or faulty septic systems), pathogens (e.g. E. coli from animal wastes), sediment, etc.

Although some of these substances are naturally occurring, they can have negative impacts on aquatic life in high concentrations. According to NH DES the most common impairments to aquatic life in the Region are low pH, low dissolved oxygen, and increasing levels of total phosphorus and chlorophyll-a. Low pH is often caused by acidic compounds, mostly from the burning of fossil fuels, which are deposited from the atmosphere into surface waters. Low dissolved oxygen and high levels of total phosphorus and chlorophyll-a are typically caused by excessive inputs of nutrients, such as phosphorus and nitrogen. These nutrients can cause algae in lakes and ponds to grow faster than the ecosystem can handle. Eventually, as excess algae die off and decompose, the dissolved oxygen that aquatic life need to survive decreases.

FIGURE 9. COMMON IMPAIRMENTS TO AQUATIC LIFE BY WATERBODY TYPE

Type	Area	#1	#2	#3	#4	#5
Lake	Southwest Region	pH	Dissolved oxygen saturation	*Chlorophyll-a	*Phosphorus (Total)	Non-Native Aquatic Plants
	NH	pH	Dissolved oxygen saturation	*Chlorophyll-a	*Phosphorus (Total)	Non-Native Aquatic Plants
River	Southwest Region	pH	Oxygen, Dissolved	Benthic-Macro-invertebrate Bioassessments (Streams)	Aluminum	Fishes Bioassessments (Streams)
	NH	pH	Oxygen, Dissolved	Aluminum	Dissolved oxygen saturation	Benthic-Macro-invertebrate Bioassessments (Streams)

\*Indicates a tied rank on a given row; Table Source: NH Department of Environmental Services, 2014

## AIR QUALITY

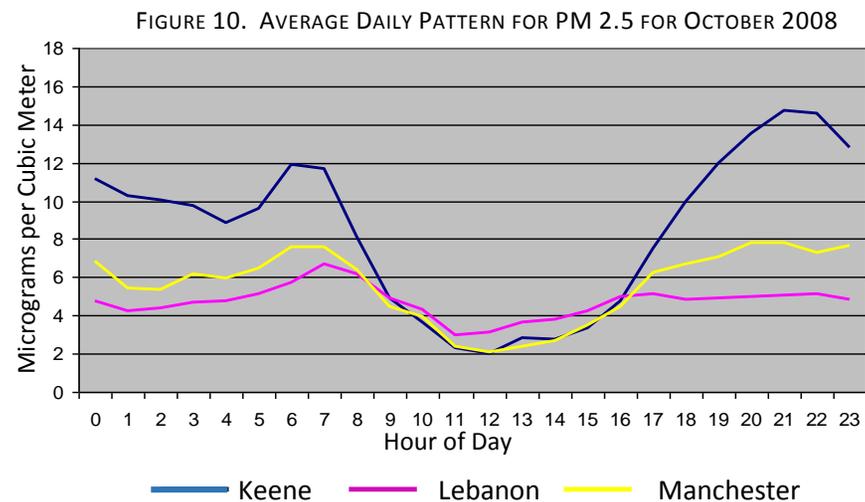
An air pollutant of concern in the Region is particulate matter, which is the term used for a mixture of solid or liquid particles in the atmosphere. Very fine particulate matter (PM 2.5), less than 2.5 microns - far smaller than the width of human hair, can deeply penetrate the lungs affecting the health of people with heart and lung conditions or breathing difficulties. Over the past few years there have been documented increases in PM 2.5 in the Keene area during the winter. NH DES has targeted smoke from wood burning as a significant contributor to this issue.

While the Keene area currently meets national air quality standards for small particle pollution, there have been instances when these standards are exceeded, particularly on calm, cold winter nights. Exceedance of these standards could result in serious economic impacts including stricter permitting and costly controls on industry emissions.

## INVASIVE SPECIES

By outcompeting native species and disrupting ecological processes, invasive species can have severe environmental and economic impacts. Non-native plant and animal species can reduce wildlife habitat, impact water quality, stress and reduce agricultural and forest crops, damage personal property and cause health problems. They can also be incredibly difficult and costly to control.

Invasive insect species of serious concern to our Region's forests include the Asian longhorned beetle, the emerald ash borer, and the hemlock woolly adelgid. Since 2001, more than 50% of the Southwest Region's municipalities have confirmed hemlock woolly adelgid infestations, which can weaken and kill trees. As of 2011, there were 9 water bodies in the Southwest Region with known infestations of invasive aquatic plant species. By far, the most widespread of these is variable milfoil, which has infested approximately 64 water bodies in the state.



Source: NH Department of Environmental Services Air Resources Division



Above right: Milfoil infestation in a lake; Above left: Hemlock woolly adelgid infestation.

## CHANGING CLIMATE

By the end of the century, the Region’s landscape may look very different from what it looks like today. Changes to the climate such as increased temperatures and precipitation are expected to greatly impact the Southwest Region’s natural systems. Between 1970 and 2012, the Region experienced an average annual increase of minimum winter temperatures of 0.17°F or a total increase of 7.14°F above the minimum over the 42 year period. Historical data shows that since 1895 the average annual temperature in the Region has increased slightly more than 1°F over a century’s time. Precipitation has also increased over time. According to data reported since 1970, rain precipitation in the Region is growing at an annual rate of 0.20 inches, or approximately 8.5 more inches per year in 2012 compared to 1970.

According to a 2014 study by the University of New Hampshire’s (UNH) Sustainability Institute, these trends are expected to continue and in some cases accelerate. The study forecasts that by 2099 there may be 53 more days during the year that will reach temperatures greater than 90°F in Keene. The number of days that will reach below freezing could decrease by 48 days. The same study suggests that the Region is expected to have between 6 and 8 more extreme precipitation events of four-inches or more in 48 hours per

decade. Between 1980 and 2009, Keene averaged only 1.5 four-inch precipitation events in 48 hours per decade. Because so many systems are tied to climate, these predicted changes will have a wide-ranging impact on where plants and animals live, food production, and the availability and use of water. For example, a change in the usual timing of rains or temperatures can affect when plants bloom and fruit, when insects hatch or when streams are at their fullest.

Although some species may flourish due to longer growing seasons and more abundant carbon dioxide, many of our native tree species, including spruce, fir, pine, maple, beech, and birch, are not expected to survive in a warmer climate and are predicted to migrate north. In addition, scientists anticipate the in-migration of new invasive pests, plants and insects, which could cause management problems and costs for area farmers and local gardeners as well as the potential introduction of chemicals such as pesticides, herbicides and insecticides into our soils and groundwater.

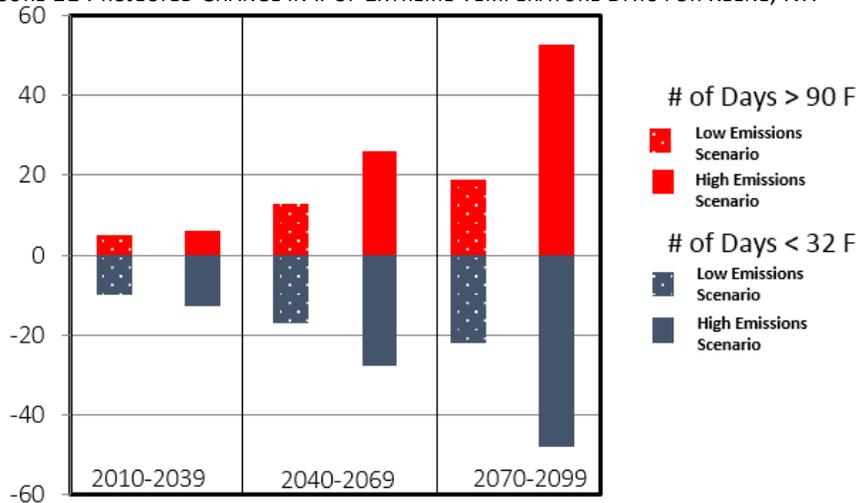
## ECONOMIC & SOCIAL IMPLICATIONS

The value of our Region’s natural ecosystems and cultural resources is vast. These features play an important role in sustaining quality of life and well-being, establishing both local and regional identity, and in attracting visitors to our Region. However, the issues described here could have an impact on their quality and availability and, potentially, severe economic repercussions.

Numerous studies have tried to calculate the economic importance of these resources. A study conducted in 2002 determined that just four uses of New Hampshire’s surface waters - boating, fishing, swimming, and drinking water supply - contribute up to \$1.5 billion annually in total sales to the state’s economy, and that surface waters boost property tax revenue statewide by an estimated \$247 million per year. A 2002 study by the Clean Water Network estimates that the economic value of New Hampshire’s wetlands, which help purify water, trap sediments, protect against floods, and recharge both surface and ground waters, to be approximately \$1.2 billion annually.

The Region’s economy, which relies on seasonal changes for recreation and tourism, could be significantly impacted if climate predictions are realized.

FIGURE 11 PROJECTED CHANGE IN # OF EXTREME TEMPERATURE DAYS FOR KEENE, NH



Source: Climate Change in Southern NH: Past, Present & Future, UNH Sustainability Institute, 2014

Winter recreation opportunities such as skiing, snowmobiling, ice fishing and skating are important to the Region. Increased warming trends are expected to limit and even threaten the continuance of these activities. Additionally, the loss of fall foliage as certain tree species migrate north could greatly impact the tourism industry and the revenue associated with foliage visitors, which is estimated to be approximately \$292 million annually statewide.

## CARING FOR OUR IMPORTANT RESOURCES

Given the diversity of interests and values related to our landscape, establishing collective priorities for resource conservation and management is a challenge. Priorities range from maximizing the commodity value of resources to ensuring the availability of clean air and water to preserving scenic views and rural character. Management strategies must balance meeting an array of needs and uses for our resources and natural systems with protecting them from current and future threats (e.g. loss of biodiversity, development pressure, and the impacts of a changing climate).

To be effective, multiple strategies should be employed from inventorying and monitoring to implementing best management practices to placing land in conservation. There can be no one-size-fits-all approach to managing and protecting these resources; especially, given their widespread geographic distribution.

### *Inventory & Monitor Resources*

Having an understanding of the availability and condition of resources is an important component of stewardship. Without this information, it would be difficult to plan for or make management decisions. Routine inventorying and monitoring can help communities and others acquire knowledge of the location, abundance, and condition of resources. This data can serve as a reference point against which past and future trends, as well as the condition of resources from other areas, can be compared and measured. Some of the ways inventorying and monitoring can be useful tools in the Region for resource management are described in the next sections.



