

Sustainable Greenfield

January 2014

Please Note:

The work that provided the basis for this publication was supported by funding under an award with the U.S. Department of Housing and Urban Development. The substance and findings of the work are dedicated to the public. The author and publisher are solely responsible for the accuracy of the statements and interpretations contained in this publication. Such interpretations do not necessarily reflect the views of the Government.

Funding for this project provided in part by a Community Development Block Grant administered by the Massachusetts Department of Housing and Community Development and the Town of Greenfield.

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Acknowledgements

Sustainable Greenfield would not have been possible without the commitment and support of the Town of Greenfield staff and the Master Plan Advisory Committee (MPAC) members. The time, effort and input of the MPAC, Mayor William Martin, the Planning Board members, and the Greenfield community as a whole, were invaluable to the development of this Plan.

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I Believe
Greenfield
Needs to

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to see

PARK

Executive Summary

Introduction

In 2012, Greenfield embarked on a journey that many communities undertake: development of a Comprehensive Master Plan. Having already made a commitment to principles and practices of sustainability, Greenfield wanted more than a traditional Master Plan. The Town wanted to create a Plan that established a path towards a more Sustainable Greenfield. Over 12 months, a passionate, committed group of residents, Town staff and other community stakeholders worked to craft a pathway for the future sustainability of Greenfield.

The driving forces behind this Comprehensive Sustainable Master Plan are rooted in a commitment to preserving the small-town heritage of Greenfield while embracing changes that will allow sustainable renewal of the Town as the economic and cultural hub of the region. Greenfield's commitment is to preserve the richness of small town life by restoring some of the lost economic vitality to its downtown, by supporting its farming and food production and distribution economic sectors, protecting its natural environment, providing housing and educational opportunities for diverse groups of people, and by seeking to attract jobs and industry sectors compatible with both small town life and the economic realities of the 21st Century.

The Comprehensive Sustainable Master Plan is the means for creating a sustainable town. The strategy for moving the Town of Greenfield toward sustainability focuses first on changes the Town has control over. The Town has the most control over its internal operations. In addition, the Town has jurisdiction over changes to the built environment (land use, infrastructure, and building permits) within its boundaries. The Comprehensive Sustainable Master Plan is the means for creating a sustainable Town. Sustainable Greenfield will be a tool to guide future operational, programmatic, and policy decisions. This summary introduces the Comprehensive Sustainable Master Plan, the collaborative planning process Greenfield followed, and the ultimate vision for each of the seven Elements of the Plan for achieving a Sustainable Greenfield.

So what is Sustainability?

The Brundtland Commission, in its final report in 1987, defined sustainability as meeting the needs of the present without compromising the ability of future generations to meet their own needs. Over the past 25 years, the definition of sustainability has expanded to actions that strike a balance among the "Three Es": environment, economy, and equity. It also emphasizes that development should minimize its negative impact on the environment and other systems.

Sustainable Master Plan Contents

ACKNOWLEDGEMENTS

EXECUTIVE SUMMARY

7 ELEMENTS

- Land Use
- Transportation
- Economic Development
- Housing
- Natural, Historic and Cultural Resources
- Public Facilities, Services and Energy
- Education

IMPLEMENTATION PLAN

SUSTAINABLE STRATEGIES

EVALUATION

GLOSSARY

APPENDIX

What is a Sustainable Master Plan?

A Sustainable Master Plan goes beyond the traditional requirements of a master plan. The approach looks beyond the local level to regional, national and global issues. It incorporates sustainability into each element of the Plan. It looks for strategies that positively affect two or more of the elements at one time. And it looks for strategies that receive high scores when using the sustainability principles established by the American Planning Association's Sustaining Places Initiative. One point is given for each principle that is addressed. The five "top scoring" strategies are presented in the call-out box.

Sustainability Principles

1. Create or promote the use of multimodal travel systems.
2. Improve health and well-being of community members and visitors.
3. Reduce fossil fuel-based energy consumption.
4. Result in more equitable access to or distribution of resources.
5. Improve the resilience of the community, its infrastructure, and its services to impacts of climate change and/or other man-made or natural disasters.
6. Be consistent with and enhance coordination on efforts with the surrounding region.
7. Improve the economic vitality and economic resilience of the community.
8. Reduce the community's contribution of greenhouse gas emissions.
9. Protect or restore natural resources.

Each of the seven elements for Sustainable Greenfield include a vision, driving

Top "Scoring" Sustainable Strategies for Greenfield

- Land Use Strategy: Create a Natural and Open Space Committee, maintain public parks, actively assess and conserve agricultural and other land throughout the community, and establish criteria for prioritizing future acquisitions. Score: 8
- Transportation Strategy: Ensure downtown is safe, easy to get to, accessible, and pedestrian/bicycle friendly. Score: 8
- Economic Development Strategy: Conserve energy and build renewable energy capacity to reduce funds (consumer spending dollars) leaving our region for the purchase of energy. Reduction goal: from \$67M to \$0 in accordance with Greenfield's 2050 goal. Score: 9
- Housing Strategy: Enhance and expand options to live in walkable neighborhoods, and reduce automobile reliance for work, services and recreation. Score: 8
- Public Facilities, Services and Energy Strategy: Review and expand long-range capital improvement plan, budget, funding, and schedule for the Department of Public Works that embraces the principles of sustainability and climate change adaptation. Score: 7

Planning Board's Role in the Comprehensive Master Plan

The Planning Board is the authorized body under Chapter 41, Section 81D of Massachusetts General Law to create a Comprehensive Master Plan. This act encourages Planning Boards to create Master Plans to “provide a basis for decision making regarding the long term physical development of the Municipality.” Upon completion of the Master Plan, or after any additions or changes, the Planning Board will approve it by a majority of the Board at which point it will become public record. The final Master Plan will also be filed with the Massachusetts Department of Housing and Community Development.

forces and goals for moving toward sustainability in the next 10 years. A baseline scenario provides a snapshot of Greenfield and the changes over the past 10-40 years. The goals and strategies are truly a reflection of Greenfield’s desire to create a more sustainable community and were developed by dedicated Master Plan Advisory Committee members as outlined in the “Planning Process” section.

The Planning Process

The last Comprehensive Master Plan in Greenfield was completed in 1974, and was updated in 2001 after conducting a Land Use/Growth Study in 1999. Since this last update, there have been a number of plans, including: Downtown Master Plan in 2003, Community Development Plan in 2004, Plan for Long-Range Economic Development in 2007, and the Open Space and Recreation Plan in 2012. In addition to these planning efforts, the Franklin County Regional Plan for Sustainable Development (Sustainable Franklin County) was referenced throughout the development Sustainable Greenfield to ensure consistency with that plan’s relevant goals and strategies. The goals of Sustainable Franklin County are incorporated into the applicable Elements of Sustainable Greenfield.

Initiated by the Greenfield Planning Board, the Sustainable Greenfield planning process was led by a diverse group of citizen stakeholders representing residents, town boards, municipal departments, and business and non-profits organizations. In October 2012, a 36-member Master Plan Advisory Committee (MPAC) was recommended by the Planning Board and appointed by the Town Council to guide the process of developing the Sustainable Master Plan over a 13-month time frame. With funding from the U.S. Department of Housing and Urban Development and the Massachusetts Department of Housing and Community Development, the Town secured the services of Vanasse, Hangen and Brustlin (VHB) to facilitate the process. The Planning Board and MPAC members are recognized in the “Acknowledgements” section for their incredible contribution and commitment to Sustainable Greenfield.

From November 2012 through November 2013, the MPAC met almost every month to discuss the baseline information that VHB collected. In addition to the monthly meetings, many MPAC members also served on one or more of the seven subcommittees that met with key local and regional stakeholders and Town staff to dig deeper into the issues related to their respective elements of the Sustainable Greenfield Master Plan. Subsequently, the tireless work of these subcommittees resulted in the goals, strategies and implementation ideas for each of the seven Elements.

Community Engagement

Public engagement workshops were held in March and September 2013 so that community members could contribute to the Master Plan process by providing their vision, goals and strategies for the future of Greenfield. Nearly 250 people participated in these workshops, and another 152 participated virtually on MindMixer (<http://engage.greenfieldmasterplan.com>), an online public engagement tool that allows people to virtually contribute ideas and vote on submissions from their neighbors. In total, over 650 ideas were generated through in-person workshops and the virtual MindMixer tool to inform the development of the final goals, strategies and implementation actions in Sustainable Greenfield. A compilation of their ideas can be found in the Appendix.

A website (<http://greenfieldmasterplan.com>) and a Facebook page were also created for the project to educate Greenfield about the process, keep the public up-to-date on events, process ideas and communicate other plan-related issues.

Engaging in Sustainable Greenfield

Community workshops: 2

People attending workshops: ~250

Likes on Facebook: 155

Participants through MindMixer: 156

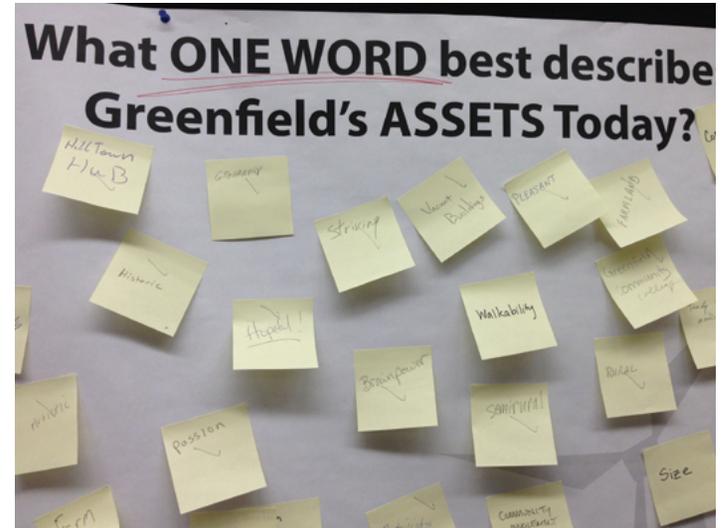
Ideas received on MindMixer: 100+

Ideas generated at Community
Engagement Workshops: 550

Website views: 2,200

MPAC and subcommittee meetings: 40+

As one of the components of a sustainable comprehensive planning process, meaningful public input throughout the process was an essential part of developing this Plan. Sustainable Greenfield would not be where it is today without their passion for and commitment to Greenfield and creating a plan that will be a reflection of where the Town is today and how it can become more sustainable over the next 10 years.



Attendees indicate what word best describes the assets in Greenfield at the Community Workshop on March 9, 2013. Photo credit: VHB.



Residents vote on goals for Sustainable Greenfield at the Fall Gathering September 26, 2013. Photo credit: VHB.



Dense downtown development on Bank Row.

Land Use Element Baseline Findings:

While Greenfield's population has not increased over the past decade, land use for homes increased primarily in the rural parts of the Town.

About 12% of the Town is still comprised of agricultural land. While it is not all actively being farmed, the soils are still capable of supporting agriculture.

Much of Greenfield's commercial development is located downtown with opportunities for infill development along Main Street.

The 2003 Greenfield Downtown Master Plan encouraged redevelopment of vacant or underutilized downtown buildings for high density mixed use and residences.

Sustainable Greenfield Elements

Land Use Element

The Land Use Element is an important first chapter of Sustainable Greenfield as it provides a foundation for making decisions about where and how we can focus housing and business development, investments in infrastructure improvements such as roadways and bicycle and pedestrian amenities, protection of natural resources and agricultural land, and efficiently provide municipal facilities and services.

Our Land Use Vision for Greenfield

We envision a verdant community with food growing everywhere, clean water, abundant wildlife, a walkable and bikeable downtown, and walking and biking recreational opportunities along our streams and in the surrounding valley and hills. We therefore need to assess the best use for each piece of land based on the qualities of the land and existing patterns of agriculture, development, and infrastructure. This effort will require strategic planning for thoughtful and informed development that preserves agricultural land, open space, and healthy ecosystems.



Poet's Seat Ridge.



Green River Dam.

Achieving the Vision – Goals and Strategies for Sustainable Land Use

The goals and strategies for the Land Use Element focus on sustainable development patterns over the next 10 years that conserve and improve open space and agricultural land; concentrate new growth in compact areas near services; use existing municipal infrastructure (i.e., sewer, water and emergency services); and prioritize the use of underdeveloped or previously developed land and buildings instead of undeveloped areas. The strategies emphasize that new and re-development should not negatively impact on water quality and quantity and the habitat of fauna and flora, and should preserve prime agricultural soils, and protect of historic places.

In Ten Years...