### *Inventory Resource Availability and Conditions*

- **Inventories provide information that is fundamental for making well-informed management decisions.** An inventory is a process of gathering and recording information about a particular resource or resources at a specific point in time. This data can help determine where resources are located and dispersed, what types of stressors might be impacting them, how they compare to resources located in other areas, etc.
- **A natural resource inventory (NRI) is a tool to identify and describe naturally-occurring resources** in a community, watershed, or region. A comprehensive NRI is typically comprised of inventory maps that show the location and extent of existing resources (e.g. forests, surface water, shoreline, agricultural soils, wildlife, etc.) and related features. It also includes associated data such as the acreage of particular resource features, the standards and scale used for inventorying resources, and a written report that provides a descriptive summary of each resource inventoried, and summarizes the project's goals, findings and



recommendations. Many communities in the Region have completed an NRI and SWRPC completed an NRI for the Region in 2003. These documents can serve as the basis for land conservation planning and can be used in local planning and zoning.

- **Inventories of historic and cultural resources, such as older buildings, barns, stone walls, and historic sites, can be used to inform and guide preservation efforts.** A historic resource survey involves collecting and recording information about existing historic buildings and sites in a community, and are considered a first step in documenting historic resources for planning purposes. This type of survey is needed to list a site(s) on the State or National Registers of Historic Places. Surveys typically include detailed descriptions of the resource, photographs, and field notes on age, setting and geographical location. Some communities, in partnership with the NH Division of Historical Resources and the Historic Agricultural Structures Advisory Committee, have undertaken surveys of historic agricultural structures such as barns, silos, poultry houses, etc.

### *Conduct Routine Monitoring*

- **While an inventory provides data for a point in time, ongoing monitoring provides information for establishing baseline conditions and identifying long term trends.** Routinely collecting and analyzing information about the quality of the Region's resources allows for early detection of changes in resource condition and enhances the ability to tract potential problems to their source.
- **Aside from prevention, early detection is one of the most effective management strategies for invasive species, nonpoint source pollution, and other resource issues.** State agencies and organizations rely heavily on data collected by volunteers in the Region to survey and monitor forests and surface waters for invasive species. In addition, volunteers routinely collect and share samples from surface waters with NH DES and partner organizations to help determine long-term water quality trends. This data can be used to identify where improvements or protection efforts might be needed or most helpful.



- Although the Region is keeping pace with sampling its water bodies as compared to the rest of the state, there is a long way to go before there is a complete picture of water quality. Within the Region, 39% of lakes and 35% of rivers have some data available from water quality testing and monitoring. Additional sampling will help improve the understanding of water quality in the Region.
- Within the Region, air quality has been monitored since the 1960s. NH DES, who operates a network of air quality monitors throughout the state including stations in Peterborough and Keene, measures levels of ozone, sulfur dioxide, nitrogen dioxide, carbon monoxide, particulate matter, and a number of other pollutants in the outdoor (ambient) air. The data collected from these sites are sent to the U.S. Environmental Protection Agency (EPA) for evaluation to determine pollutant trends and to see if levels of pollutants exceed air quality standards.

### *Protect & Conserve Important Resources*

Some resources need to be protected from certain human activities development in order to maintain their integrity, ecological processes, and/or cultural values. Inventories and monitoring can help identify which resources or areas in the Region are most sensitive or vulnerable to these activities, and which warrant protection. There are multiple ways a community, organization, or others can protect natural or cultural resources. The sections below describe some of the methods currently employed in the Region for preserving the quality and value of important resources.

### *Conserve Important Resources*

- Conservation measures such as easements and land acquisitions ensure the long-term protection of important and/or valuable natural resources including wildlife habitat, working landscapes, vegetated riparian corridors, etc. A conservation easement is a legal agreement between a

*Approximately 23% of the Region's land is currently in conservation through ownership by natural resource agencies, conservation organizations, municipalities or by permanent conservation easement.*

landowner and a land trust, such as the Monadnock Conservancy, or a government agency that permanently limits future uses of the land in order to protect its natural resources. Often, landowners with conservation easements are still allowed to manage and use their land, and they can also sell it or pass it on to heirs. However, any future owner must abide by the permanent restrictions spelled out in the easement. In addition to conservation easements, land can also be donated or purchased to be used permanently for conservation purposes.

- **Approximately 23% of the Region's land is currently in conservation** through ownership by natural resource agencies, conservation organizations, municipalities or by permanent conservation easement. This land is distributed across the Region with large segments in the areas encompassing Pisgah State Park in Chesterfield, Hinsdale, and Winchester; portions of the Wapack Range in Sharon, Temple, New Ipswich, Peterborough, and Greenfield; Mount Monadnock, and its host towns of Dublin, Marlborough, Jaffrey, and Troy; and the Town of Stoddard. Six towns in the Region have 40% or more of their total land area in conservation. These include Chesterfield, Gilsum, Richmond, Stoddard, Surry, and Westmoreland.
- **Regional approaches to conservation are important** for coordinating large, un-fragmented tracts of land; ensuring connectivity among important wildlife habitat; and, protecting resources that cross municipal jurisdictions. Organizations like the Monadnock Conservancy and the Harris Center for Conservation Education can play a role in helping to coordinate regional conservation efforts.
- **Similar to conservation easements, a preservation easement can be used to protect a historic, archaeological, or cultural resource.** With a preservation

easement, the owner of a significant historic or cultural property grants a second party, such as a qualifying local board or non-profit historical organization, the right to protect and preserve the historic and architectural features of the property.

- **Good land conservation does not end with the acquisition of the property or an easement.** When property is placed in conservation it is important to plan for and identify resources to support long-term stewardship and management of the land or resource. Stewardship responsibilities can include monitoring and enforcing the provisions of an easement, evaluating the appropriate use of a property (recreation, timber, harvesting, farming, etc.), and managing the impact of public use of town-owned lands.
- **Aside from private donations, common sources of funding for conservation efforts include the Land Use Change Tax (LUCT), federal and state programs such as the USDA's Natural Resource Conservation Service and the NH Land and Community Heritage Investment Program (LCHIP), and municipal conservation programs.** The LUCT is money paid to a municipality when land that was enrolled in the current use assessment program is removed from current use to be developed.
- **The current use program (NH RSA 79-A:7) is a tax relief strategy aimed at making it easier for landowners to keep open space undeveloped and to conserve agricultural and forest lands.** Land in current use is taxed on its income-producing capability, instead of being taxed at its real estate market value. If this land is taken out of current use and is developed, the property owner must pay a use-change penalty, which is typically a sum relative to the amount of tax revenue lost during the years the land was in current use. In 2013, 66% (404,177 acres) of the Region's land was in current use and 316 acres were removed from current use, which generated an estimated \$111,473 in LUCT.

## CALIFORNIA BROOK NATURAL AREA: A CASE STUDY IN CONSERVATION & ECONOMICS



Selling a conservation easement to a land trust was not part of the plan when Forecastle Timber, LLC, bought its first property in Chesterfield, New Hampshire, in 2004. But when the Monadnock Conservancy made an offer to purchase an easement on nearly 400 acres of Forecastle's new acquisition, they listened with interest. Monadnock Conservancy was one of several organizations working to conserve the California Brook Natural Area, a 9,000-acre swath of undeveloped forest and wetlands linking the City of Keene with Pisgah State Park. The land trust purchased the easement, funded in part by LCHIP, in 2006.

"As long-term investors, our approach is to conduct regular but infrequent timber harvests, ensuring that the volume of timber removed does not exceed long-term natural growth," said Forecastle's Phil Blake. "We found that the conservation easement and the Monadnock Conservancy's goals were quite compatible with our own," added Blake. The easement was designed to ensure the land remains available for sustainable timber management and wildlife habitat, among other ecological values.

The transaction was so successful that the Monadnock Conservancy and Forecastle partnered on a similar project on adjacent land being sold by the Colony family in 2012. With significant potential for residential development, the Colony property carried a larger price tag. "Not being in the development business, we could never have afforded to buy the land if not for the Monadnock Conservancy's simultaneous purchase of a conservation easement," explained Phil Blake. "The easement provided the missing piece of the puzzle." Public funding for the easement was critical, not only from LCHIP, but also from NH DES and the Town of Chesterfield.

According to Chris Loomis, supervising forester on Forecastle's 2013 harvest of the Colony property, the economic benefits of the harvest extended far beyond Forecastle's profits. Before the harvest, a log landing and an access road were built using locally sourced gravel and stone. Two foresters were involved in planning and supervising the harvest, which utilized a local family-owned logging company and kept five employees busy full-time performing harvesting, processing, and trucking duties. Wood was trucked across the state, including to a log yard in Winchester, biomass power plants in Concord and Springfield, a wood pellet manufacturer in Jaffrey, and a lumber mill in New London. Finally, the Town of Chesterfield benefited as well in the form of more than \$3,500 in timber tax paid to the municipality at the time of the harvest. With the undeveloped Forecastle property demanding little in municipal services or similar expenses, this tax revenue to the Town was almost entirely profit.

To date the Monadnock Conservancy has protected one-third of the California Brook Natural Area, nearly all of which remains available for sustainable forestry. Another project is currently underway to protect another 688 acres in the corridor, and the Conservancy and Forecastle Timber are discussing opportunities to apply their successful model to future acquisitions.

*-Case study and photos courtesy of The Monadnock Conservancy*



- **Many communities in the Region have benefited from LCHIP to acquire and conserve land and cultural resources.** LCHIP is an independent state authority (NH RSA 277-M) that makes matching grants to communities and non-profits in the state to conserve and preserve New Hampshire's most important natural, cultural, and historic resources. Since the program started in 2000, over 260,000 acres of land have been conserved and 142 historic structures have been preserved or revitalized statewide.

### *Adopt and Enforce Policies & Regulations*

- **Communities can protect sensitive resources from potentially harmful land uses by establishing conservation zoning overlay districts and/or adopting land use regulations** that prohibit or restrict development and certain activities in critical natural resource areas such as drinking water or wellhead areas, wetlands, shorelands, wildlife corridors, etc. The Innovative Land Use Planning Techniques handbook produced by NH DES provides guidance and includes model regulations for communities to consider in their efforts to protect resources such as groundwater and surface water, wildlife habitat, wetlands, and agricultural soils.
- **Ordinances and regulations are most effective when local officials and residents adequately understand the restrictions they impose and the reasons for doing so.** It is also important to have adequate resources to support enforcement of these regulations. Enforcement can be especially challenging in communities where there is limited staff or a full-time code enforcement officer present.
- **Some communities have chosen to modify their land use regulations to support the retention or encouragement of agricultural activities and open space.** For example, some communities have reduced or removed impediments to home-based businesses or accessory dwelling units, which can be critical to farm operations. Communities might also consider exempting agricultural signs, which are typically temporary signs that change with the season and crop availability, from local sign ordinances. A community could develop and adopt ordinances such as an agricultural conservation district or a right-to-farm ordinance that are sensitive to the

unique needs of farm businesses, seek to protect areas of the community that are well suited for agriculture, and help to minimize conflicts between incompatible uses.