1. Greenfield has achieved a high level of ecosystem health, recreational opportunities, and biodiversity through conservation, restoration, and stewardship of its open spaces and natural areas.
2. Agricultural land is preserved to ensure a vibrant local food supply, while increasing Greenfield's role as a regional food hub including production, aggregation, processing, and distribution infrastructure.
3. Our adaptable and resilient green infrastructure enhances and promotes compact development and redevelopment and offers ecological and social benefits.
4. Compact residential and commercial development and redevelopment that is focused in and around Greenfield's historic downtown and other previously developed areas, incorporates increased density, mixed use development, and infrastructure reuse as the norm and supports our green, adaptable, and resilient infrastructure.

Greenfield's Sustainable Land Use Strategies

1. Create a Natural and Open Space Committee, maintain public parks, actively assess and conserve agricultural and other land throughout the community, and establish criteria for prioritizing future acquisitions.
2. Develop priority conservation corridors and/or overlay districts for natural and agricultural lands and rivers.
3. Adopt the Community Preservation Act to provide funding for open space acquisition.
4. Inventory all agricultural land - including cropland, pastures, orchards, and its infrastructure to assess and encourage its potential preservation.
5. Preserve all agricultural land to increase Greenfield's food security and health for all and work toward a more sustainable agricultural system by using new innovative practices that enhance soil fertility, carbon sequestration and food production.
6. Increase productive agricultural land by fostering backyard gardening.
7. Integrate biological systems into the "urban fabric" of Greenfield to provide an improved ecosystem and infrastructure.
8. Update the Zoning Ordinance to include sustainable development practices and controls.
9. Revise the Zoning Ordinance to allow development by-right in the downtown area and neighborhood centers that is compatible with Greenfield's traditional character.
10. Adopt an infill development ordinance to encourage redevelopment or reuse of vacant or underperforming buildings or parcels.



Bicycles parked in downtown Greenfield.

Transportation Element Baseline Findings:

- 170 miles of roadway in Greenfield and 80 miles of sidewalks.
- There are a limited number of miles of on-road bicycle “facilities” in Greenfield.
- 85% of Greenfield residents travel to work in an automobile. 7% of them walked.
- Sixteen of the top 50 most hazardous intersections in Franklin County are located in Greenfield.
- Several large transportation infrastructure projects are scheduled in the next four years presenting opportunities to improve safety issues and access conflicts along arterials, connect or construct sidewalks, and stripe the roadway for bicyclists.
- Access to reliable public transportation was one of the most important issues we heard from the community.

Transportation Element

To create a sustainable transportation system, we must change how we get around. Our present auto-dominated transportation system is damaging to our economy and the environment, and it is not equitable. By improving access and safety for all modes of transportation including automobiles, walking, bicycles, and public transportation (buses and trains) we can make our transportation system more sustainable. Fortunately Greenfield can build on an existing public transportation system with a state-of-the-art net zero transit station, many sidewalks, and a growing interest in walking and biking to work, school, and play. By connecting and improving these systems, we can reduce the financial drain on the community, traffic congestion, fuel consumption and vehicle emissions, while improving safety and equity, and begin to build a system that can be sustained into the indefinite future.

Our Transportation Vision for Greenfield

We seek to develop a sustainable transportation system that encourages residents and visitors to reasonably choose between walking, biking, riding public transit, and driving environmentally-friendly vehicles. It would also expand the availability and accessibility of transportation options for all. A truly multimodal transportation system will result in people making trips that are safer, healthier, and more cost-effective, with less air pollution and fewer greenhouse gas emissions, while fostering a greater sense of community.



ELF Car running on solar power.



Park(ing) Day in September 2013. A downtown parking space was turned into a park for a day.

Achieving the Vision – Goals and Strategies for Sustainable Transportation

In order to create a sustainable transportation system in Greenfield, we identified goals and strategies that create a fuel efficient, resilient transportation network that includes sidewalks, bike lanes, transit options, and is accessible to everyone, no matter where they live. We understand that this network is not limited to travel for residents within Greenfield. Our strategies underscore that residents and visitors should be able to travel into and out of Greenfield safely and efficiently using a variety of transportation methods. And lastly, a sustainable transportation system needs to have minimal impacts on the environment and must be resilient to changing climate conditions.

In Ten Years...

1. Greenfield will have welcoming gateways, as well as safe, efficient, and attractive travel corridors.
2. Downtown will be safe for all modes of transportation, with smooth traffic flow and sufficient parking, including a Municipal Parking Garage.
3. Neighborhoods will enjoy an improved quality of life by a reduction in the negative impact of vehicular traffic.
4. The entire community will have enhanced walkability.
5. Our town will be a place where people of all ages can safely use bicycles for transportation and recreation.
6. There will be dramatically increased ridership of all forms of public transportation, which will offer expanded service and accessibility.
7. Fuel use, climate change emissions, and air pollution by vehicles will be reduced.
8. Transportation infrastructure will have minimal environmental impact wherever possible and will be made resilient to our changing environment.

Greenfield's Sustainable Transportation Strategies

1. Develop a beautification and informational plan, including a unified sign policy.
2. Implement Complete Streets Initiatives
3. Implement Access Management Techniques
4. Implement a Downtown Transportation Improvement Plan, including parking and traffic flow, for all modes of transportation.
5. Implement Traffic Calming Initiatives
6. Develop a Townwide Walkability Plan
7. Adopt initiatives from current federal and state programs to enhance walkability.
8. Create and implement a Greenfield Bikes Initiative Program
9. Increase collaboration with public transit and improve connections between public transit and other modes of travel.
10. Develop a Transportation Demand Management (TDM) Program.
11. Develop a Green Infrastructure Program



Franklin County Chamber of Commerce on Main Street.

Economic Development Element

In addition to contributing to a standard of living and economic health of a community, economic development also addresses the changes in a community's economy. Economy is also the third area of sustainability, so there are many overlaps with this Element and others throughout Sustainable Greenfield. We recognize that Greenfield is an economic engine made up of many assets enjoyed by our citizens and the greater Franklin County community. We are the county seat, housing most of the state and federal offices that benefit the region. We have a viable hospital and healthcare system serving the city and surrounding communities and an affordable community college that provides higher education and innovative programs to prepare our citizens for the workforce. There is also an emerging and authentic downtown center that offers shopping, entertainment, eating establishments, and professional offices. Our Town is also surrounded by beautiful natural areas that stretch from the eastern ridge, forests, trails and parks to farmlands and the rivers in the west. This natural setting offers many recreational opportunities for our residents and visitors.

Economic Development Element Baseline Findings:

- Over the past decade, Greenfield experienced a -3.3% decline in population (from 18,168 to 17,565)
- The education and healthcare industries employ the largest number of Greenfield residents by a large margin (30%), while manufacturing and retail trade are the next largest industry employers at 12%.
- There is a substantial, growing cluster of jobs in the arts, entertainment, recreation, and accommodation sector, at 11%. This is an increase of almost 37% from 2000.
- Greenfield has a local currency called "Greenfield Dollars", which promote 'buying local' and strengthens the connection between residents and local businesses.

Our Economic Development Vision for Greenfield

Greenfield will be a living example of how social, economic and environmental sustainability maintains a creative and resilient community, with living wage jobs, a bustling downtown, a comprehensive local food system, and an excellent quality of life for diverse people of all ages. Its walkable and bikeable downtown, cultural activities, shopping options, events, recreational opportunities in the surrounding hills, rich agricultural land, locally-produced energy, market-rate housing, quality schools and colleges, jobs, restaurants and services draw people to live, work and visit Greenfield, and there is a robust transportation system that brings people to us.

Achieving the Vision – Goals and Strategies for Sustainable Economic Development

The Economic Development goals and strategies seek to enhance our existing assets while improving upon some known deficiencies to achieve a sustainable economy. Greenfield should offer a broader range of shopping options and improve access to more market-rate housing, especially in and around its downtown core. In some professions and trades, job opportunities are limited. Inventive strategies to increase job diversity and availability – including in the clean energy, creative economy, and food industries – are important to creating a viable, sustainable future for the Town. We will continue to reduce our extensive use of fossil fuels. We will seek ways to incentivize redevelopment and infill of unused space in Greenfield for a wide range of economic development opportunities. Achieving a diverse, but unified plan for our future economic development is critical at this time.

In Ten Years...

1. Greenfield will be the cultural, shopping and services center of Franklin County.
2. Living-wage jobs and a resilient and sustainable local economy will be provided to support and expand traditional and innovative business development.
3. Greenfield will have a vibrant, dynamic, walkable downtown.
4. Greenfield will be a magnet for 10-15% growth in new residents that support the local economy.
5. Educational and financial resources will be available for sustainable economic development from both public and private entities.
6. Financial resources leaving our community will be reduced.

Greenfield's Sustainable Economic Development Strategies

1. Market Greenfield as a cultural, tourism, and recreation destination through a town-funded plan.
2. Support local events, markets, and fairs that draw consumers to Greenfield and promote additional shopping in town, and ensure state and federal service offices remain located in Greenfield.
3. Nurture existing and new business owners, including creative economy entrepreneurs, to grow their businesses locally and sustainably.
4. Continue further development or redevelopment of commercial sites with sufficient supporting infrastructure for businesses compatible with local and regional industry clusters.
5. Strengthen downtown as a welcoming, attractive, and vibrant mixed-use urban space, with the First National Bank building as a cultural center with flexible performance and event space.
6. Ensure downtown is safe, easy to get to, accessible, and pedestrian/bicycle friendly.
7. Create multiple marketing strategies to attract a diverse population and promote the attributes that make Greenfield a great place to live, including affordable starter homes; scenic, natural, and recreation opportunities; transportation accessibility; and a culture of sustainability.
8. Promote partnerships with training and career centers, local colleges, and social service providers to align education, certification, and training offerings with the labor force needs of local businesses.
9. Encourage retail options that appeal to all socio-economic groups in Greenfield and surrounding areas and promote buy-local efforts through procurement and sale of local products.
10. Conserve energy and build renewable energy capacity to reduce funds (consumer spending dollars) leaving our region for the purchase of energy. Reduction goal: from \$67M to \$0 in accordance with Greenfield's 2050 goal.



30 Olive Loft Apartments in downtown Greenfield.

Housing Element

Housing that meets the needs of all residents is an essential component of a strong, vibrant community. We are a community with remarkable assets that make it a desirable place to live, including a diverse housing stock and population, ideal location as an urban hub in Franklin County, numerous open space and recreation options, and a vibrant downtown. These assets will serve as the foundation for a strong and resilient community when we are faced with demographic, economic and environmental challenges.

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A Housing Vision for Greenfield

Greenfield's many attractive, affordable and sustainable housing options support a high quality of life, equity, and self-sufficiency. Greenfield offers to all who live here multi-modal connections to nature, opportunity, work, education, shopping, entertainment and services. A diverse housing stock with adapted, renovated and newly built units, promotes through both location and design a healthy environment and lifestyle, appealing to people of varied age and income, promoting individual prosperity and the economic vitality of Greenfield as a whole. Greenfield's economic competitiveness and home values grow through investment in the quality of all neighborhoods.

We are a community with tremendous assets: diversity, a position as an urban hub for Franklin County, our beautiful rural landscape of farms, hills, meadows, woods and rivers, and a vibrant downtown and residential core. These assets serve as the basis for strength and resilience in the face of demographic, economic and environmental change. The housing goals point toward actions that promote sustainable use of our assets, reducing energy use to reduce the negative impact of high utility bills, and reducing the negative environmental impacts generated by housing to enhance quality of life today and will contribute to a better tomorrow for all.

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Housing Element Baseline Findings:

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- The number of households in Greenfield is expected to increase from 7,852 in 2010 to 8,103 in 2017.
- Non-family households are becoming more common at 46.6% of all households.
- Residents over 65 are expected to comprise 20% of Greenfield's population in 2020.
- Multi-family housing options (3+ units) comprise nearly 30% of the housing stock.
- A large percentage of Greenfield's housing stock (49%) was constructed prior to 1939.

Achieving the Vision – Goals and Strategies for Sustainable Housing

The Housing Element goals and strategies focus on diverse, centrally-located, energy efficient housing that meets the needs of all of our residents at all stages of their lives. New housing development, whether it is construction of a new house or conversion of an old home or mill into multiple units, should advance energy conservation, watershed protection, land conservation and farm preservation and allow residents the flexibility to access services and employment through a variety of transportation modes, including walking, biking and transit. Overall, the housing stock should represent a livable environment that provides a high quality of life for residents of all ages, incomes and abilities.

In Ten Years...

1. Greenfield's policies and programs are coordinated to ensure housing units and neighborhoods adapt to meet changing needs.
2. Housing energy consumption from utilities, maintenance and automobile reliance are reduced, thereby reducing Greenfield's overall greenhouse gas emissions and increasing our community's energy independence.
3. A wide variety of affordable, attractive, sustainable housing options are available in Greenfield promoting high quality-of-life and self-sufficiency for all households.
4. Greenfield supplies quality, permanent affordable housing and creative transitional and supportive housing programs that include the special challenges of homeless and carless households in a rural context.
5. Community resilience and individual enjoyment of our abundant natural resources is enhanced through residential development practices that preserve local agriculture, water quality, biodiversity, and the visual integrity of the landscape.
6. Greenfield is a thriving, vibrant, regional urban center with livable, mixed income, well-situated neighborhoods within easy reach of everyday needs.