- **Local land use regulations can also be a tool for protecting historic and cultural resources.** There are three different types of historic districts that communities could adopt to protect historic character in a specific area. These include a National Register historic district, which is initiated at the local level but ultimately approved by the state and federal government; a locally designated historic district, which is typically a zoning overlay district that is administered by a local citizen commission that approves exterior alterations, new construction and demolition in the district; and, a neighborhood heritage district, which is also a zoning district but operates under more flexible, less stringent standards.
- **Communities might also consider adopting a demolition review ordinance, which can help prevent the loss of historically and architecturally significant buildings.** While this ordinance, which is adopted as an amendment to the building code, does not prevent demolition, it does provide for a delay period. This allows additional time for a community to evaluate the significance of the building, meet with the owner to discuss options, hold a public hearing, document the structure, and explore alternatives. Communities have a great deal of flexibility in creating this type of ordinance and can draft it to reflect local concerns and conditions. For instance, the City of Keene's demolition review ordinance requires that qualifying buildings be photographically documented prior to demolition and encourages the salvage of significant architectural features.

### *Promote the Use of Best Management Practices*

- **Best Management Practices (BMPs) are techniques and strategies that have been proven effective at reducing or preventing the pollution or impairment of natural resources.** BMPs are available for most land use activities that might impact natural resources, specifically water resources, and can be either voluntary or mandatory depending on the site. For example, forestry BMPs include a wide range of recommended



*Above photo: Peterborough Town House walkway prior to 2008 LID installation; Below photo: Peterborough Town House walkway following 2008 LID installation of rain garden and pervious brick walkway.*

techniques that can be used before, during, and after logging operations to protect water quality, wildlife habitat, soil integrity and other aspects of the forests. There are BMPs for agricultural practices, stormwater management, invasive species removal, roadway maintenance including road salt application, erosion and sediment control, etc.

- **Low Impact Development (LID) is a set of stormwater BMPs that strives to reduce the impact of built areas and promote the natural movement of water within an ecosystem or watershed.** Instead of conveying and treating stormwater off-site using conventional infrastructure such as pipes, LID focuses on techniques to infiltrate, filter, store, evaporate and detain rainfall close to its source. Common LID BMPs include: rain gardens, permeable pavements, vegetated roofs, and rainwater harvesting.
- **Communities have the opportunity to encourage the use of LID by requiring it in land use regulations, and implementing demonstration projects.** Often, elements of municipal ordinances, such as minimum roadway widths, parking requirements, and curb and gutter design, can conflict with LID principles. Local regulations can be modified to allow for and encourage LID best practices and techniques in the design and development of lots and streetscapes.
- **A few municipalities in the Region have implemented noteworthy LID projects.** In 2008, Peterborough completed a stormwater improvement and LID demonstration project in its downtown. This project incorporates LID techniques such as rain gardens, infiltration beds, and pervious brick sidewalks, to address nonpoint source pollution and stormwater concerns, and to protect the water quality of the nearby Contoocook River as well as important drinking water aquifers located downstream from the project.
- **There are numerous resources available for both public and private land owners and others seeking to implement BMPs.** State agencies such as NH DES, NH Division of Forests and Lands, NH Fish and Game Department as well as the National Resource Conservation Service and the University of

New Hampshire Cooperative Extension are a few of the organizations that have published BMP guidance and reference materials in New Hampshire.

### *Enhance Awareness & Education*

- **Education and outreach are important to helping residents understand the economic, cultural, and environmental importance of caring for our natural and historic features.** Having an understanding of how human and land use activities impact the quality and availability of resources, especially those that we rely on for daily living, is one of the best ways to ensure their protection and management.
- **Even the best plans and/or regulations cannot succeed without community participation and cooperation.** Public outreach and education on the importance of resource protection and management is essential. Outreach efforts should effectively communicate the importance and benefits of protecting resources and inspire citizens to action and behavior change.
- **Communities in the Region can help raise awareness** about ways residents and businesses can help protect natural resources and preserve historic and cultural features by sharing information on their websites and in community newsletters. This information can include links to guidance materials prepared by state agencies or other organizations and can include BMPs and other ways residents and businesses can be good stewards of resources in their background, community, or Region.

*“Clean air is a basic requirement to a healthy life. The outreach campaign was created to help people understand the issue and provide advice about proper wood-burning, the primary contributor to wintertime air pollution in our Region.”*

-Henry Underwood, GIS Technician / Planner, Southwest Region  
Planning Commission

## GREATER KEENE AIR QUALITY CAMPAIGN

When the nights get cold and frost begins to form, many residents of the Region turn to their trusty woodstove for heat. Wood burning in New England is a tradition, and for many, the spicy smell of wood smoke conjures memories of sitting by a warm fire. Yet, buried in this scent is fine particulate matter (PM 2.5 for short), which can pose significant environmental, economic and health concerns.

PM 2.5 refers to the mixture of very fine particles smaller than 2.5 microns in size - far smaller than the diameter of a human hair. These particles are small enough to enter the blood stream through the lungs, which can cause a myriad of health effects, especially for those with chronic respiratory diseases such as asthma, emphysema and bronchitis.

For most areas, wood smoke is rarely seen as an issue because the climate and topography allow it to blow away before it affects anyone. However, on cool, calm winter nights in valley communities, such as Keene, an overhead layer of warm air can trap colder air, along with wood smoke and other pollution, close to ground.

NH DES, who routinely monitors air quality throughout the State, knew they needed to address this issue when elevated PM 2.5 levels were observed in Keene. In 2012, they formed a partners group with SWRPC, Cheshire Medical Center, Keene State College, the Greater Monadnock Public Health Network, and the City of Keene to respond to the issue. The group recognized the important role public awareness and education could play in mitigating PM 2.5. If residents burned wood more efficiently it could reduce the amount of wood smoke produced. Together, these partners designed and implemented the Greater Keene Air Quality Education and Outreach Campaign.

The Campaign's core message, “burn the right wood; use the right stove; and burn the right way,” is a reminder to those with wood-fueled stoves, boilers, and furnaces to burn only dry/seasoned firewood in a clean, efficient appliance. The Campaign has spread this message by creating an informational website; distributing flyers, door tags, and pamphlets; facilitating community discussions, presentations, and interviews; gaining substantial media coverage via newspapers, radio, and cable TV; and enhancing awareness of the Air Quality Index and Air Quality Action Days. And the work hasn't stopped there - the Partners Group, along with local businesses and community members continue to cultivate more research and awareness about air quality in and around the City of Keene.

## Coordinate and Plan for Resource Management

Planning for natural and cultural resources within the Region and communities is important for many reasons. It is an opportunity to identify and develop goals and objectives as well as a direction for the use and management of important resources. It is also an opportunity to educate and inform residents about the history, availability, and conditions of certain resources. Included below are some considerations for communities and others in their efforts to plan for resources at varying scales.

### Develop Management Plans

- **Communities can support the management, conservation or protection of natural and cultural resources by developing visions, goals, and objectives for these resources in their local master plans.** Through powers granted by NH RSA 674:2, municipalities can dedicate sections of their master plan to natural resources, cultural and historic resources, energy, etc. By including clear goals for the management of certain resources in the master plan, a community can establish the direction and authority needed to implement certain strategies or ordinances to protect and care for resources locally.
- **Plans focused on the management of certain resources, such as open space or watershed management plans, can be developed in addition to master plan chapters.** Often these documents identify goals and action items for the purpose of creating, protecting, and/or maintaining desired conditions for the resource whether it be a field, forest, river, lake, watershed, etc. The process of developing these plans can involve multiple partners including municipalities, landowners, local and state agencies, and the general public.
- **It is important to plan for and manage some resources at a regional or multi-jurisdictional scale.** Resources that cross municipal boundaries and are a part of a larger network such as rivers, watersheds, large tracts of forests and wildlife habitat warrant consideration at a larger scale and a more

comprehensive planning effort. However, it can be challenging to collaborate with multiple jurisdictions and diverse stakeholders.

### Form Advisory Committees

- **Advisory committees can support and facilitate ongoing monitoring of and planning for natural resources in communities and the Region.** For example, lake associations, which are voluntary organizations composed of people who own land on or near a lake, provide a forum for residents to raise concerns related to the lake, become educated about problems, and work towards solutions.
- **Communities have the ability to form a number of different types of advisory committees and commissions including those focused on conservation, open space, energy, historic and agricultural resources.** While the roles and duties of these committees vary, each serves to explore and better understand the availability and condition of certain resources in a community and to advocate for their protection and wise management.



Above photo: Town of Jaffrey Energy Committee

*Goal III: The Region's natural, historic, and cultural resources will be cared for and protected for the use and enjoyment of present and future generations.*

Objective A: Inventory and monitor the availability and condition of natural, cultural, and historic resources within the Region.

Objective B: Preserve and protect the integrity and availability of important resources through the use of conservation, regulation, and the use of best management practices.

Objective C: Manage natural, cultural, and historic resources through planning and collaboration among communities, organizations, and landowners in the Region.

## WHAT YOUR COMMUNITY CAN DO TO HELP STEWARD NATURAL AND CULTURAL RESOURCES:

### INVENTORY & MONITOR RESOURCES

- ✓ *Develop natural resource inventories to identify important naturally occurring resources within communities.*
- ✓ *Inventory important historic and cultural resources such as buildings, structures, sites, and objects.*
- ✓ *Monitor and assess the quality of surface water resources in the Region and expand efforts to water bodies not currently monitored.*
- ✓ *Inventory and evaluate the locations and adequacy of public access to outdoor recreation resources.*
- ✓ *Support programs that prevent the introduction of and reduce the impacts of invasive species and diseases.*

### PROTECT & CONSERVE IMPORTANT RESOURCES

- ✓ *Develop and implement conservation strategies that protect and manage the Region's natural resources such as prime agricultural soils, open space, important forest soils, shorelands, and wildlife habitat.*
- ✓ *Adopt policies or regulations that protect natural resources and systems (e.g. groundwater protection, stormwater management, steep slope protection, visual resource protection, etc.).*
- ✓ *Adopt policies or regulations that protect historic and cultural resources (e.g. demolition review ordinances, neighborhood heritage districts, scenic road designation, etc.).*
- ✓ *Help landowners, communities, and others implement Best Management Practices through outreach, education, and demonstration projects in areas such as forestry, agriculture, water quality, waste management, stormwater management etc.*
- ✓ *Support programs to generate revenue for the protection of important natural resource features such as open space, working landscapes, wildlife habitat, etc.*

### COORDINATE & PLAN FOR RESOURCE MANAGEMENT

- ✓ *Encourage multi-town collaboration for the management, protection and use of natural resources (e.g. developing watershed management and non-point source pollution plans).*
- ✓ *Promote land and resource protection through means such as open space and land conservation plans, historic preservation plans, agricultural commissions, etc.*
- ✓ *Incorporate climate adaptation and mitigation strategies as part of natural resource planning and management.*



## PREPAREDNESS

The Southwest Region, like much of New Hampshire, celebrates its Yankee heritage and related qualities of independence and self-sufficiency. Residents are used to New England's variable weather and the hardships of long winters - shoveling, plowing, heating, potential power outages, etc. Communities have trained volunteers and plans in place to respond to emergency and disaster situations. Neighbors help neighbors in need.