Greenfield's Sustainable Housing Strategies

1. Conduct a comprehensive regional housing needs assessment.
2. Audit and update zoning regulations, permitting and other appropriate regulations, to increase density of housing and population through adaptation and infill.
3. Enhance and expand options to live in walkable neighborhoods, and reduce automobile reliance for work, services and recreation.
4. Replace and renew homes to create a more energy efficient housing stock.
5. Create a staffed resource center to assist homeowners, tenants and landlords with education and resources on home purchase, energy use and upgrades, renovation, and financing.
6. Increase housing choice, expand and update housing stock to reflect changing preferences and population.
7. Improve supply and access by ensuring that a full range of quality alternative housing options continue to be developed to serve diverse populations and needs, including the homeless, and those transitioning to and from independence.
8. Address Housing Demand.
9. Ensure future residential development promotes watershed protection, land conservation and farm preservation goals by focusing activity in areas with existing infrastructure.
10. Reduce negative impacts of new and existing residential neighborhoods on natural systems while enhancing beneficial access to nature.
11. Identify key neighborhood services, amenities and facilities and enhance connections through upgraded sidewalks, bikeways and streets.
12. Protect historic character of neighborhoods while facilitating improvement of housing stock.



View from Poet's Seat Ridge, Tower 4.

**Natural, Historic and Cultural Resources Element
Baseline Findings:**

- Four major waterways, the Green, Fall, Deerfield, and Connecticut Rivers, run through the town and converge near downtown Greenfield.
- Fourteen farms in Greenfield are permanently protected under the Agricultural Protection Restriction Program.
- Greenfield has 18 town-owned conservation areas, parks, fields, and playgrounds that are publicly accessible for athletic and recreational uses.
- The Town has ten historic properties listed in the National Register for Historic Places, including four historic districts and six buildings.
- Greenfield is home to the Pioneer Valley Symphony Orchestra which was founded in 1939, making it one of the oldest community orchestras in the United States.

Natural, Historic, and Cultural Resources Element

Greenfield is blessed with rich natural places, cultural and recreational events and activities, and historic resources. We have a wealth of natural and open spaces that support recreation, the environment, and quality of life at both local and regional levels. Four major rivers, including the Green and Deerfield Rivers, meander through our Town, carving out special areas for swimming and boating. Meadows and ridges, like the Poet's Seat Tower area, surround us and provide hiking, biking, snowshoeing and bird watching opportunities, and our agricultural soils are considered to be some of the best in New England. Industry and agriculture provide the historic setting of Greenfield. Industrial activity, including the manufacturing of textiles, cutlery and precision machine tools, made Greenfield one of the wealthiest communities in Massachusetts in the late 19th Century, and provide a rich history today. Agriculture also played a vital role and sets the stage for celebrating and increasing local food activities in Greenfield. Cultural organizations, attractions and events are carrying on our heritage for residents and tourists. In addition to a rich offering of festivals, arts activities, and symphonies, a plethora of cultural and recreational events, activities and resources attract visitors year round from all over the region.

Our Natural, Historic and Cultural Vision for Greenfield

Greenfield is recognized as a community with numerous and varied cultural amenities in a beautiful historic setting, with ready access to the rivers and fields, woods and hills of the Pioneer Valley and the recreational opportunities they provide. Our sense of place, community, and connection binds us to our Town, building civic pride and ownership which benefits the physical, cultural, and environmental health of Greenfield. We capitalize on these assets to attract visitors and new residents, as well as retaining existing residents, as a vital component of our economy.

Achieving the Vision – Goals and Strategies for Natural, Historic and Cultural Resources

The Natural, Historic and Cultural Resources' goals and strategies underscore the unique role these resources play in Greenfield. In addition to preserving these precious assets in our town, we recognize that our rich history, and cultural and recreational activities, are not well known. The goals and strategies therefore aim to promote our assets to increase civic pride, and an appreciation and respect for the natural, historic and cultural heritage that has made Greenfield what it is today. They also aim to overcome economic and environmental challenges by attracting new and retaining existing residents, including people who live in the greater Pioneer Valley, in order to achieve our full potential. We must recognize that our natural, historic, recreational, and cultural assets are vital components of a robust local economy and not luxuries. We recognize conflicts will arise between natural and historic preservation and a system must be developed which includes public forums in order to resolve conflicts.



All local meal at the Harvest Supper.



Garden Theater on Main Street.

In Ten Years...

1. Greenfield's natural, historic, and cultural resources will be an integral part of the Town's identity with wider recognition and use.
2. Residents and visitors of all ages in Greenfield will enjoy various recreational opportunities as a vital contribution to their health and wellbeing.
3. Our natural world and the scenic, rural, and agricultural landscapes will be protected, preserved, and improved to support biodiversity and healthy living in Greenfield.
4. Greenfield's cultural life will be encouraged, expanded, and better promoted, with more established town-wide events.
5. The historic resources in Greenfield (historic buildings/areas, archaeological sites, and heritage landscapes) will be preserved and protected.

Greenfield's Sustainable Natural, Historic and Cultural Strategies

1. Establish a marketing plan for natural, historic, and cultural resources.
2. Identify existing and create new year-round recreational facilities that are accessible to all generations in Greenfield.
3. Identify, celebrate, and preserve open space; continuous wildlife habitat and migration corridors; significant view corridors; heritage landscapes, watersheds, wetlands, and rivers; and agricultural land.
4. Review, update, and enforce the Town's Zoning Ordinances and environmental regulations to protect all of the above.
5. Create a downtown Cultural Center at the First National Bank to support existing activities and create new town-wide events and programs.
6. Support existing and create new town-wide cultural events through public/private partnerships.
7. Apply for Cultural District designation from the Mass Cultural Council.
8. Develop and implement a plan for historic preservation that includes creative reuse of historic buildings, the creation of local historic districts, and the nomination of additional National Register historic districts and individual properties.
9. Support the passage of the Community Preservation Act.



Engine 1 in a parade Downtown.

Public Facilities, Services and Energy Element Baseline Findings:

- The Town has 103 miles of water mains and approximately 70% of these mains are over 50 years old (the life expectancy of water mains is 60 years).
- The Recreation Department manages over 25 recreational programs, six large events, the Green River Swimming and Recreation area and the Energy Park.
- The Library has 11,000 square feet of usable floor area, which is below the industry standard of 32,000 square feet for Greenfield’s population.
- Greenfield installed a 2.009 megawatt (MW) solar farm on the landfill in June 2012.

Public Facilities, Services and Energy Element

The Public Facilities, Services and Energy Element is a unique component of Sustainable Greenfield. In addition to documenting the public buildings, equipment and services that Greenfield provides, we also explore energy use for the Town as a whole, including opportunities to reduce our energy consumption and install renewable energy sources. Many of our buildings have served us well for over a century, and we now see an opportunity to create and implement a major long-range capital improvement plan and build new buildings, or do major upgrades, that embrace the principles of sustainability. In particular, we see the need for a larger Town Hall that houses all Town staff and fosters communication and collaboration; a library that is sized to serve Greenfield and the surrounding community; and a senior center that is healthy and located near the town center. There is a need for new fire trucks that are housed in a facility that can accommodate them, and that space may be co-located with Emergency Services and Police, and have shared facilities with the DPW. Recognizing that a majority of our water, sewer and drainage infrastructure is 50-100 years old, we need to plan and implement a system-wide upgrade. We also see a need for adequate staffing of Town departments, and a new downtown police sub-station. This is an excellent time to assess and update our municipal facilities because of a new understanding of sustainability and new techniques and technologies are available to reduce heating, lighting, and cooling costs; sewage sludge disposal; reduce stormwater runoff, and urban heat island effect.

Our Public Facilities, Services and Energy Vision for Greenfield

Greenfield has updated facilities that are energy-efficient, well-maintained, and well-staffed. Creative ideas and innovation have enabled the Town to find synergies and build new state-of-the-art facilities that will meet the needs of Municipal staff, emergency services, the library, and services for seniors, youth and others for the next century and beyond. All new buildings are built to zero-net-energy ready specifications, and all projects will make Greenfield’s infrastructure greener, less expensive to maintain, and more resilient to increased storms. Greenfield will generate clean energy that significantly reduces its dependence on fossil fuels, and reduces the amount of money that leaves the community to pay for energy. Greenfield has strengthened its role as the county seat by advocating for and retaining state, federal, and private services that serve both Greenfield and Franklin County residents.

Achieving the Vision – Goals and Strategies for Public Facilities, Services and Energy

In order to develop sustainable community operations, we identified a number of goals and strategies that prioritize adequate staffing, budgets, resources and long-term maintenance and resiliency of its facilities. Incorporating ecological functions – such as rain gardens, bioswales and other stormwater infiltration techniques – into our public works and parks projects, is also essential to protecting our water quality and quantity and lowering municipal costs through reduced wastewater treatment. The last goal is that, in ten years, we will be a showcase clean energy community, will reduce greenhouse gas emissions by 40%, and will reduce energy dollars leaving Greenfield to zero.



Greenfield Energy Park.

In Ten Years...

1. **Municipal buildings, equipment, and operations meet the Town's needs and are accessible, efficient, resilient, well-staffed, and well-maintained.**
2. **The Department of Public Works will have an updated budget and capital improvements plan, and sustainable funding to provide the necessary services to the Town of Greenfield.**
3. **The library, and senior and youth services have adequate, healthy facilities and expanded staffing and programs, and state, federal, and private services remain in Greenfield.**
4. **Green Infrastructure Practices will reduce municipal infrastructure costs, protect public health and safety, and preserve natural areas.**
5. **Greenfield will be a showcase "clean energy city" and be 40% of the way to meeting its 2050 goals to reduce CO2 by 80%, and to reduce the money we spend on energy that leaves the region from \$67 million per year (2008) to ZERO.**

Greenfield's Sustainable Public Facilities, Services and Energy Strategies

1. Create and implement a long-range physical plant capital improvement plan to include buildings and vehicles.
2. Continue to explore how to meet the space and staffing needs of municipal services.
3. Review and expand long-range capital improvement plan, budget, funding, and schedule for the Department of Public Works that embraces the principles of sustainability and climate change adaptation.
4. Reduce solid waste and disposal costs through a comprehensive program that includes recyclable materials, compostable food and yard waste, and reduction of disposable items.
5. Improve Greenfield's Public Library facilities to include adequate parking, accessibility, and community gathering space.
6. Reinstate the Town Youth Commission to enhance services and activities for the Town's youth.
7. Work with Council on Aging to improve Senior Services by moving to a larger/healthier space with adequate staffing and increased programs.
8. Continue to advocate for keeping regional services that are physically located in Greenfield that serve both residents of Greenfield and greater Franklin County.
9. Incorporate cost-effective Green Infrastructure and Low Impact Design (LID) strategies into all municipal projects and work with developers and residents on what they can do.
10. Greenfield will continue to reduce municipal energy use and its carbon footprint through innovative programs, conservation, energy efficiency, the installation of renewable energy systems.
11. Continue public/private partnerships to reduce residential and business energy use and promote installation of renewable energy systems.



Boy walking to school.

Education Element

A good education benefits the community as a whole by providing students – young and old – the skills and expertise they need to adapt to the changing conditions of the local, regional and global economy. Our vision for the education system and its facilities is based on the recognition that a thriving, resilient, and sustainable community and economy is one where people want to live, raise and educate their children. To develop the community and benefit from the advantages of a high quality of life we must have a well-maintained public education infrastructure and competitive educational programs. The citizens of Greenfield have a long history of supporting and funding a quality public education system through their taxes and their volunteerism. Our new high school and existing school structures position Greenfield to be able to offer quality education through high-quality facilities and staffing. Our schools are working collaboratively to ensure that, in their early years, students are receiving an education that provides a variety of programs in settings that fit the needs of today’s youth. From extended learning to environmental awareness programs, the Greenfield School Department is creating diverse learning experiences that focus on preparing youth for tomorrow’s challenges.

Education Element Baseline Findings:

- The new high school building is being constructed to “LEED for Schools” certification and is designed to accommodate 585 students.
- The Massachusetts Virtual Academy at Greenfield Commonwealth School is the first diploma-granting virtual school in the state.
- Two Greenfield schools, Newton Elementary and the Middle School, participate in the Mass 2020 Expanded Learning Time Initiative.
- In 2012-2013 school year, the teacher-student ratio was 1 to 14.6 as compared to the statewide average of 1 to 13.5.