However, extreme storm events and flooding in the most recent decade have caused unprecedented damage to some areas of the Region, and raised questions about our resilience to unforeseen threats. Extreme rainfall events in 2005 (Alstead) and 2006 (Keene and surrounding communities) brought severe flooding resulting in costly road washouts, property damage, and loss of life. Similarly, the Ice Storm of 2008 took down power lines, disrupted economic activity, and left many without heat, hot water, electricity, and the ability to communicate with others for days.

Events such as these tested the preparedness of our residents and communities and have compelled us to consider our capacity for responding to and enduring natural and manmade disasters and potential emergencies. For example, if travel and trade were restricted, would we have sufficient supplies of food, fuel or other materials needed to survive? Is our infrastructure vulnerable to increased flooding or severe storm events? Questions of this nature are important to consider in our efforts to plan for the future. Although we cannot be resilient to everything, we cannot afford to be complacent. Preparedness for disasters and emergencies is critical to our Region's public health, safety, and security.

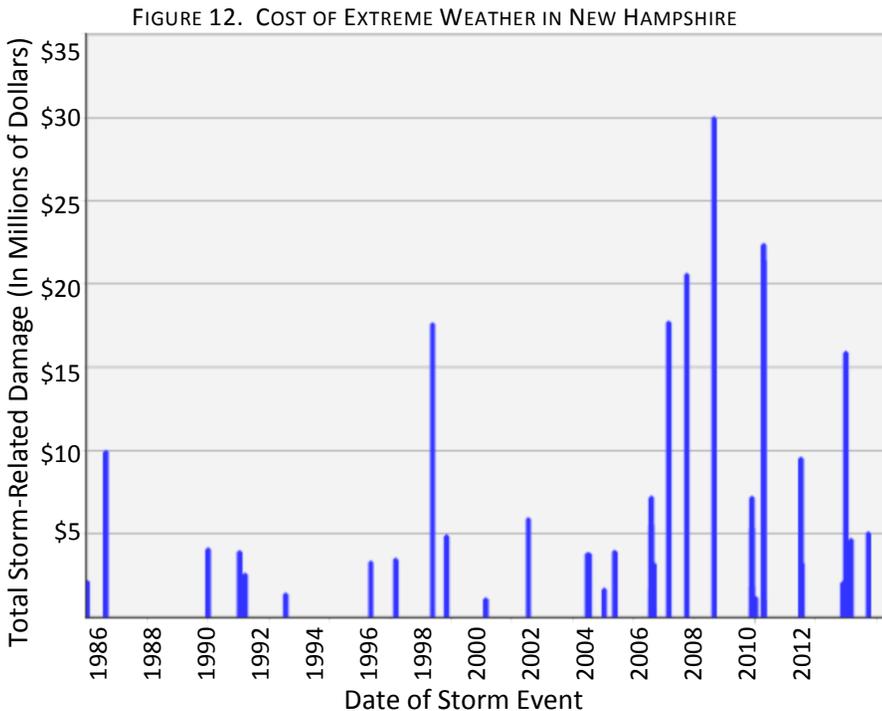
This section of the Plan examines opportunities to enhance our Region's resilience to a range of planned and unplanned events. It also provides an overview of significant trends and challenges that might impact preparedness in the Region.



### SEVERE WEATHER & CLIMATE CHANGE

Extreme weather events like heat waves, storms, and floods have increased over the past decade in the Southwest Region. According to the Federal Emergency Management Agency (FEMA), there were 13 severe storms and flooding events in the Region declared as Major Disasters between 2003 and 2012. Statewide, there have been 32 Major Disaster declarations since 1953, 53% of which have occurred since 2000.

These storms have caused significant damage to property, roadway infrastructure, and other utilities, costing millions to repair. Although they have not been unequivocally connected to climate change, at the very least, these events are examples of what climate scientists predict we can expect to happen more frequently in the Region.



Source: NH Department of Environmental Services

### ENERGY RELIANCE

Southwest Region households are among the most dependent on petroleum in the nation, with more than 65% of households using fuel oil as their primary source for home heating. This heavy reliance on non-renewable and imported energy sources for heating, transportation and other important applications has made the Region vulnerable to changes in its supply and price.

In addition, the state of New Hampshire has become increasingly reliant on natural gas to produce electricity, despite limited pipeline capacity. In January of 2014, there were times when more than 75% of the natural gas powered electricity generation facilities in New England were not running, as the available fuel supply was being consumed for heating purposes.

**FIGURE 13. NEW ENGLAND NATURAL GAS PIPELINES**



Source: U.S. Energy Information Administration

A 2012 study by ISO New England, the independent manager of New England's electricity grid, found that under typical operating conditions, existing natural gas infrastructure in New England is sufficient to meet electric power system demand from only 2014-2017. This, coupled with the anticipated closure of Vermont Yankee and other nuclear facilities, raises concerns for the long-term stability and reliability of the electric system.

### AVAILABLE FOOD SUPPLY

Over the past century, our ability to provide the most basic need of our citizens - that of food, has weakened to the point where the Southwest Region and the rest of New Hampshire now relies on outside sources for 96% of the food we consume. In addition, our delivery chain has become dependent on petroleum, an imported fuel source that is susceptible to sudden price increases or supply shortfalls. If there were an unforeseen break in our food supply lines, the Region would be left with about four days of nutrition on supermarket shelves.



*Above photo: Empty shelves in the produce section of supermarket, Market Basket, just one week after an employee strike prompted food distributors to stop delivery of fresh produce to the stores in 2014.*

### INFECTIOUS DISEASES

Infectious diseases represent an ongoing threat to the health of people everywhere, including those in the Southwest Region. Over the past few decades, there have been several emerging infectious diseases that have taken the health community by surprise including SARs, H1N1, Lyme disease, eastern equine encephalitis (EEE) and the West Nile virus. Since 1980, approximately one to three new infectious diseases have been identified each year, while others have re-emerged or have developed resistance to available treatments.

Although not every infectious disease has major public health implications, a few have resulted in global pandemics, causing significant loss of life, economic losses, and interruptions in trade and travel. The flu alone contributed to between 3,000 and 49,000 deaths each year in the United States from 1976 to 2006.

As the Region's population ages and climate changes, the risk and potential impacts of an infectious disease pandemic might increase. It's estimated that 90% of seasonal flu-related deaths and more than 60% of seasonal flu-related hospitalizations in the country each year occur in people 65 years and older. In addition, increased heat, rain, and humidity as a result of climate change can create conditions conducive for disease-carrying vectors such as mosquitos and ticks to come into closer contact with humans in the Region.

### ECONOMIC & SOCIAL IMPLICATIONS

Failing to prepare for the challenges described above and others could cost the Region significantly more than if it were to invest in disaster prevention and preparedness measures. According to the U.S. Department of Homeland Security, failing to prepare for extreme weather events has cost the United States \$1.15 trillion in economic losses from 1980 to 2010, and could cost another trillion in coming years. Investments in pre-disaster mitigation strategies such as adopting floodplain standards and hazard mitigation plans, and preparedness strategies such as maintaining reliable emergency communications systems and having evacuation plans, cost local governments

significantly less than recovery. A 2005 study of FEMA's disaster mitigation grants, found that for every \$1 invested in hazard-mitigation activities, the United States economy saves \$4 in societal losses from future disasters.

The costs of disasters are only anticipated to grow as our infrastructure becomes more vulnerable with age and as storm events become more frequent and severe. Over the past two decades, the annual cost of natural disasters in the United States has doubled, growing from \$15.6 billion to \$31.25 billion each year. According to the U.S. Global Change Research Program, future impacts of climate change project national economic losses on the order of \$1.2 trillion through 2050.

### ENHANCING REGIONAL RESILIENCE & PREPAREDNESS

It would seem to take more than a village to respond to the types of events described in the previous sections; yet, most disasters and emergencies are experienced locally, at the community level. Given that resources are limited in the wake of an emergency, it is likely that communities will be the first to respond and may be on their own for hours or potentially days before help arrives from regional, state and/or federal sources. In these hours, towns must look to themselves and their neighbors for answers and assistance. For this reason and others, it is imperative that communities build preparedness and local response capabilities as well as overall resilience in advance of a disaster or emergency.

There are many factors that influence a community's resilience - or rather the ability to prevent or withstand and recover from natural or manmade disasters, public health emergencies and other crises. Resilience involves developing the capacity to account for and mitigate vulnerabilities, establishing strong social networks, considering preparedness and mitigation in local planning efforts, reducing negative health consequences, and rapidly restoring community functions.

While many communities in the Southwest Region have in place plans and trained volunteers to respond to a disaster or emergency, building resilience

*For every \$1 invested in hazard-mitigation activities, the United States economy saves \$4 in societal losses from future disasters, according to a 2005 study of FEMA's disaster mitigation grants.*

is an ongoing task. To improve resilience within the Region, we must routinely assess our capacity to meet the needs of our population in the event of an emergency; enhance local and regional planning for potential disasters and emergencies; and, ensure that we have sufficient and reliable infrastructure to access food, water, shelter, and other necessities and to maintain channels of communication.

### *Assess Existing Capacity*

Part of preparedness is knowing the type of risks and hazards we might face as a Region and assessing our degree of vulnerability or exposure to them. It also involves understanding our capacity for responding to and dealing with these events, including our ability to meet basic needs such as supplying food and water, shelter, health care, heat, electricity, communications, etc. The sections below explore considerations for communities and regional organizations in assessing their capacity to either prevent or withstand and recover from natural and man-made hazards.

### *Examine Resource Availability*

- **Having an understanding of the Region's potential and current capabilities for storing and supplying materials such as nutritious food, safe drinking water, heat and electricity, medicine, etc. from nearby sources is critical to building resilience.** If travel and trade were restricted, how would we access food, fuel or other materials needed to survive? Do we have the necessary infrastructure to process, transport, and store these supplies even if they were available? These are important questions to consider in studying community readiness to either short or long term disaster or emergency situations.

- It is estimated that grocery stores in the Region have less than a week's supply of food on hand and there are few sources of fuel available within the Region. Organizations like the Monadnock Farm to Community Coalition (MFCC), Cheshire County Conservation District (CCCD), Cheshire County government, and others have been working on projects to enhance the Region's food security by supporting increased agricultural production and efforts to build the infrastructure needed to transport and process food products such as warehouses, commercial kitchens, etc. Others in the Region might consider undertaking similar efforts to enhance local food and energy security.