Our Education Vision for Greenfield

Greenfield Public Schools will be a group of attractive, well-maintained neighborhood schools with inter-district choice available at the elementary level to Greenfield parents. Each school is a jewel with a focus on preparing children for their next level of education as lifelong learners. School curriculum will not only focus on state requirements which includes core programs and technology, but will also provide ongoing opportunities to develop the skills and behaviors needed for citizenship, scholarship, and leadership. Greenfield’s educational programs will be known for the richness of electives and arts, the commitment to acceleration and academic rigor at all levels, and for the commitment to equal opportunities, where economic advantage does not determine participation.

Greenfield Public Schools will offer flexibility and teach students critical thinking skills so they can creatively adapt to environmental, societal, and technological developments. Each school will emphasize community involvement, continuous improvement, innovation, and a respectful culture. The sports fields, playgrounds, meeting rooms, and auditoriums are open to the community when schools are not in use.

Achieving the Vision – Goals and Strategies for Education

The goals and strategies for education ensure that we continue to address our school buildings with a commitment to proactive and timely maintenance; updated school entrances to embrace 21st Century security needs; beautification of grounds; encouragement for safe walking and biking to school; healthy, green learning environments; and long-range innovative thinking about how to use our buildings to accommodate fluctuations in school enrollments. In order to ensure that these goals are met, we need to secure additional funding for innovative programs by hiring a creative, highly-skilled grant writer with a view of interdepartmental grant application opportunities.

In Ten Years...

1. All schools and administrative buildings and equipment are safe, have adequate space, are attractive, well maintained, have good air quality, and are energy efficient.
2. The Greenfield school system is a choice-in system with high-quality, energy-efficient facilities and adequate staffing to offer a broad range of options that provide quality education for 21st Century jobs.
3. Facilities, equipment and technology systems for staff and students are up to date and connected to Town systems where relevant and allowable.
4. School security is addressed and maintained at all levels, including schools, administration building, and storage facilities.
5. Walking and biking to school is common practice for Greenfield's students, school grounds are secure with arrival areas, including school drop-off/pickup areas, and they are beautiful, welcoming, and safe.
6. The school meals program offers healthy food choices and engages in sustainable practices during preparation and disposal.
7. Facilities for Special Education students in all schools are appropriate to the students' learning needs, and are quiet.

Greenfield's Sustainable Education Strategies

1. Maintenance is performed regularly, and is approached as an opportunity to upgrade facilities to become safer, healthier, more sustainable, energy efficient, and beautiful, and purchasing policies ensure school vehicles are as energy efficient as possible.
2. Ensure that budgeting and policies provide quality facilities and curriculum with adequate staffing and administration to meet the over-arching student and maintenance needs of our school system.
3. Ensure that all communication systems, such as computers, telephones and wireless Internet access, are current, accessible and meet state and federal regulations.
4. School building entrances, both exterior and interior, are safe and secure, but welcoming of authorized individuals.
5. Security policies are in place and regularly maintained to ensure proper vetting of individuals attempting to enter the schools.
6. Re-evaluate bus, visitor, delivery, staff, and parental vehicle needs to ensure that drop-off areas are safe and attractive; that air quality is not compromised; and there is adequate staff and visitor parking.
7. Expand Safe Routes to School program from once a month to weekly, then daily with the goal of increasing health, exercise, and non-motorized ways of traveling around.
8. Reduce waste by applying for composting grant and implementing it, while using washable or compostable trays, plates, and flatware.
9. Implement a farm-to-school program by working with local farmers and other farming organizations for access to locally-grown food and to support educational options for teachers about food and local agriculture.
10. Explore creating on-site and off-site facilities that meet the needs of a variety of special education programs at all age levels.

Implementation Plan

The Implementation Plan is an essential piece for Sustainable Greenfield. It lays out the process and tools necessary to activate the Plan. It includes the specific actions to take, the cost, potential funding sources, connection to other plans already being implemented as well as other elements in the Plan, and identifies who needs to be at the table in order for the strategy to be successfully implemented.

The Implementation Plan is the result of extensive research, discussion, review of previous plans and studies, interviews with stakeholders and a passion for developing a more sustainable Greenfield. The Implementation Plan includes goals and strategies for each of the seven elements of the Plan. Each strategy has an individual “workplan” which includes the following components:

- Implementation Actions
- Type of Action (Policy, Plan, Program or Infrastructure Action)
- Best Practices and Resources
- Additional Elements that the Strategy Addresses
- Time it will take to Implement – Short (within a year), Mid (2-5 years), and Long (greater than 5 years)
- Lead Department or Stakeholder, and Others who should be involved
- Estimated Cost – Low (under \$20K), medium (\$20,001-100,000), medium high (\$100,001- 250,000), and high (greater than \$250,000)



Transportation

IMPLEMENTATION PLAN

Goal	Strategy	Description of Strategy	Implementation Actions
Goal #1: Greenfield will have welcoming gateways as well as safe, efficient, and attractive travel corridors.	1. Develop a beautification and informational plan, including a unified sign policy.	This strategy is aimed to seek opportunities to use streetscape, hardscape, and/or landscape enhancements to create a sense of place at key nodes throughout the community. Signage should provide guidance to key community features for way-finding purposes. Enforcement and implementation shall be established by existing committees and/or the planning board.	<ul style="list-style-type: none"> • Support welcoming signage, public art, and the promotion of special events at gateways. • Reaffirm Corridor Design Guidelines adopted by the Planning Board in 1993. • Enhance tree canopy along streets, adopting Tree Committee recommendations of June 2013. • Reduce/prioritize roadway signage to improve appearance and effectiveness. • Develop a wayfinding signage program to promote economic development. • Improve signage to inform and encourage a higher usage rate of existing parking off Main Street.
	2. Implement Complete Street initiatives	Complete Street policies shall be incorporated into all intersection or roadway improvement projects regardless of whether it is a public or private partnership. State and Federal guidelines shall be followed to ensure that roadway cross sections (lane and shoulder width, etc.) are met for the roadway's specific functional classification and/or jurisdiction.	<ul style="list-style-type: none"> • Incorporate a Complete Streets Policy as part of the Major Development Review Process. • Establish a standard width of 11 feet for travel lanes, with the option of using 10 feet where conditions allow. • Identify intersection/roadway improvements using multimodal assessment methodologies approved by Greenfield DPW and/or Massachusetts Department of Transportation. • Perform more detailed corridor assessments on Main St., Federal St., and Turners Falls Road, etc. to identify specific improvement needs and construction costs. • Incorporate more detailed traffic impact and access study guidelines into the Major Development Review process. • Explore ways to improve traffic flow issues related to school pick-up/drop-off.
	3. Implement Access Management Techniques.	Access Management Techniques shall be incorporated into any intersection or roadway improvement project regardless of whether it is a public or private partnership; although it may be easier to implement techniques when private developments are reviewed during the Major Development Review process. Access management techniques could include curb cut/driveway consolidations, internal parcel shared access, or adequately spacing driveways based on the classification and observed speed limit for the roadway.	<ul style="list-style-type: none"> • Improve traffic flow along major corridors by reducing vehicle-conflict points; through driveway consolidation and internal shared driveways. • Reduce vehicle-crashes town-wide and on major corridors and at Highway Safety Improvement Program cluster areas identified by MassDOT.
Goal #2: Downtown will be safe for all modes of transportation with smooth traffic flow and sufficient parking, including a Municipal Parking Garage.	4. Implement a Downtown Transportation Improvement Plan, including parking and traffic flow, for all modes of transportation.	The downtown has been a subject of many conversations to improve and enhance all modes of transportation. On-street parking needs to be reviewed to confirm utilization and turnover ratios so that parking space changes and a new parking garage can be justified. Further study is needed to provide a better assessment of the impacts associated with any improvements in downtown, and to obtain key stakeholders support	<ul style="list-style-type: none"> • Gradually shift Main Street parking from angled to parallel in collaboration with funding a new parking garage. • Include bicycle parking. • Perform an updated downtown parking assessment. • Continue to seek funding for a parking garage on Olive Street to serve visitors, residents, the courthouse, and the Transit Center, incorporating pedestrian access from Transit Center to level of Main Street. • Upgrade all municipal parking lots using Low Impact Development principles, with consideration of the 2012 Conway School of Landscape Design study as a model. • Add bike lanes or shared use markings (sharrows) along Main Street and throughout the downtown area. • Add planted medians or islands to Main Street to slow traffic and make pedestrian crossings safer. • Make it easier to reach downtown safely by non-automotive modes. • Support pedestrian walking areas by providing and maintaining streetscape amenities such as: a quality tree canopy, benches, and outdoor dining. • Encourage transit opportunities with frequent and convenient stops at downtown locations. • Investigate and implement ways to reverse direction on Main Street. • Conduct Road Safety Audits to improve traffic flow/safety at problem areas along Main St, such as at intersections with Colrain St., Hope St. and High St. • Encourage cooperation between the town and businesses to use underutilized areas for access/egress, such as alleys, rear entrances, and parking lots creating welcoming environments (courts, patios, plazas) for everyone.

Acronyms:

CD66: Community Development Block Grant program
 DPW: Greenfield Department of Public Works
 FR02G: Franklin Regional Council of Governments
 GBA: Greenfield Business Association

GPS: Greenfield Public Schools
 GDA: Greenfield Redevelopment Authority
 STIP: State Transportation Improvement Program
 SAC: Sustainability Advisory Committee

A snapshot of the Implementation Plan

- Whether Implementation Funding is Currently Available – Yes or No
- Whether it is a New Strategy or Part of an Existing Plan

The final piece of the Implementation Plan is the Comprehensive Strategies section. These are overarching actions that the Town can take to ensure that this Plan becomes a living document and recognizes that the Plan is just the first step in the process. The strategies that are key to continuing the momentum and sustaining this process include:

- Create a Sustainable Greenfield Implementation Committee
- Promote the results of Sustainable Greenfield
- Track the progress of implementing the Sustainable Greenfield strategies
- Use the Sustainable Master Plan as the 'go-to' reference for all projects in the Town
- Identify and incorporate additional stakeholders into the implementation process

Moving Forward

Sustainable Greenfield is more than just a document – it is a process. In 2012, the Town of Greenfield made a commitment to begin a journey to become more sustainable. Through hours of planning, engagement of community and commitment and expertise of dedicated volunteers and staff, this Plan was created to lay the path toward sustainability. It is important to remember that this Plan is a snapshot in time and needs to be maintained as a living document that is continually referenced, tracked and updated. Note that there are recommendations for several follow up studies and projects to continue to dig further into some of the issues that are presented in this Plan.

Sustainable Greenfield has been a significant effort to-date, with numerous contributions received throughout the community and beyond. There is more to come, and the energy and excitement that jumpstarted this Plan must continue in order to be successful. This is just the beginning of a journey toward a strong, vibrant, and resilient **Sustainable Greenfield...**

– The Place Where You Belong.

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LAND USE

vision



We envision a verdant community with food growing everywhere, clean water, abundant wildlife, a walkable and bikeable downtown, and walking and biking recreational opportunities along our streams and in the surrounding valley and hills. We therefore need to assess the best use for each piece of land based on the qualities of the land and existing patterns of agriculture, development, and infrastructure. This effort will require strategic planning for thoughtful and informed development that preserves agricultural land, open space, and healthy ecosystems.



Land Use

Introduction

Greenfield is well-known in Franklin County as a “hub of activity” with diverse land uses and development patterns. We are a community that has a mix of downtown business, retailers, and town facilities; coupled with a wide-range of housing choices, agricultural land, and open space. Our location within the region and historic growth patterns have contributed toward making Greenfield prominent and appealing as a place to live, work, and play. These attributes contribute to a high quality of life and livability within our town.

While our existing land uses include residential, commercial, industrial and institutional development, they are also interspersed with natural features including undeveloped open spaces, forests, wetlands, rivers and streams, and agricultural land. The evolution of land use in Greenfield is the product of our industrial and agricultural heritage, local economic conditions and community preferences. Our growth and development is based on such factors as access to jobs, employment, and the availability of land for new housing or commercial development. Community preferences, expressed as land use plans and regulations, dictate the form, location, and sometimes the pace, of new development.

As we plan for our future, we will need to continue to assess how and where we will grow, what businesses and populations we will serve, all while striving to maintain the aspects of our town that make us thrive. Walkability, access to the natural world, local food, transit, and the quality and energy efficiency of our built environment are key aspects to consider as we plan for a sustainable future. Land use and development patterns form the basis for community planning, and determine, to a large extent, a community’s need to provide public facilities and services, maintain and improve transportation networks and services, and protect natural resources. Our community has the ability to manage land use patterns through a variety of mechanisms, including zoning and subdivision regulations, provision of public utilities and infrastructure, incentives, and preservation of open space. The combination of the use of these tools is crucial to ensuring sustainable development in Greenfield.



Arts Block in downtown Greenfield. Photo Source: VHB



Antique map of Greenfield. Photo Source: Caitlin von Schmidt.



goals

In Ten Years...

**1**

Greenfield has achieved a high level of ecosystem health, recreational opportunities, and biodiversity through conservation, restoration, and stewardship of its open spaces and natural areas.

**2**

Agricultural land is preserved to ensure a vibrant local food supply, while increasing Greenfield's role as a regional food hub including production, aggregation, processing, and distribution infrastructure.

**3**

Our adaptable and resilient green infrastructure enhances and promotes compact development and redevelopment and offers ecological and social benefits.



4

Compact residential and commercial development and redevelopment that is focused in and around Greenfield's historic downtown and other previously developed areas, incorporates increased density, mixed use development, and infrastructure reuse as the norm and supports our green, adaptable, and resilient infrastructure.

2001 Greenfield Master Plan Land Use Goals:

- Encourage development in and around Greenfield's historic downtown.
- Encourage business development where infrastructure will support it.
- Preserve agriculture.
- Promote both housing choice and natural resource protection through careful site planning in outlying areas.
- Where the carrying capacity of the land is greatest, site land uses that provide the most benefit to the community.

Sustainable Franklin County - Land Use Goals

Greenfield's central location within Franklin County requires us to consider our role both within our Town and in partnership with the broader communities. In 2013 the Franklin Regional Council of Governments, prepared Sustainable Franklin County – A Regional Plan for Sustainable Development for Franklin County which outlined strategies for land uses and growth patterns throughout the County. The following are the top three land use goals from the Plan:

- Prioritize redevelopment of vacant or underutilized structures and properties.
- Locate new businesses in town centers or near transit services.
- Coordinate new development with existing transportation, water and sewer infrastructure.

These Regional goals are consistent with those developed for this Sustainable Master Plan, either in this element or in others such as transportation, housing, and natural resources.



Our Land Use Driving Forces

Our vision is driven by our recognition of the rights of nature; the climate change crisis; integrated systems needed to support the health, resilience, adaptability and sustainability of all living beings; and Greenfield's limited land base. Additionally our vision is driven the recognition of the importance of growing food locally.

Land Use Evolution in Greenfield

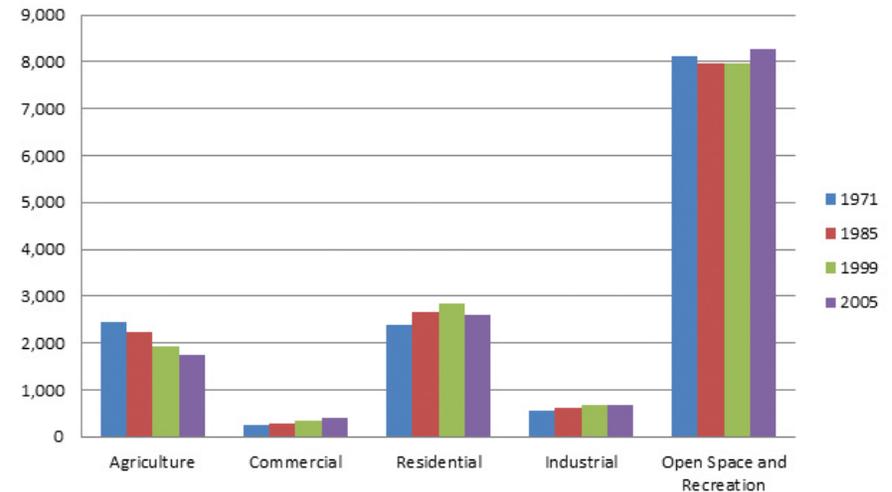
Historic Land Use Patterns

Greenfield covers approximately 21.93 square miles of land (14,036 acres).¹ A review of the land use change in Greenfield between 1971 and 2005, based on MassGIS land use data, reveals how the community historically evolved over the past few decades and is summarized in **Figure 1-1**. Notable changes over the past ten years include:

- The Town has lost significant acreage of agricultural land as interest in agricultural business waned and land was considered more valuable for development. Of all the changes in land use between 1971 and 2005, agricultural land is the only category that decreased.
- Consequently, the amount of land developed for residential purposes increased by approximately 1.5%, with much of the newer residential property occurring on the outskirts of Greenfield that were historically agricultural. Most of this residential growth has been low density residential development (defined as lots greater than ½ acre in size).
- Commercial development increased predominantly along the corridors that extend away from the downtown area. As illustrated in

¹ This number is different from some previous planning studies. This discrepancy might be a result of various calculations and reporting inconsistencies that occur when the MassGIS, Town GIS, or Town Assessor's data was prepared. The number provided is by MassGIS.

Figure 1-1: Land Use Changes in Greenfield, 1971 - 2005



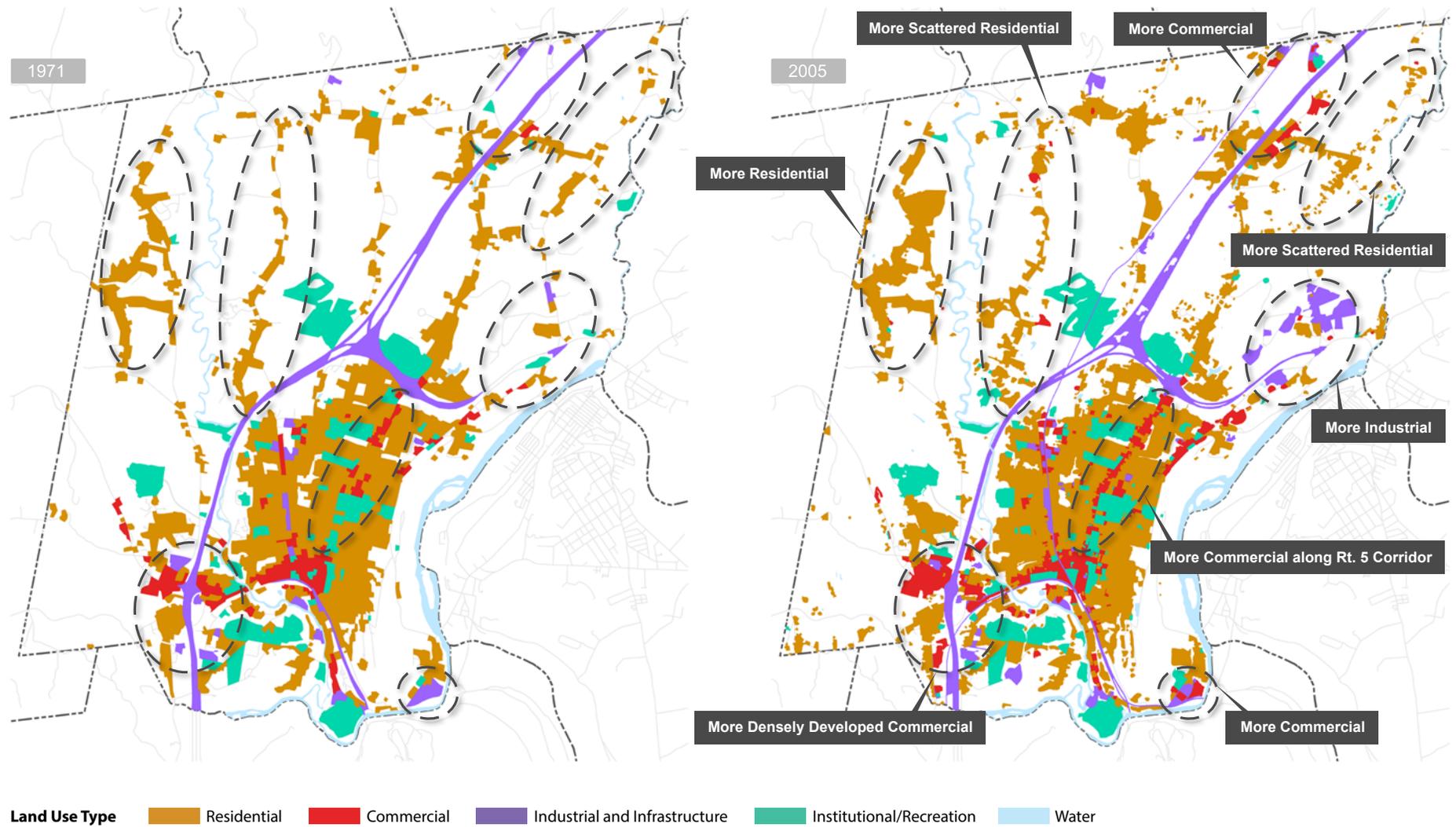
Source: MassGIS

Figure 1-2, the Route 5/10 Corridor and the commercial district off of I-91 at Exit 26 are two examples of increased commercial development.

- Land used for industrial purposes increased steadily through the 1990's, but as businesses relocate or close, the amount of land used for industry is beginning to decline.
- Open space and recreation land increased slightly from 1971 to 2005.

These historic transitions have formed the basis for Greenfield's current land use and development patterns. With the overall goal of creating a more sustainable future for our Town, our community needs to reflect upon its history and understand how and where our existing land uses afford the opportunity to achieve a more sustainable future for the next generation.

Figure 1-2: Land Use and Development Patterns in Greenfield, 1971 - 2005



Source: MassGIS

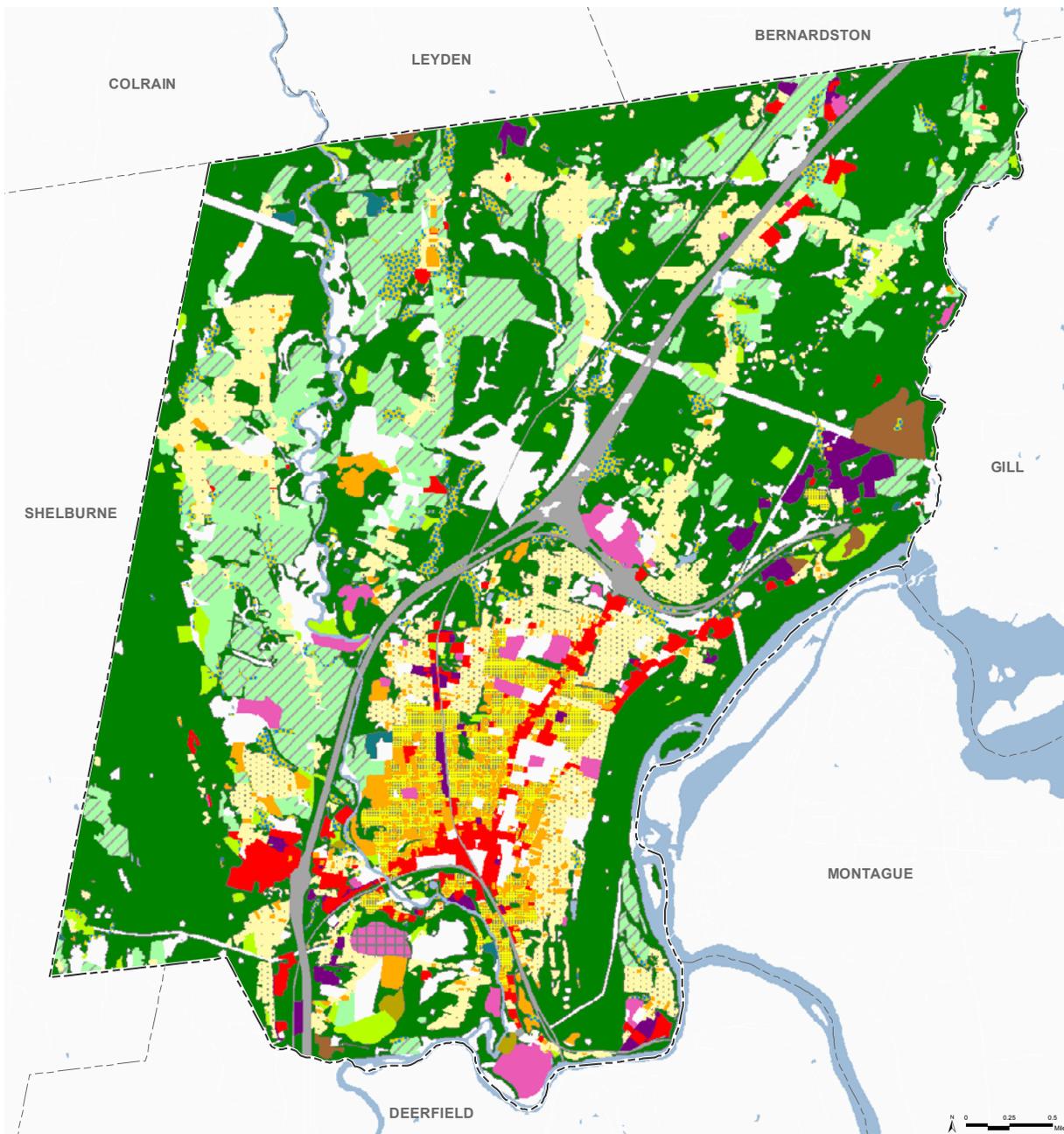


Figure 1-3: Land Use in Greenfield, 2005

Legend

- · — Greenfield Town Boundary
- · — Surrounding Town Boundary
- Crop Land
- Pasture
- Forest
- Non-Forested Wetland
- Mining
- Open Land
- Participation Recreation
- Spectator Recreation
- Water-Based Recreation
- Multi-Family Residential
- High Density Residential
- Medium Density Residential
- Low Density Residential
- Salt Water Wetland
- Commercial
- Industrial
- Urban Open
- Transportation
- Waste Disposal
- Water
- Woody Perennial

Vanasse Hangen Brustlin, Inc.