### *Evaluate Response Capabilities*

- In the event of an emergency evacuation, communities have the obligation to provide shelter space and food for evacuees. For larger scale events, it is important to consider undertaking a study of regional evacuation capabilities and shelter capacity to better understand how prepared the Region is for a disaster or hazard event that has region-wide impacts. Generally, schools and faith based institutions, such as churches, are the relied-upon options for shelter facilities in a community since they often offer space and facilities such as kitchens, bathrooms, emergency generators, etc. Although identifying and planning for these facilities is typically the responsibility of the municipality, a regional study could aid in improving the understanding of how well these shelters can accommodate the needs of larger diverse populations and of response efforts.

*“Having food security in the future is going to be very important. The work that MFCC does - providing accessible, affordable healthy foods to all people - supports a better future. It just makes a lot more sense for us to be as strong as we can be locally.”*

--Roe-Ann Tasoulas, Coalition Coordinator, Monadnock Farm to Community Coalition

## BUILDING REGIONAL FOOD SECURITY

“Across the board, people are very passionate about food and about it being local. They’re invested and enthusiastic about having a sustainable and accessible future for generations,” describes Roe-Ann Tasoulas, the coordinator for the Monadnock Farm and Community Coalition (MFCC). The MFCC is working towards building and supporting a robust and reliable local food system by facilitating discussion, collaboration, and implementation of effective programs, projects, and policies within Monadnock Region communities.

In 2007, the Cheshire County Conservation District (CCCD) began hosting open forums to explore the issues and barriers farmers, educators, businesses, and community members face in the Region related to local agriculture. What stemmed from these discussions was a myriad of off-shoot organizations dedicated to promoting and advocating for local food production and distribution. These include the Keene Farmer’s Market, the Monadnock Food Cooperative, Monadnock Menus, and the MFCC, to name a few.

Today, the MFCC consists of 44 members, a Board of Directors and one full-time staff person. Since forming, the MFCC has developed and adopted a 3-year strategic plan. One facet of this plan is the formation of working groups, which are focused on supporting community action on specific subjects, like policy making and education. For example, the Farm-to-School working group discusses the business of food programs in the Region and how to better teach healthy eating habits to people of all ages. Tasoulas notes, “Poor health is taxing on our healthcare system, which affects our regional economy. Eating local food means eating healthy, and communities with strong agriculture contribute to a more resilient economy.”

The MFCC is reliant on partnerships and community participation to achieve its goals. “As a non-profit, there’s only so much time, money, and energy to accomplish goals, so collaboration is where it’s at!” comments Tasoulas. Into the future, the MFCC is hoping to continue building their regional presence as a hub for information on local agriculture, farming, education, and resources. The public is encouraged to attend any of their various quarterly meetings, which are held in locations around the Region.

- **Continuing to recruit and train volunteers of diverse ages and abilities is vital to sustaining local emergency management efforts such as firefighting, emergency medical response, search and rescue, etc.** In the Southwest Region, communities are reliant on citizen volunteers to respond to emergencies. Taking time from family life and work to undergo training and duty time can be a challenge for many volunteers. Yet, it is unlikely that our small communities will acquire the funding and resources necessary to meet their emergency response needs without volunteer support. In addition, the need for these skilled volunteers is anticipated to increase as our population grows older.
- **It is important to understand how prepared and capable communities are for meeting the needs of diverse, vulnerable populations in times of disaster.** Vulnerable populations refers to groups that may not feel they can comfortably or safely access and use the standard resources offered in a disaster response or recovery effort. These groups may include but are not limited to individuals with physical limitations, developmental disabilities, mental illness, Limited English Proficiency, medical or chemical dependencies, etc.
- **Addressing the great diversity of special health and medical concerns of vulnerable populations, language and cultural barriers, and other life circumstances in an emergency presents many challenges for emergency management professionals and volunteers.** However, the more prepared emergency managers are for handling these needs in advance, the more successful the response and recovery effort will be. Preparedness can involve attending trainings on this topic, becoming better informed of the types and locations of vulnerable populations living in a community, and reaching out to these groups in advance of a disaster or emergency to better understand their needs. The Greater Monadnock Public Health Network, in partnership with the Region's major hospitals, recently developed a guide for healthcare providers and community partners in the Southwest Region on how to interact with vulnerable populations in emergencies or disasters.



*Above photo courtesy of Monadnock Buy Local.*

## Plan for Disaster Mitigation & Response

In order to protect critical infrastructure and strengthen the Region's response to disasters and emergencies, planning for hazard mitigation and emergency response is a critical and oftentimes necessary task. These plans provide a framework to reduce impacts to lives, property and the economy from future disasters and can provide a strategy for response efforts in a town. In addition to plan development, communities can plan for events by ensuring that emergency management professionals and volunteers receive adequate training and access to resources.

### Develop & Implement Plans

- In order to be eligible for certain types of non-emergency disaster assistance, local governments must develop hazard mitigation plans that are approved by FEMA. Hazard mitigation planning is a process to identify risks and vulnerabilities associated with natural and man-made disasters, and to develop long-term strategies for protecting people and property from future hazard events. The process, which involves a team of community members and typically takes between six and ten months, results in a mitigation plan that offers a framework for developing feasible and cost-effective mitigation projects. In New Hampshire, the Department of Homeland Security and Emergency Management provides technical assistance to communities developing these plans.
- Within the Region, every community has developed a hazard mitigation plan. However, a community must review and revise an existing plan to reflect changes in development, priorities, and progress in local mitigation efforts every five years to continue to be eligible for FEMA mitigation project grant funding.
- SWRPC has been helping communities develop hazard mitigation plans since 1999. SWRPC developed the first natural hazard mitigation plans to be approved by the state of New Hampshire.



*Above photo: Damage to a private driveway in Greenfield from the April 2007 storm and floods; Below photo: Mountain View Road in Temple during the April 2007 flood event.*



Above photo: Stoddard Emergency Operations Plan Committee; Below photo: Greenville, NH Fire Station

- While a hazard mitigation plan outlines strategies to avoid or minimize impacts from certain natural or man-made hazards, an emergency operations plan (EOP) describes the basic mechanisms and structures by which a town would respond to potential or actual emergency situations. The purpose of an EOP is to initiate coordination and sustain an effective local response to disasters and emergency situations. It provides the basis for coordinating actions prior to, during, and after any type of disaster.
- During times of disaster, there are many agencies and organizations involved in responding to the needs of the community and affected populations. There must be a plan for coordinating services and materials. The EOP represents a town's best intentions for dealing with disasters within the framework of community-wide cooperation and statewide coordination. This document, which is developed with the assistance of local officials and community members, identifies a number of support functions such as transportation, communications, search and rescue, food and water, energy, etc. to be addressed by a community in an emergency situation as well as the roles of local government, community organizations and institutions, mutual aid resources, etc.
- An important preparedness measure that communities might consider in their planning efforts is to identify adaptation and/or mitigation strategies for climate change. In addition to the New Hampshire Climate Action Plan, there are resources from within the Region that communities can refer to in their efforts to plan for climate change. These documents include the City of Keene's 2004 Local Climate Action Plan as well as their 2007 climate adaptation plan, "Adapting to Climate Change: Planning a Climate Resilient Community." Resources focused on the Region include the Southwest Region Natural Resource Plan, which is included in the Appendix of this Plan, and the Monadnock Sustainability Action Plan.

### *Build Regional Response Capacity*

- The impacts of emergencies and disasters can be significantly reduced if local authorities are well prepared. In the Southwest Region, the Greater Monadnock Regional Public Health Network (GMPHN) provides leadership

and coordination to improve the readiness of partners to mount an effective response to public health emergencies and threats. GMPHN works closely with hospitals, municipal emergency management directors, and other governmental, public health, and health care entities to plan for public health emergencies and ensure the provision of public health, medical, and behavioral health services before, during, and after an incident.

- **GMPHN coordinates efforts to recruit, train, and deploy a volunteer Medical Reserve Corps (MRC) during public health emergencies.** The MRC supports local emergency responders to provide emergency public health services throughout the Region. MRC volunteers include medical, public health, and general professionals.
- **The Community Emergency Response Team (CERT) program educates people about disaster preparedness and trains them in basic disaster response skills,** such as fire safety, search and rescue, and disaster medical operations. Using their training, CERT members can assist others in their neighborhood or workplace following an event and can take a more active role in preparing their community.
- **When emergencies happen, CERT members can give critical support to first responders, provide immediate assistance to victims, and organize spontaneous volunteers at a disaster site.** CERT members can also help with non-emergency projects that help improve the safety of the community.
- **Another vital resource is Southwestern NH District Fire Mutual Aid (SWNHFMMA),** which provides fire and emergency medical services to 90 fire departments spread across New Hampshire, Vermont, and Massachusetts. In emergency services, mutual aid is an agreement among emergency responders to lend assistance across jurisdictional boundaries. This may occur due to an emergency response that exceeds local resources, such as a disaster or a multiple-alarm fire. SWNHFMMA's dispatch center is in Keene.

## *Enhance Critical Infrastructure Resilience*

Critical infrastructure are the assets, systems and networks vital to the security, public health and safety of the Region. Examples of these systems include transportation, water and wastewater, energy, emergency management, health care, agriculture, stormwater, and telecommunications. Communities and residents rely on them to access essential services and functions such as power for our homes, businesses, and hospitals; food and clean drinking water; communication with family, friends, and others.

The resilience of critical infrastructure is intricately linked with the overall resilience of a community. Therefore, protecting these systems against disruptions and adverse impacts is an important component of preparedness and hazard mitigation. Some strategies for communities and other partners to consider to reinforce the resilience of critical infrastructure to potential threats are discussed below.

### *Reduce Vulnerability*

- **Communities can identify how potential threats and disaster scenarios might impact some of the Region's infrastructure by inventorying the condition of publically-owned assets, facilities and systems.** Having an understanding of the degree of susceptibility or exposure of critical infrastructure to threats, such as extreme weather, aging or failing infrastructure, and acts of terrorism, can help communities undertake more targeted risk management or hazard mitigation activities. Developing and maintaining an asset management program, as described in earlier in this Plan in the Economic Prosperity chapter, can be a tool for communities in this effort.
- **One of the most pressing threats to infrastructure in the Region is extreme storms and flooding.** However, much of our stormwater and roadway infrastructure such as culverts and bridges, which are aging or in need of repair, does not have the capacity to handle the extreme storms and flooding we've experienced in recent years. Ongoing and future changes

to climate have the potential to compound these risks and could have a major impact on infrastructure, and associated maintenance costs.