Data Source: MassGIS

Current Land Use

Today, the Town's densest development is concentrated in the southeastern part of town which is bounded by I-91 and Route 2 (**Figure 1-3**). Much of Greenfield's commercial development is in the downtown area. However there are strips of commercial development extending from downtown along main transportation arteries, including the Route 5/10 corridor, the commercially developed area around the Route 2A/2/I-91 interchange, and along Route 2A (High Street). Residential development, some of it relatively dense, surrounds the commercially zoned areas of Greenfield along these corridors. In the northern and western areas of Town, the lower density residential lots and agricultural uses result in a more rural character.

According to the 2005 land use data provided by MassGIS, about 30.5%, or 4,278 acres, of Greenfield is developed. Among these developed areas, residential land comprised the largest portion (18.5% of total) and commercial (2.9%) uses.

Approximately 8,266 acres of land can be classified generally as open space and recreation land. Additionally, the Town has 1,756 acres of agricultural land, which includes land identified by MassGIS as cropland, pasture, nursery or orchards. Not all of this land is actively used for agriculture currently, but was historically farmed in the past or has soils classified as agricultural soils.

The zoning over the years has led to denser residential and commercial development in the urban core and larger residential lots in the rural areas. The density in the downtown core area of Greenfield varies as some parcels are vacant and others are underutilized. This provides opportunities for infill development to support more concentrated and sustainable growth located near transit and services, and relieves the pressure to develop along the outskirts of town where expansion of the infrastructure may be needed. **Figure 1-4** illustrates a range of building densities in downtown Greenfield that are based on the relationship between building area and the size of the parcel

What is ANR?

In Massachusetts, the first comprehensive subdivision control statute was enacted exclusively for the city of Boston in 1891. It provided that no person open a public way until the layout and specifications were approved by the street commissioners. With the revision of the state statute in 1936, the subdivision control powers were expanded and conferred on Planning Boards.

In most states, subdivision control laws were enacted to address two problems: 1) ensuring that plots of subdivisions be technically accurate and in good form for recording and tax assessment purposes; 2) concern for the impact of subdivisions on street development within communities.

The purpose of providing for an approval not required process was to alleviate the difficulty encountered by Registers of Deeds in deciding whether a plan showing ways and lots could lawfully be recorded. As explained by Mr. Philip Nichols on behalf of the sponsors of the 1953 legislation, ". . . it seemed best to require the person . . . who contends that (his plan) is not a subdivision within the meaning of the law, because all of the ways shown on the plan are already existing ways, to submit it to the planning board, and if the board agrees with his contention, it can endorse on the plan a statement that approval is not required, and the plan can be recorded without more ado."

Source: ANR Handbook 2010: <http://www.mass.gov/hed/docs/dhcd/cd/zoning/anrhandbook.pdf>



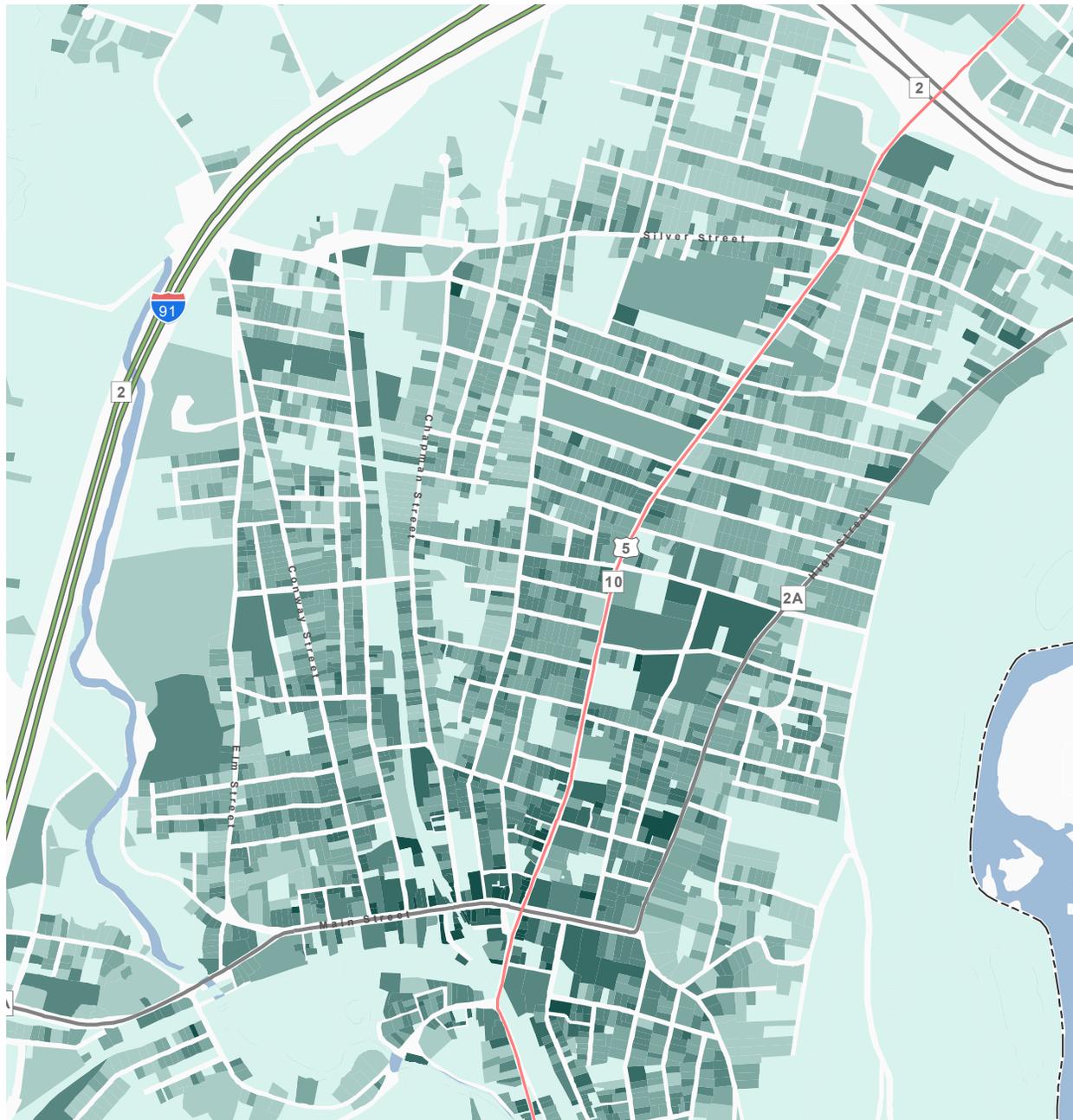
Figure 1-4: Land Use Density in Downtown Greenfield, 2013

Legend

- Greenfield Town Boundary
- Interstate
- U.S. Highway
- State Route

Building Density

- Under 2,000 sq.ft/acre
- 2,000-5,000 sq.ft/acre
- 5,000-10,000 sq.ft/acre
- 10,000-20,000 sq.ft/acre
- 20,000-50,000 sq.ft/acre
- Above 50,000 sq.ft/acre



VHB Vanasse Hangen Brustlin, Inc.

Data Source: Assessor's database, Town of Greenfield, 2013

where the structure is located. Dark shaded areas indicate the highest densities, while the lighter areas indicate low densities. Of note are the “pockets” of lightly shaded areas (notably around Main Street) which indicate locations of infill development potential.

While Greenfield’s population is not expanding (according to 2010 U.S. Census – see Economic Development Element), the Town’s open land continues to diminish as these areas slowly change use over time. Increasing suburbanization has occurred in these rural areas, with the development of residential frontage lots along rural roadways. This pattern of development is allowed through the Approval-Not-Required (ANR) process (see call-out box), which requires only a sign-off by the Planning Board certifying that the division of land meets the dimensional standards in the Zoning Ordinance. Farmland is gradually reduced through ANR subdivision as farmers sell portions of their farms to people who want to build single-family homes. This type of development has significant impacts on the rural character of the landscape. The changes are slow but constant and, over time, open areas become house-lined streets, one house deep, which is a major contributor to suburban sprawl.²

Recent Planning Efforts

In the past, the Town generally favored single-family development in the hope of preserving the rural community character. For example, the 1974 Master Plan Update raised a concern regarding the development of multi-family housing which was viewed as detracting from the unique character of Greenfield and suggested that such development should be monitored in the future. However, the 2004 Community Development Plan changed direction of land use development from single-family to higher-density development within walking distance of the downtown area. That plan encouraged a mix of housing types to provide a range of choices for both market rate and affordable units for the

labor force the Town hoped to attract.

The Greenfield Downtown Master Plan prepared in 2003 identified opportunities for a number of key properties in the downtown area, especially in the vacant upper floors of buildings that could be utilized for the creation of new housing options. The Downtown Master Plan also encouraged the redevelopment of vacant or underutilized downtown buildings for higher density mixed use and residential in order to generate a more vibrant downtown environment.

In addition, certain locations were recommended for rebuilding previously developed lots in Greenfield’s downtown. Design guidelines were also suggested to ensure that the architectural and historical integrity of downtown Greenfield is enhanced.

A footpath that was proposed through downtown, with connections to a trail along the Green River, would encourage pedestrian activity while taking advantage of a significant natural resource for the Town. Streetscape improvements were recommended that would enhance the experience for pedestrians, bicycles, and automobiles, while improving the appearance of the downtown area.

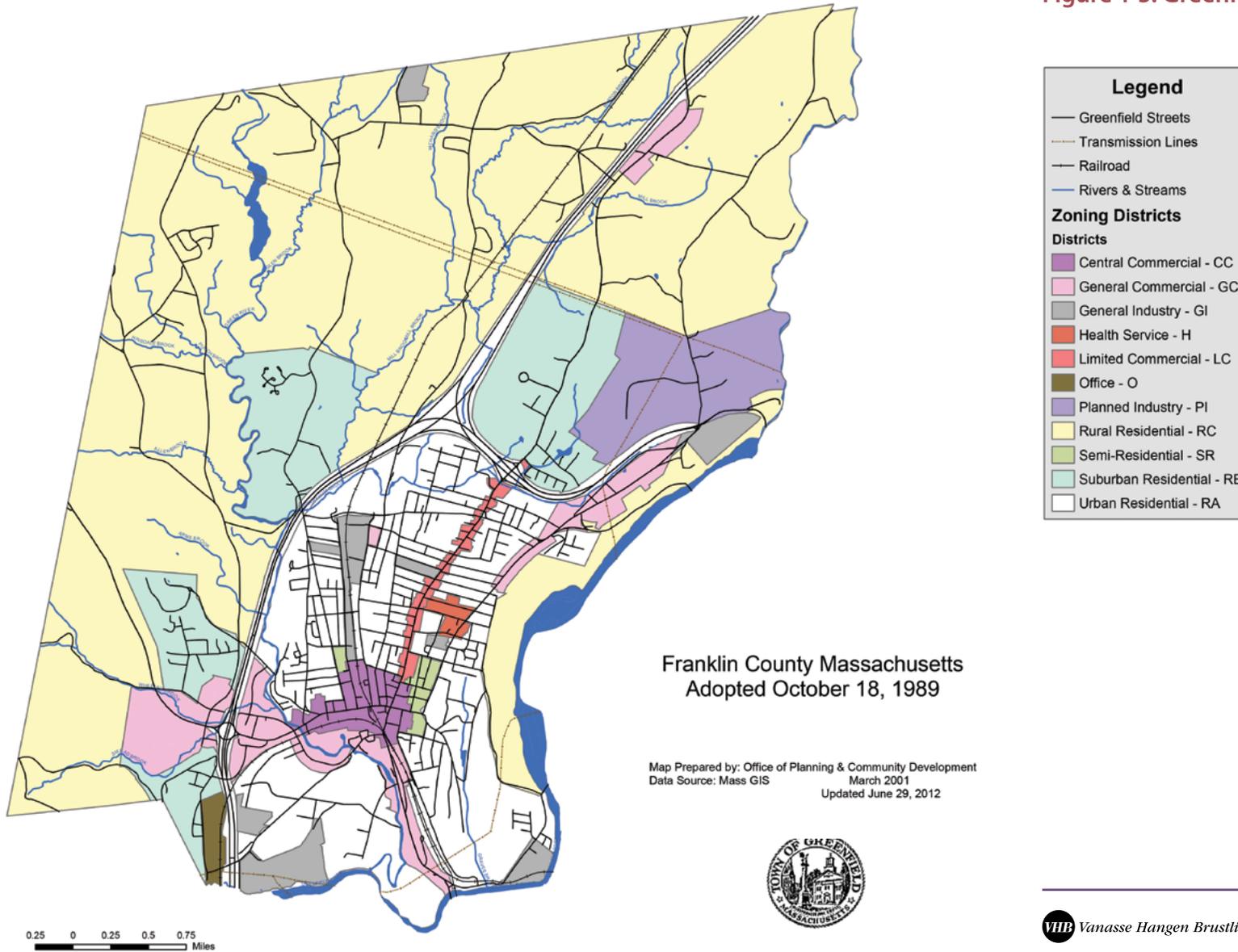
Local Zoning Regulations

Greenfield’s Zoning Ordinance establishes four residential districts with minimum lot sizes ranging from 8,000 square feet to 40,000 square feet; three commercial districts (Central Commercial for the downtown area and Limited and General Commercial elsewhere); two industrial districts; and separate zoning districts for Office and Health Service. There are four overlay districts – Floodplain, Water Supply Protection, Corridor Overlay and Planned Unit Development Overlay – See **Figure 1-5**.