- **Some communities in the Region have participated in assessments of their culverts and bridges to better understand how vulnerable this infrastructure is to the impacts of increased storm events and flooding.** Data collected from these assessments is shared with NH DES and NH DOT, and can be used to help identify, prioritize, and replace or retrofit infrastructure that is inadequate or undersized. These agencies, in collaboration with other entities, have developed guidelines and protocol to ensure these assessments are completed in a standardized manner. In the Southwest Region, organizations like the Nature Conservancy, Trout Unlimited, SWRPC, and others have worked within communities and watersheds to complete these assessments.
- **An important component of reducing critical infrastructure vulnerability is ensuring system redundancy.** Redundancy is a property of a system that allows for alternate options, choices, and substitutions under stress. In other words, if one component of a system fails, there is a backup option available as a method to insure against system failure or loss of functionality. In the event of an emergency, it is especially important to ensure that there is redundancy in communications systems such as telephone, radio or Internet infrastructure, and in energy systems that generate and transmit electricity.
- **The Region and its communities should explore innovative ways to increase energy independence and security in the Region.** While many communities and residents have been installing renewable energy systems and technologies, the Region is still largely dependent on imported natural gas and oil for powering our buildings and vehicles. Even if there were a transition to renewable resources, the Region does not yet have the infrastructure or technology in place to ensure reliable storage and transmission capacity in the event of an emergency. However, some parts of the country have been building microgrids to increase reliability and diversification of energy sources at a local scale. A microgrid is a small-scale, local energy grid with control capacity, meaning it can disconnect

from the traditional grid and operate autonomously. It can be powered by distributed generators, batteries, and/or renewable resources. While these systems are relatively new and not without their challenges, they are a potential solution to improving the redundancy and reliability of energy systems in the event of outages.

### *Undertake Mitigation Efforts*

- **Communities can integrate hazard mitigation concepts into existing and future community infrastructure projects.** Before repairing, replacing existing or building new infrastructure it is important to ensure the new designs or repaired structures can withstand challenges posed by climate and disaster-related stressors. For example, if a culvert fails during a flooding event, it might have been undersized for that particular water channel. Instead of replacing the culvert in-kind, it might warrant resizing or upgrading the culvert to better fit site conditions and handle future storm events. NH DES has adopted guidelines for communities and others to consider in installing stream crossing such as culverts.



*Above photo: SWRPC intern measures culvert dimensions as part of a town culvert assessment.*

## PETERBOROUGH DIVERSIFIES ENERGY SUPPLY WITH SOLAR



The sun is shining on Peterborough, and the Town plans to take advantage of it. In 2007, Peterborough's Board of Selectmen voted to reduce the municipal carbon footprint by 5% by 2010. This measure prompted a number of projects to diversify the Town's energy sources. A small solar panel was installed to power pedestrian lights; new biomass pellet boilers were installed in municipal buildings, including the newly built wastewater treatment facility (WWTF), to reduce heating costs; and, wind renewable energy credits were purchased to offset emissions. These efforts resulted in a 60-70% fossil fuel use reduction over a seven year period. Yet, Peterborough had greater aspirations.

The Town wanted to reduce the energy dependence of its WWTF - a significant and costly consumer of electric power. It began working with Borrego Solar, a company based in Lowell, Massachusetts, to install a 1 megawatt capacity solar array on the 5 acres of land next to the WWTF, the site of decommissioned wastewater lagoons. This array would generate enough electricity to power the WWTF as well as other municipal buildings. Once completed, it will be the state's largest solar power facility.

Because the energy produced from the solar array would be fed into the electric grid, there was a question of whether the existing infrastructure could accommodate this additional power. Also, prior to any activity, the proposal had to be approved by NH DES and USDA Rural Development. Following approval from these entities, and discussions with Public Service of New Hampshire (PSNH) about power options, the Town worked with Borrego Solar to pursue funding.

In May of 2013, Peterborough received a \$1.2 million grant from the New Hampshire Public Utilities Commission (PUC) and Borrego Solar agreed to fund the rest of the project. Borrego Solar agreed to lease the land from the Town for a 20-year period. The Town would be the site's only customer, purchasing the entire 1,189,058 kilowatt hours (kWh) of electricity produced for \$0.08 per kWh. This price is less expensive than the \$0.07 per kWh they pay to PSNH, because it doesn't include the distribution fees paid on conventional electricity, which raises the price up to \$0.14 per kWh.

The Town stands to save between \$12,000 and \$25,000 a year on energy costs, which equates to a 20 year savings of between \$240,000 and \$500,000. The next phase for the project is to clean and fill in the abandoned lagoons. If the project were to follow its anticipated timeframe, the solar installation will be completed sometime in 2015. The Town hopes that this project will encourage other communities to invest in the benefits of renewable energy.

*Above photo: Borrego solar array at the landfill in Ludlow, MA; Below photo: A conceptual plan for Peterborough WWTF solar array.*

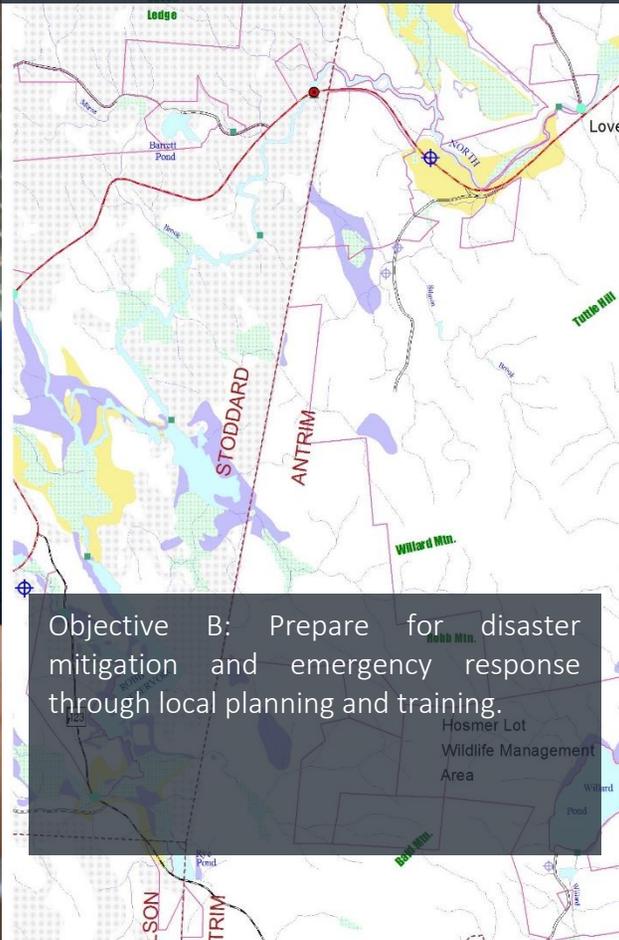




*Goal IV: The Region will be prepared for and have the capacity to withstand and recover from the impacts of natural and manmade hazards and other emergency situations.*



Objective A: Routinely assess the capacity of the Region to meet the needs of its population in the event of an emergency or disaster.



Objective B: Prepare for disaster mitigation and emergency response through local planning and training.



Objective C: Ensure that the Region's critical infrastructure is capable of withstanding the impacts of potential threats and/or disasters.

## WHAT YOUR COMMUNITY CAN DO TO BUILD RESILIENCE:

## ASSESS EXISTING CAPACITY

- ✓ *Assess the ability to supply critical resources such as food, shelter, water, energy, and medical supplies in the event of an emergency or natural disaster.*
- ✓ *Routinely assess the capacity of communities for emergency preparedness by maintaining local Emergency Operations Plans, conducting periodic table top exercises, etc.*
- ✓ *Assess the capacity of communities to assist and respond to the needs of vulnerable populations in the event of an emergency.*
- ✓ *Identify and assess vulnerability to disruptions in the supply of energy such as brownouts, black outs, and energy shortages.*
- ✓ *Assess the capacity of suitable emergency shelter.*

## PLAN FOR MITIGATION &amp; RESPONSE

- ✓ *Integrate climate adaptation and mitigation strategies into planning efforts including hazard mitigation, emergency operations, and community master plans.*
- ✓ *Raise awareness of the resources available to support communities in the event of emergencies (e.g. volunteer emergency response support teams).*
- ✓ *Develop recovery plans for post-disaster situations.*
- ✓ *Increase education and awareness on potential impacts of severe weather events and climate variability, and on ways to plan and prepare for these impacts.*
- ✓ *Establish and support programs that involve youth in volunteer firefighting and emergency response services.*
- ✓ *Utilize the NH Geological Survey's analysis of fluvial geomorphology and erosion hazards to inform local planning in activities such as capital improvement programming and hazard mitigation planning.*

## ENHANCE CRITICAL INFRASTRUCTURE RESILIENCE

- ✓ *Assess the vulnerability of road-stream crossing infrastructure such as roads and bridges to the impacts of flooding and severe storms.*
- ✓ *Strengthen efforts to develop a local food hub by establishing the required processing and warehousing facilities and the transportation systems needed to support it.*
- ✓ *Maintain reliable and diverse communications capabilities including broadband and communication devices not dependent on electricity such as ham radios.*
- ✓ *Plan for modes of transportation that address issues of increasing importance such as energy uncertainty, climate change, public health, etc.*
- ✓ *Explore opportunities to diversify energy resources and to enhance energy independence.*

IMPLEMENTATION



# IMPLEMENTATION

To support and advance the goals and objectives identified in this Plan, a number of strategies were identified. These strategies are projects and programs that could be implemented at either the community or regional scale by a range of stakeholders including municipal boards and committees, businesses, institutions, nonprofit organizations, human service agencies, and others. The tables on the following pages include these action items, which are categorized by the Plan's theme areas of community vitality, economic prosperity, stewardship, and preparedness, as well as the by the Plan's objectives.

While the Plan includes strategies and content that address the needs of the Region at the time of writing, it is intended to be a dynamic document that is periodically revisited and updated to address conditions and recognize opportunities that were unforeseen at the time of its development.

Each of the tables includes a list of topic areas (e.g. housing, transportation, environment, economy, history/culture, engagement, public health) to which the strategies might be related. A closed circle indicates the topic area that the strategy is most closely aligned with, and an open circle indicates a topic area that the strategy might have a secondary impact or influence. For example, improving the energy efficiency of housing in the Region can have a direct impact on the environment, by reducing carbon emissions and the demand for fossil fuels, and on housing, by improving the quality and affordability of the housing stock. There is also a secondary impact on the economy, as energy improvements could lead to cost savings for occupants of these homes.

Also included in the tables is a list of potential partners that could help play a role in the implementation or facilitation of related strategies. The list of partners specified is not intended to be comprehensive nor is it definitive. Many of these partners are organizations or institutions from within the Region, there are also state agencies and organizations identified.



GOALS & OBJECTIVES

*Goal I. The Region’s communities will be vibrant and affordable places for people of all ages and abilities to live, work and recreate.*

- **Objective 1a.** Ensure the supply of diverse housing types that meet the needs and preferences of multiple generations, diverse abilities, and a range of income levels.
- **Objective 1b.** Provide safe and convenient options for people of all ages, abilities and income levels to access goods, services and places of employment, education, health care, etc.
- **Objective 1c.** Promote opportunities for social and civic engagement that foster relationship building and community involvement among a variety of sectors and populations.

*Goal II. A competitive and prospering regional economy will create diverse opportunities for current and future residents and workers.*

- **Objective 2a.** Ensure that the Region’s residents and workers have access to the education, skills, and support services necessary to thrive.
- **Objective 2b.** Retain, grow, and attract a diverse base of business and industry that provides opportunities for growth and workforce development.
- **Objective 2c.** Maintain high quality infrastructure that will safely and reliably connect people with and provide convenient access to employment, goods, services and other resources within and outside of the Region.

*Goal III. The Region’s natural, historic, and cultural resources will be cared for and protected for the use and enjoyment of present and future generations.*

- **Objective 3a.** Inventory and monitor the availability and condition of natural, cultural and historic resources within the Region.
- **Objective 3b.** Preserve and protect the integrity and availability of important resources through conservation, regulation and the use of best management practices.
- **Objective 3c.** Manage natural, cultural and historic resources through planning and collaboration among communities, organizations, and landowners in the Region.

*Goal IV. The Region will be prepared for and have the capacity to withstand and recover from the impacts of natural and manmade hazards and other emergency situations.*

- **Objective 4a.** Routinely assess the capacity of the Region to meet the needs of its population in the event of an emergency or disaster.
- **Objective 4b.** Prepare for disaster mitigation and emergency response through local planning and training.
- **Objective 4c.** Ensure that the Region’s critical infrastructure is capable of withstanding the impacts of potential threats and/or disasters.

Objective 1a. Expand Housing Options

COMMUNITY VITALITY STRATEGIES	ID	Strategy	Topic Area							Potential Partners
			Housing	Transportation	Environment	Economy	History/Culture	Engagement	Public Health	
	i.	Offer incentives to promote housing that is diverse in size and tenure, affordable, and/or energy efficient.	●		○	○				Municipal Boards and Committees; Heading for Home; Southwestern Community Services; Keene Housing; SWRPC; Southwestern NH Home Builders & Remodelers Association; Local Banks and Lending Institutions; NH Housing; NH Community Development Finance Authority; Monadnock Energy Resource Initiative
	ii.	Consider establishing funding mechanisms to support the development of new or the maintenance of existing affordable housing units.	●			○				
	iii.	Support educational and financial assistance opportunities for first-time homebuyers.	●			○				
	iv.	Consider innovative land use approaches [1] such as performance standards, flexible zoning, environmental characteristics zoning, and others described in NH RSA 674:21.	●	○	○					
	v.	Enhance awareness of and respond to the need for the availability of transitional housing and emergency shelters for homeless individuals and families.	●						○	
	vi.	Enhance awareness of housing trends including the needs of residents of all ages, incomes, etc.	●			○			○	
	vii.	Review and consider revising land use regulations and building codes to address barriers to affordable, energy efficient, and flexible [2] housing.	●		○	○				
	viii.	Expand the availability of affordable and adequate rental housing.	●			○				
	ix.	Repair or rehabilitate residential structures to be more energy efficient and/or accommodate the needs of the elderly or persons with disabilities.	●		○				○	
	x.	Support the adaptive reuse of buildings and lots near village centers to promote affordable and diverse housing options as well as mixed-use development.	●	○	○	○			○	
	xi.	Encourage innovative lending options for homebuyers (e.g. location-efficient mortgages and energy-efficient mortgages).	●	○	○	○				
	xii.	Consider forming municipal housing commissions [3] and participating in multi-town and/or regional housing coalitions.	●							

[1] Under NH RSA 674:16, municipalities have the authority to implement innovative approaches to land use regulation. A list of example innovative land use controls and associated descriptions is included in NH RSA 674:21.

[2] Flexible housing is housing that can adjust to the changing needs of the user and accommodate new technologies as they emerge. Flexible housing is usually designed to permit surplus space to be rented out to either a non-related tenant or a family member and thereby reduce the costs of ownership. As the family size increases or its needs change, the dwelling can be reconfigured.

[3] Municipalities have the authority to establish housing commissions pursuant to NH RSA 673:4-c. The powers of housing commissions are described in NH RSA 674:44-i.

Objective 1b. Enhance Access to Goods, Services, and Other Destinations		Topic Area							Potential Partners
		Housing	Transportation	Environment	Economy	History/Culture	Engagement	Public Health	
ID	Strategy								
COMMUNITY VITALITY STRATEGIES	i. Preserve mobility on major state highways through municipal land use planning best practices (e.g. access management, land use regulations, coordination with NH Department of Transportation on driveway permits, multi-town coordination, etc.).		●		○				<i>Municipal Boards and Committees; Monadnock Region Transportation Management Association; Monadnock Regional Coordinating Council for Community Transportation; SWRPC; SWRPC Transportation Advisory Committee; Contoocook Valley Transportation Company; Home Healthcare, Hospice and Community Services; American Red Cross; Healthy Monadnock 2020; Monadnock at Home; Monadnock RSVP; NH Department of Transportation; NH Department of Environmental Services</i>
	ii. Support the development of a model policy for streets that accommodates multiple users such as vehicles, bicycles, pedestrians, transit, etc.		●	○				○	
	iii. Support programs that promote ridesharing, vanpooling, carsharing, etc.		●	○				○	
	iv. Develop and implement plans and projects that support innovative parking practices (e.g. bicycle parking, shared parking, maximum parking limits, etc.).		●		○				
	v. Support and expand programs that offer services for healthy aging and aging in place (e.g. ServiceLink, Monadnock at Home, Monadnock RSVP, etc.).	○	○					●	
	vi. Improve the capacity of volunteer driver networks (e.g. increase service areas, hours of availability, number of drivers, etc.).		●				○	○	
	vii. Consider the development of a cooperatively owned transportation system (i.e. a system that is owned and managed by the people who use its services).		●					○	
	viii. Improve access to air and rail transportation hubs (e.g. intercity buses, taxi services, car rental services, etc.).		●		○				
	ix. Improve options for individuals to access goods and services from home as well as the opportunity to work from home (e.g. telehealth, online education, delivery services, telecommuting, etc.).		●		○			○	
	x. Examine the feasibility of a centralized, coordinated transportation support system for improving regional passenger transportation (e.g. regional call/dispatch center, regional transportation coordinator, service garage, multimodal transportation hub(s), etc.).		●		○			○	

*Objective 1c. Promote Social and Civic Engagement*

COMMUNITY VITALITY STRATEGIES	Topic Area							Potential Partners		
	ID	Strategy	Housing	Transportation	Environment	Economy	History/Culture		Engagement	Public Health
	i.	Incorporate opportunities in educational programming for hands-on learning through community service.					○	●		<i>Municipal Boards and Committees; Educational Institutions; Local Businesses; Monadnock RSVP and Volunteer Center; People's Service Exchange; Chambers of Commerce; Civic Groups/Associations</i>
	ii.	Support and expand programs that facilitate the sharing of skills, services, and experiences between people of different ages, abilities, and incomes (e.g. time banks, service exchanges, community gardens, etc.).				○	○	●	○	
	iii.	Increase employer supported or sponsored volunteerism (e.g. compensatory time for volunteering, sponsor a community service day, etc.).				○		●		
	iv.	Develop opportunities for community board members to receive training and technical assistance on relevant topics such as community governance, land use planning, economic development, conservation, etc.						●		
	v.	Actively recruit and support diverse representation on local government boards and committees (e.g. different ages, ethnicities, genders, incomes, experiences, etc.).						●		
	vi.	Support existing and establish new events that bring together people of all ages (e.g. old home festivals, contra dances, community performances, etc.).						●	○	
	vii.	Utilize community buildings and outdoor spaces to support additional activities and programs such as fitness classes, workshops, community gardens, etc.						●	○	

ECONOMIC PROSPERITY STRATEGIES		Objective 2a. Develop and Attract a Skilled Workforce							Potential Partners
		Topic Area							
ID	Strategy	Housing	Transportation	Environment	Economy	History/Culture	Engagement	Public Health	
i.	Expand and support apprenticeship and internship programs for youth and other age groups.				●		○		<i>Educational Institutions; Local Businesses; Hannah Grimes; Regional Center for Advanced Manufacturing; Monadnock SCORE; Chambers of Commerce</i>
ii.	Strengthen training programs that focus on the needs of the Region’s leading industry clusters.				●				
iii.	Expand and support programs that match workers and employers based on available skills and needs.				●				
iv.	Strengthen coordination and collaboration among businesses, educational institutions and other partners to meet workforce training needs.				●		○		
v.	Ensure the availability of affordable and accessible educational opportunities for all levels of learners including early childhood education.				●				

Objective 2b. Retain, Grow, and Attract Business and Industry

ECONOMIC PROSPERITY STRATEGIES	ID	Strategy	Topic Area						Potential Partners			
			Housing	Transportation	Environment	Economy	History/Culture	Engagement		Public Health		
			i.	Encourage the sharing and joint procurement of resources and goods among municipalities, institutions, businesses, and other partners.				●			○	<i>Hannah Grimes;                      Monadnock Makers;                      Discover Monadnock;                      Local Businesses;                      Monadnock Arts Alive!;                      Monadnock Farm to                      Community Coalition;                      Monadnock Economic                      Development                      Corporation; SWRPC;                      Keene Young                      Professionals Network;                      Chambers of Commerce;                      Business Incubators;                      Municipal Boards and                      Committees; NH                      Department of Cultural                      Resources; NH                      Department of                      Agriculture</i>
			ii.	Recognize and support the role of the Region’s agricultural sector.			○	●				
			iii.	Support programs that focus on business retention, expansion, and recruitment.				●				
			iv.	Support the ongoing efforts of entities that promote economic prosperity (e.g. Monadnock Economic Development Corporation, chambers of commerce, Monadnock Buy Local, Hannah Grimes Center for Entrepreneurship, etc.).				●				
			v.	Promote and expand programs and facilities that support small and emerging businesses (e.g. incubators, maker spaces, shared commercial kitchens, etc.).				●				
			vi.	Develop and implement marketing strategies that promote the Region.				●				
			vii.	Strengthen the local manufacturing sector.				●				
			viii.	Raise awareness about wages in the Region in comparison to cost of living.				●				
ix.	Encourage community revitalization projects such as the rehabilitation of under-utilized buildings.				●							
x.	Recognize and support the role of the Region’s creative economy sector.				●	○						
xi.	Establish incentives to attract, retain, and support young professionals.				●							
xii.	Provide financial and technical assistance to local businesses.				●							