² 2012 Open Space Recreation Plan, Town of Greenfield, MA



Figure 1-5: Greenfield Zoning Map, 2013



VHB Vanasse Hangen Brustlin, Inc.

Data Source: MassGIS, Town of Greenfield, Updated August 7, 2013

Mixed use development is allowed by right in the Central Commercial District and by special permit in the Semi-Residential, Health, Limited Commercial and General Commercial districts. Open Space/cluster developments are allowed in the Urban Residential, Suburban Residential, and Rural Residential zoning districts subject to site plan review by the Planning Board. This allows the buildings to be clustered together on reduced lot sizes with the remaining land permanently undeveloped. It is designed to preserve contiguous open space while reducing impervious ground covering, minimize sprawl, and use land and resources more.





Implementation: Goals, Strategies, and Actions

The goals and strategies for the Land Use Element focus on sustainable development patterns over the next 10 years that conserve and improve open space and agricultural land; concentrate new growth in compact areas near services; use existing municipal infrastructure (i.e., sewer, water and emergency services); and prioritize the use of underdeveloped or previously developed land and buildings instead of undeveloped areas. The strategies emphasize that new and re-development should not negatively impact on water quality and quantity and the habitat of fauna and flora, and should preserve prime agricultural soils, and protect of historic places.



goal 1

Greenfield has achieved a high level of ecosystem health, recreational opportunities, and biodiversity through conservation, restoration, and stewardship of its open spaces and natural areas.

STRATEGY 1

Create a Natural and Open Space Committee, maintain public parks, actively assess and conserve agricultural and other land throughout the community, and establish criteria for prioritizing future land acquisitions.

Through the creation of a Natural and Open Space Committee, the Town will be able to access and prioritize its open spaces and natural resources throughout the town to ensure that there continues to be stewardship, protection, and maintenance of these critical resources. In addition, this committee will be able to develop ways to improve existing parks and potentially create new parks that meet specific needs of the community.

Implementation Actions:

- a. Establish criteria for prioritizing future acquisitions.
- b. Create a permanent Natural and Open Space Committee to provide leadership and vision for the town.
- c. Provide stewardship, protection and access for the Green River working in partnership with the Green River Watershed Association and Deerfield River Watershed Association.
- d. Maintain and improve existing public parks, and create new parks to meet specific needs and demographics. These could include pocket parks, parklets, and a skate park.



UrbanRiver Visions 2 study includes recommendations for celebrating, protecting, and encouraging the use of the Green River.

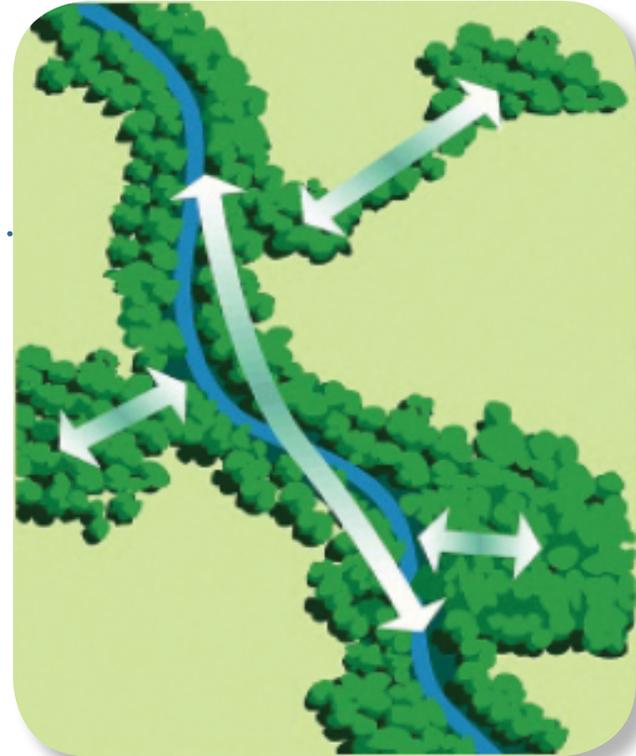
STRATEGY 2

Develop priority conservation corridors and/or overlay districts for natural and agricultural lands and rivers.

Establishing priority conservation corridors and overlay districts for natural and agricultural lands and rivers will enable the Town to realize the potential to connect these resources together to maximize the benefits to wildlife habitats and migration patterns. Improvements to the natural systems can enhance wildlife and add to the quality of these limited resources.

Implementation Actions:

- a. Partner with land trusts and the state to target priority conservation corridor areas for permanent protection and/or regenerative use.
- b. Provide continuous wildlife habitat and migration corridors, and protect watershed resources.
 - Create east-west connection between the ridges that define Greenfield;
 - Ensure river corridors enhanced, and deleterious uses of flood plains removed;
 - Remove or retrofit dams along rivers to allow fish passage.



Wildlife (ecological) corridors are connections between existing natural areas, river corridors, and blocks of fragmented habitat that allow the unrestricted movement of wildlife and protect water quality.



Implementation

goal 1 [continued]

Greenfield has achieved a high level of ecosystem health, recreational opportunities, and biodiversity through conservation, restoration, and stewardship of its open spaces and natural areas.

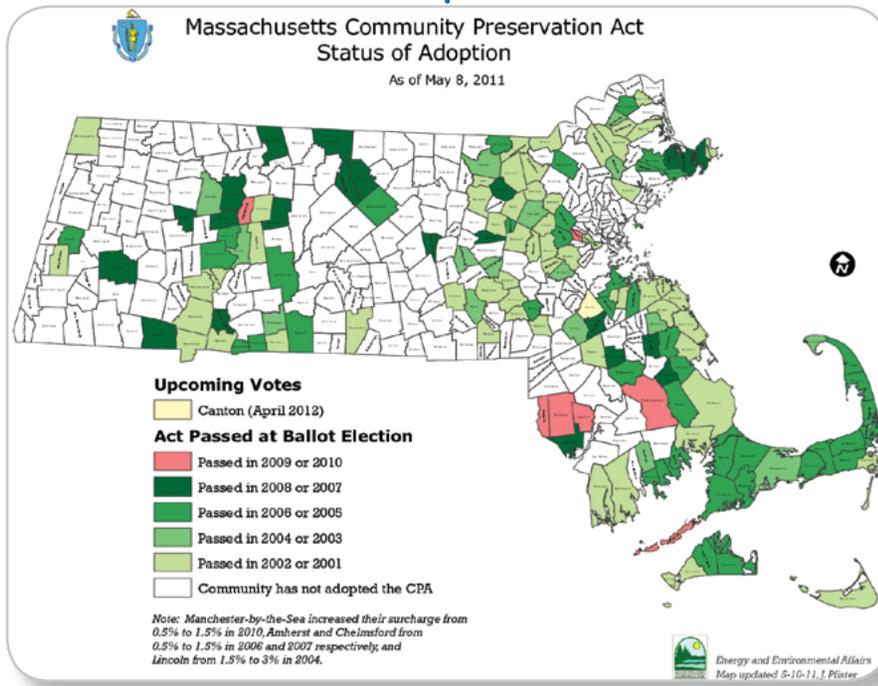
STRATEGY 3

Adopt the Community Preservation Act to provide funding for open space acquisition.

The Community Preservation Act (CPA) enables communities to raise funds to create a local dedicated fund for open space preservation, preservation of historic resources, development of affordable housing, and the acquisition and development of outdoor recreational facilities. The adoption of the CPA would assist Greenfield in achieving some of its goals related to open space acquisitions and park development.

Implementation Actions:

- a. Town Staff should review and identify the steps needed to adopt the Community Preservation Act and work with the Town bodies to outline the procedural steps and requirements for adoption of the Act.
- b. Once adopted, build awareness of the Act's provisions through an internal Town Staff meeting and through updating the Town's Website
- c. Outline the short and mid-term goals to advance efforts under the adopted Act.



Many communities have adopted the Community Preservation Act as of May, 2011.

goal **2**

Agricultural land is preserved to ensure a vibrant local food supply, while increasing Greenfield's role as a regional food hub including production, aggregation, processing, and distribution infrastructure.

STRATEGY 4

Inventory all agricultural land - including cropland, pastures, orchards, and its infrastructure to assess and encourage its potential preservation.

In order to advance the Town's goal to encourage the potential preservation of agricultural land, an inventory of all agricultural land will assist in determining the value of that land, its suitability for those uses and its associated infrastructure. With this assessment in place, the Town can advance actions to proactively engage the farm community and assess the need and applicability for the Town to supplement or modify tools (such as zoning) to reinforce this strategy.

Implementation Actions:

- a.** Encourage farmers to take advantage the state's Agricultural Preservation Restriction (APR) Program and protect their agricultural land in perpetuity.
- b.** Partner with area land trusts.
- c.** Pursue preservation options that include affordable "whole farm" preservation, including the buildings.
- d.** Discourage or prohibit the development of prime agricultural land for non-agricultural uses through zoning, and provide zoning that incentivizes redevelopment



Greenfield agriculture land is covering 12.5% of the town's total land area.



Implementation

goal 2 [continued]

Agricultural land is preserved to ensure a vibrant local food supply, while increasing Greenfield's role as a regional food hub including production, aggregation, processing, and distribution infrastructure.

STRATEGY 5

Preserve all agricultural land to increase Greenfield's food security and health for all and work toward a more sustainable agricultural system by using new innovative practices that enhance soil fertility, carbon sequestration and food production.

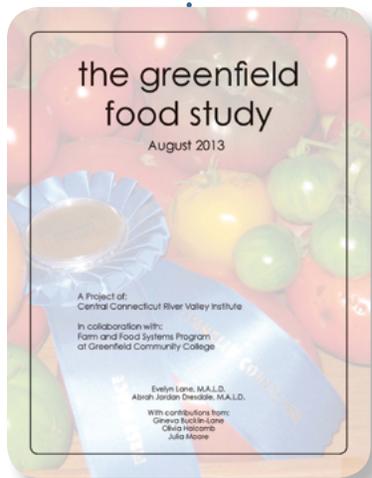
With an inventory complete in Strategy 4, the Town can continue to advance efforts to preserve agricultural land and thus work toward a more sustainable agricultural system for Greenfield and the broader community. This strategy focuses on advancing the idea of Greenfield as a food hub and agricultural economic generator. Core to this strategy is the need to development the necessary technological systems to support a more sustainable and robust agricultural system, like food storage, processing, distribution, etc., and educational and community programs.

Implementation Actions:

- a. Establish Greenfield as a food hub and support the economic growth and job creation potential of food production, distribution, and processing in town.
- b. Develop new food system infrastructure, storage, processing, and distribution centers based on studies such as the Greenfield Food Study, and those written by CISA and FRCOG to determine food system needs.
- c. Incorporate nutrition and food education programs in school curricula.
- d. Ensure everyone has access to fresh food by accepting SNAP/EBT at farmers markets, and fostering community gardens in areas with a high concentration of rental properties, and at public schools.
- e. Ensure that the Greenfield Agricultural Commission promotes and advocates for all aspects of Greenfield's food system.
- f. Foster Greenfield as a center for new innovative, restorative agricultural practices and techniques.



Greenfield corn sprouts



The Greenfield Food Study identifies ways Greenfield can implement a sustainable agricultural system.

STRATEGY 6

Increase productive agricultural land by fostering backyard gardening.

Through fostering back yard gardening, Greenfield will advance efforts to grow foods locally while reducing energy consumption associated with the transportation of goods and services from farm to market. In addition, this strategy will realize the goal to increase the towns land for food production.