Objective 2c. Maintain Adequate Infrastructure		Topic Area							Potential Partners
		Housing	Transportation	Environment	Economy	History/Culture	Engagement	Public Health	
ECONOMIC PROSPERITY STRATEGIES	ID Strategy								
	i.	Expand the availability and quality of broadband infrastructure, especially in unserved and underserved areas.				●			<i>Municipal Boards and Committees; SWRPC; SWRPC Transportation Advisory Committee; Southwest Region Broadband Stakeholder Group; Monadnock Region Transportation Management Association; Monadnock Regional Coordinating Council for Community Transportation; Municipalities; Monadnock Economic Development Corporation; NH Department of Transportation; NH Department of Environmental Services; U.S. Department of Agriculture Rural Development</i>
	ii.	Promote tools that help municipalities strategically maintain and upgrade municipal infrastructure and facilities (e.g. tax increment financing, asset management, capital improvement plans, etc.).				●		○	
	iii.	Establish municipal and/or multi-town broadband committees to plan for the expansion and development of broadband infrastructure.				●		○	
	iv.	Identify and advocate for community transportation needs and pursue funding solutions, which may include the New Hampshire Ten Year Transportation Plan, federal funding programs, vehicle registration fees [4], etc.		●		○			
	v.	Strengthen multi-town collaboration and coordination on shared infrastructure needs such as sewer, water, sidewalks, schools, transfer stations, police and fire stations, etc.				●		○ ○	
	vi.	Maintain and modernize public and private water infrastructure to meet current and future needs (e.g. wells, water/sewer lines, dams, treatment facilities, culverts, etc.).				●		○	
	vii.	Support and develop an adequate, affordable, diversified energy supply including local resources such as biomass, solar, wind, etc.			●	○			
	viii.	Identify funding mechanisms to upgrade wastewater and water treatments facilities.				●		○	
	ix.	Support and develop a well-maintained and diversified transportation system to sustain and grow regional and local economies (e.g. highways, bridges, trails, transit, park and ride lots, sidewalks, airports, rail, etc.).		●		○			
	x.	Expand affordable licensed child and elder care programs including evening services as well as services near employment centers.				●		○	
	xi.	Improve the condition and availability of pedestrian and bicycle infrastructure.		●				○	
[4]	Under NH RSA 261:153 a municipality may vote to collect an additional motor vehicle registration fee up to \$5.00 for the purpose of funding, wholly or in part, improvements in the local or regional transportation system including roads, bridges, bicycle and pedestrian facilities, parking and intermodal facilities and public transportation.								

Objective 3a. Inventory and Monitor Resources		Topic Area							Potential Partners	
		Housing	Transportation	Environment	Economy	History/Culture	Engagement	Public Health		
STEWARDSHIP STRATEGIES	ID Strategy									
	i.	Monitor and assess the quality of surface water resources in the Region and expand efforts to water bodies not currently monitored.			●	○			○	<i>Municipal Boards and Committees; Lake Associations; River Advisory Committees; Cheshire County Conservation District; UNH Cooperative Extension; NH Department of Environmental Services; Monadnock Conservancy; The Harris Center; SWRPC</i>
	ii.	Inventory and evaluate the locations and adequacy of public access to outdoor recreation resources.			●	○			○	
	iii.	Develop natural resource inventories to identify important naturally occurring resources within communities.			●					
	iv.	Inventory important historic and cultural resources such as buildings, structures, sites, and objects.					●			
	v.	Support programs that prevent the introduction of and reduce the impacts of invasive species and diseases.			●	○			○	

Objective 3b. Protect and Conserve Important Resources

STEWARDSHIP STRATEGIES	ID	Strategy	Topic Area							Potential Partners
			Housing	Transportation	Environment	Economy	History/Culture	Engagement	Public Health	
	i.	Develop and implement conservation strategies that protect and manage the Region’s natural resources such as prime agricultural soils, open space, important forest soils, shoreland areas, and wildlife habitat.			●					<i>Monadnock Conservancy; The Harris Center; Municipal Boards and Committees; SWRPC; NH Department of Environmental Services; NH Office of Energy and Planning; Cheshire County Conservation District; UNH Cooperative Extension; NH Land and Community Heritage Investment Program; Society for the Protection of NH Forests; NH Department of Agriculture; NH Department of Cultural Resources</i>
	ii.	Support programs to generate revenue for the protection of important natural resource features such as open space, working landscapes, wildlife habitat, etc.			●					
	iii.	Adopt policies or regulations that protect natural resources and systems (e.g. groundwater protection, stormwater management, steep slope protection, visual resource protection, etc.).			●	○			○	
	iv.	Incorporate low impact stormwater management techniques and principles into streetscape design.			●				○	
	v.	Improve energy efficiency of the built environment.	○		●	○				
	vi.	Manage, store, and dispose of solid and hazardous waste in a safe and environmentally sound manner.			●				○	
	vii.	Identify funding mechanisms to enhance and expand stormwater management initiatives.			●	○				
	viii.	Adopt policies or regulations that protect historic and cultural resources (e.g. demolition review ordinances, neighborhood heritage districts, scenic road designation, etc.).				○	●			
	ix.	Help landowners, communities, and others implement Best Management Practices through outreach, education, and demonstration projects in areas such as forestry, agriculture, water quality, waste management, and stormwater management etc.			●					
	x.	Identify opportunities to convert waste to energy resources.			●	○			○	
	xi.	Identify funding mechanisms to support historic and cultural preservation efforts.					●			
	xii.	Expand access to renewable energy resources.			●	○				

Objective 3c. Coordinate and Plan for Resource Management

STEWARDSHIP STRATEGIES	ID Strategy		Housing	Transportation	Environment	Economy	History/Culture	Engagement	Public Health	Potential Partners	
	i.	Expand awareness of air quality issues such as small particle air pollution.			●	○			○	Municipal Boards and Committees; Monadnock Farm to Community Coalition; Cheshire County Conservation District; Monadnock Conservancy; SWRPC; Monadnock Sustainability Network;	
	ii.	Raise awareness of the value of working landscapes to our environment, economy, and heritage.			●	○	○			Monadnock Travel Council; Discover	
	iii.	Promote land and resource protection through means such as open space and land conservation plans, historic preservation plans, agricultural commissions [5], etc.			●				○	Monadnock	
	iv.	Continue to support and develop activities that promote agricultural practices to younger generations (e.g. farm-to-school initiatives, school gardening programs, adult farm schools and apprenticeships).			●		○			Discover	
	v.	Promote low-impact tourism opportunities that feature the Region’s natural and cultural resources (e.g. expanded camping opportunities, tours of local farms/working landscapes, and activities along the Region’s waterways).			●	○	●			Discover	
	vi.	Raise awareness about climate change.			●	○			○	Discover	
	vii.	Incorporate climate adaptation and mitigation strategies as part of natural resource planning and management.			●	○			○	Discover	
	viii.	Encourage multi-town collaboration for the management, protection and use of natural resources (e.g. developing watershed management and non-point source pollution plans, etc.).			●				○	○	Discover
											Discover

Objective 4a. Assess Existing Capacity		Topic Area							Potential Partners	
		Housing	Transportation	Environment	Economy	History/Culture	Engagement	Public Health		
PREPAREDNESS STRATEGIES	ID Strategy									
	i.	Assess the ability to supply critical resources such as food, shelter, water, energy, and medical supplies in the event of an emergency or natural disaster.				○			●	<i>Greater Monadnock Public Health Network; Cheshire Medical Center; Monadnock Community Hospital; Municipal Boards and Committees; SWRPC; Southwest Mutual Aid; Council for Healthier Communities; Emergency Management Facilities; NH Department of Homeland Security and Emergency Management</i>
	ii.	Assess the capacity of communities to assist and respond to the needs of vulnerable populations in the event of an emergency.							●	
	iii.	Assess the capacity of suitable emergency shelter.							●	
	iv.	Routinely assess the capacity to respond to a range of public health emergencies such as pandemic outbreaks and mass casualty events.						○	●	
	v.	Identify and assess vulnerability to disruptions in the supply of energy such as brownouts, black outs and energy shortages.			○				●	
	vi.	Routinely assess the capacity of communities for emergency preparedness by maintaining local Emergency Operations Plans, conducting periodic table top exercises, etc.						○	●	

Objective 4b. Plan for Mitigation and Response Efforts											
PREPAREDNESS STRATEGIES	ID	Strategy	Topic Area							Potential Partners	
			Housing	Transportation	Environment	Economy	History/Culture	Engagement	Public Health		
	i.	Establish and support programs that involve youth in volunteer firefighting and emergency response services.							●	●	<i>NH Department of Homeland Security and Emergency Management; Greater Monadnock Public Health Network; Hospitals; Municipalities; SWRPC; Monadnock Sustainability Network; Transition Keene; Emergency Management Facilities</i>
	ii.	Utilize the NH Geological Survey's analysis of fluvial geomorphology and erosion hazards to inform local planning in activities such as capital improvement programming and hazard mitigation planning.			●					○	
	iii.	Increase education and awareness on potential impacts of severe weather events and climate variability and ways to plan and prepare for these impacts.			●	○				○	
	iv.	Integrate climate adaptation and mitigation strategies into planning efforts including hazard mitigation, emergency operations, and community master plans.			●				○	●	
	v.	Encourage multi-town coordination in developing evacuation plans.							○	●	
	vi.	Raise awareness of the resources available to support communities in the event of emergencies (e.g. volunteer emergency response support teams).				○			○	●	
	vii.	Develop recovery plans for post-disaster situations.				○				●	

Objective 4c. Enhance Critical Infrastructure Resilience										
PREPAREDNESS STRATEGIES	ID	Strategy	Topic Area						Potential Partners	
			Housing	Transportation	Environment	Economy	History/Culture	Engagement		Public Health
	i.	Maintain reliable and diverse communications capabilities including broadband and communication devices not dependent on electricity such as ham radios.				●			●	<i>Monadnock Farm to Community Coalition; SWRPC; Municipalities; Greater Monadnock Public Health Network; Emergency Management Facilities; Southwest Mutual Aid; PSNH; NH Department of Environmental Services; NH Department of Transportation</i>
	ii.	Plan for modes of transportation that address issues of increasing importance such as energy uncertainty, climate change, health, etc.		●		○			○	
	iii.	Strengthen efforts to develop a local food hub by establishing the required processing and warehousing facilities and the transportation systems needed to support it.		○	●	●			○	

# APPENDIX

Attached to this document are a number of plans and technical components that were either developed or updated by SWRPC as part of the development of this Regional Plan. These Region-specific materials, which contain more detail and information regarding subject areas such as housing, transportation, economic development, natural resources, and broadband in the Region, serve as reference documents to this Regional Plan. These documents, which can be accessed via the website, [www.swrpc.org/regionalplan](http://www.swrpc.org/regionalplan), include:

- A comprehensive economic development strategy for the Region;
  - A long range transportation plan for the Region;
  - A regional housing plan and fair housing equity assessment;
  - A natural resource plan that also examines issues related to climate change, energy, and water infrastructure;
  - A regional broadband plan;
  - A summary of outreach efforts that informed this Plan; and,
  - A summary of scenario planning activities.
- 