Implementation Actions:

- a. Bolster community efforts to protect the viability of farming by emphasizing the importance of, and support for, farming within the Town.
- b. Partner with GCC's Food Systems and Agriculture program, Just Roots, and others to offer programs and training that foster health and backyard gardening including tool sharing programs, and workshops on innovative farming practices, and food processing and storage.
- c. Provide incentives to homeowners to reduce area of hardscapes and lawns and increase areas of productive landscapes such as backyard gardens, rain gardens and gardens for biodiversity.



Backyard farming



Backyard farming



goal **3**

Our adaptable and resilient green infrastructure enhances and promotes compact development and redevelopment and offers ecological and social benefits.

STRATEGY 7

Integrate biological systems into the “urban fabric” of Greenfield to provide an improved ecosystem and infrastructure.

Greenfield has the opportunity to integrate biological systems into existing and future development patterns throughout the town that will enhance the ecosystem and the town’s infrastructure. This can be accomplished by providing incentives to incorporate plants and trees into development projects, and by adopting ordinances that require best practices for stormwater.

Implementation Actions:

- a.** Develop and adopt an Urban Forestry Code.
- b.** Provide incentives to homeowners to plant and maintain trees.
- c.** Adopt a Green Stormwater Infrastructure Ordinance.
- d.** Prepare Greenfield’s essential infrastructure to maintain critical functions through challenging weather, energy, and economy, as outlined in the MA Climate Adaptation report (2010).



Green Infrastructure

goal **4**

Compact residential and commercial development and redevelopment that is focused in and around Greenfield's historic downtown and other previously developed areas and incorporates increased density, mixed use development, and infrastructure reuse that supports a green, adaptable, and resilient infrastructure.

STRATEGY 8

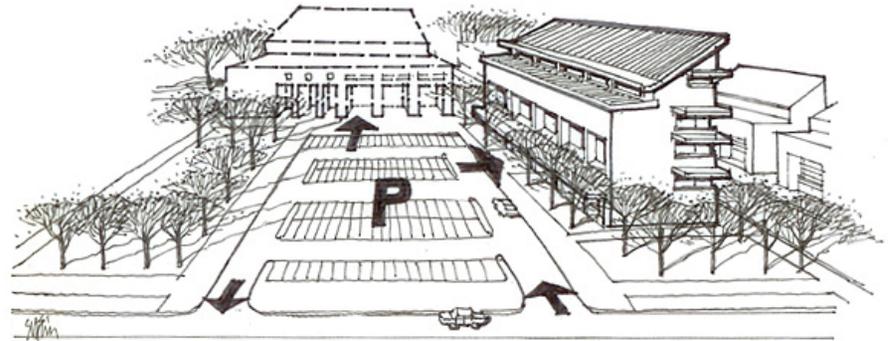
Update the Zoning Ordinance to include sustainable development practices and controls.

Zoning is a tool that allows a community to regulate land uses, development densities, and built environments in ways that support a town's goals for preservation and growth. As a result of this Master Plan, Greenfield will need to update applicable sections of its zoning bylaw to allow for uses and land use development patterns that may have not been identified or allowed in the past, as well as other updates that include best practices to encourage and require sustainable development.

Implementation Actions:

- a. Promote a mix of residential, commercial, civic, and open-space areas, allowing residents to live within one-quarter mile or a five-minute walk from these uses.
- b. Zoning that facilitates improved residential and nonresidential uses in town center.
- c. Establish maximum parking standards and to encourage the use of shared parking.
- d. Establish design guidelines for development downtown and along highway corridors.

Shared parking takes advantage of peak activity periods among different facilities or functions. For example, administrative facilities are typically most active from 0700 to 1700. The parking area may be used for an alternate function, such as a community center or chapel, outside of these hours. Shared parking also takes advantage of scenarios where use alternates by day rather than hour (i.e. chapel and CDC). Training exercises often vary by day or week



Shared parking strategies can reduce the total amount of parking needed, thereby reducing impervious surfaces.



Implementation

goal 4 [continued]

Compact residential and commercial development and redevelopment that is focused in and around Greenfield’s historic downtown and other previously developed areas and incorporates increased density, mixed use development, and infrastructure reuse that supports a green, adaptable, and resilient infrastructure.

STRATEGY 9

Revise the Zoning Ordinance to allow development by-right in the downtown area and neighborhood centers that is compatible with Greenfield’s traditional character.

This strategy specifically calls for zoning revisions in the downtown area and neighborhood centers to encourage development that is compatible with Greenfield’s traditional character.

Implementation Actions:

- a. Consider incentives such as expedited permitting to encourage mixed-use where appropriate.
- b. Consider increasing density in the downtown area and appropriate neighborhood centers.



Greenfield has a diverse and historic downtown character.



Examples of dense development in downtown Greenfield

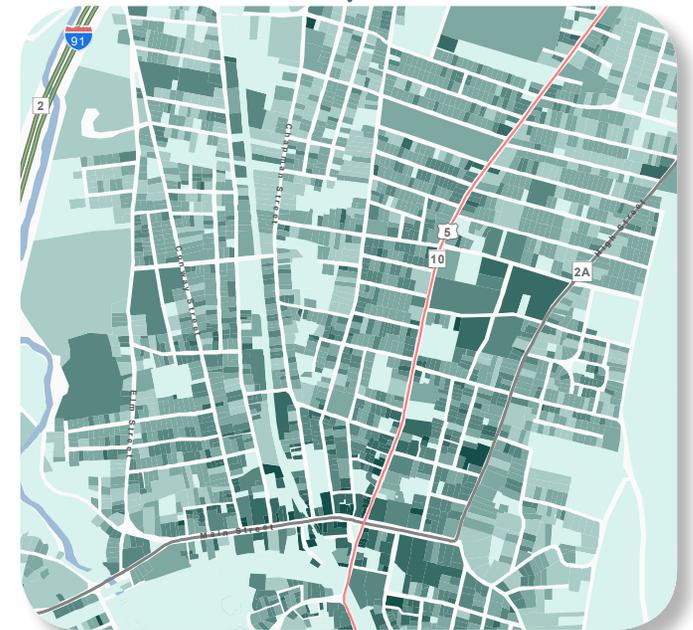
STRATEGY 10

Adopt an infill development ordinance to encourage redevelopment or reuse of vacant or underperforming buildings or parcels.

This strategy calls for the creation of a new zoning ordinance to encourage redevelopment of infill sites or vacant sites within Town. This new ordinance is important, in that, infill or vacant parcels may not currently have the appropriate zoning in place or allow redevelopment patterns that are consistent with its abutting context and uses. For example, the by right zoning for an area may not allow or promote building placement (such as setback and building heights) that is consistent with its abutting context, or allow for any deviation from existing non-confirming lots sizes that may impact the feasibility of redeveloping a vacant site. This strategy recognizes the potential for these types of discrepancies and suggests creating a new ordinance that not only corrects these issues, but does so while striving to achieve the Town's goals.

Implementation Actions:

- a. Develop an inventory of, and strategy for, reusing vacant or abandoned properties.
- b. Evaluate whether form-based code would help the town achieve its desired goals of infill and redevelopment.
- c. Adopt flexible zoning standards that allow developers to adapt to existing site constraints, density bonuses, mixed uses, and reduced parking standards (or shared parking) are examples of the types of incentives that can be applied to this type of redevelopment.
- d. Eliminate zoning and permitting obstacles to the redevelopment of parcels in the urban core and at the rotary.
- e. Pursue reuse of vacant industrial and commercial properties that preserve historic elements and incorporate mixed uses appropriate to that neighborhood.



Greenfield has a number of opportunities to redevelop underutilized parcels in downtown.



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Source of Implementation Illustrations:

- UrbanRiver Visions 2 - Executive Office of Energy and Environmental Affairs and the Town of Greenfield, 2007
- Wile Links Corridor - <http://www.rivercare.org/what-are-wild-link-corridors>
- Community Preservation Act map - <http://img.docstoccdn.com/thumb/orig/113406440.png>
- Greenfield agriculture land - VHB
- The Greenfield Food Study - http://www.greenfield-ma.gov/Pages/GreenfieldMA_Planning/GreenfieldFoodStudy.pdf
- Backyard Farming - Neo-Terra Experiments in Healthy Living; Backyard Farmers, LLC
- Green Infrastructure - EPA
- Shared Parking - http://www.wbdg.org/ccb/AF/AFSUSTTOOLKIT/Strategies/Site/Strategies_SharedParking.shtml
- Greenfield Downtown characters - VHB, Stephen Conn on Flickr
- Downtown infill opportunities - VHB



TRANSPORTATION

vision



We seek to develop a sustainable transportation system that encourages residents and visitors to reasonably choose between walking, biking, riding public transit, and driving environmentally-friendly vehicles. It would also expand the availability and accessibility of transportation options for all. A truly multimodal transportation system will result in people making trips that are safer, healthier, and more cost-effective, with less air pollution and fewer greenhouse gas emissions, while fostering a greater sense of community.



Transportation

Introduction

This Element provides an overview of Greenfield’s existing transportation system and identifies goals and strategies for moving toward the town’s vision of a sustainable transportation system. For our transportation system to become sustainable, a shift must occur in how we (as a community) select a mode of transportation for travel. For example, one may ask “How do I get from here to there the fastest?” versus “How can I get here to there using a more sustainable mode of transportation?” This shift in thinking requires local government, businesses and residents across all social and economic spectrums to think about the environmental impact of different modes of transportation. A sustainable transportation system is one in which fuel consumption, vehicle emissions, safety, congestion, and social and economic access are of such levels that they can be sustained into the indefinite future without causing great impact to society or the environment.

In 2008, our community spent \$32.5 million in fuel costs to travel 152 million miles. The transportation sector accounted for approximately 39% of our total fuel cost (residential buildings and commercial/ industrial uses accounted for almost another third each). The transportation cost has doubled since 2001, and 75% of these costs are generated by the vehicle miles traveled (VMT) by residents. As a community we own almost 14,000 vehicles and the miles driven (on average) by every person in Town equates to approximately 11,000 miles; which is less than the national average by 1,000 miles. Air pollutants emitted by the transportation sector account for almost 84% of all sectors.

In 2010, Governor Patrick awarded Greenfield the Leading by Example¹ award and the town became the first of four municipalities in Massachusetts to be designated as a Green Community. This award honored those who had significantly reduced energy use and greenhouse gas emissions, or increased recycling, the use of renewable energy and other clean energy, and environmental quality initiatives. Greenfield continues to set the bar in the Commonwealth through our sustainability efforts; including the completion of this sustainable master plan. The Town has been working closely with key stakeholders to identify opportunities to further the vision of creating a sustainable transportation system for all roadway users.

Previous Transportation Studies and Plans

- In 2003, a Downtown Master Plan was prepared that identified the need to develop parking initiatives that made better use of the existing parking supply in the downtown.
- In 2009, the Franklin Regional Council of Governments (FRCOG) developed the Franklin County Bikeway Map. This map provides an illustrated on – and off-road bicycle route for Greenfield and the adjacent communities. These maps can be found at: http://www.frcog.org/services/transportation/trans_bikeway.php
- In 2012, the Town updated its open space and recreation plan. In this plan sidewalk conditions and locations were identified.
- FRCOG’s Sustainable Franklin County included strategies that promote alternate modes of transportation, including: increase the availability and use of public transit, restore passenger rail service, and increase bicycle and pedestrian facilities that promote walking and bicycling.

¹ For more information on the “Leading By Example” award presented to the Town of Greenfield see <http://greeninggreenfield.org/sustainability>



goals

In Ten Years...



1

Greenfield will have welcoming gateways, as well as safe, efficient, and attractive travel corridors.



2

Downtown will be safe for all modes of transportation, with smooth traffic flow and sufficient parking, including a Municipal Parking Garage.



3

Neighborhoods will enjoy an improved quality of life by a reduction in the negative impact of vehicular traffic.



4

The entire community will have enhanced walkability.

2001 Greenfield Master Plan Transportation Goals:

- Seek a regional and local system that provides for public and private transportation; and
- Provide for vehicular, bicycle, pedestrian, and other modes of circulation.

Sustainable Franklin County – Transportation Goals:

- Increase availability and use of public transit.
- Restore passenger rail service.
- Increase bicycle/pedestrian facilities and promote walking and bicycling.



5

Our town will be a place where people of all ages can safely use bicycles for transportation and recreation.



6

There will be dramatically increased ridership of all forms of public transportation, which will offer expanded service and accessibility.



7

Fuel use, climate change emissions, and air pollution by vehicles will be reduced.



8

Transportation infrastructure will have minimal environmental impact wherever possible and will be made resilient to our changing environment.



Greenfield’s Transportation System

Greenfield is defined not only by its natural features, but also by its network of streets, blocks, and land uses that collectively contribute towards defining the built environment. The transportation system varies dramatically from dense streets that make up the downtown, to the roads that provide access to some of the more rural portions of the community, and to the corridors that provide regional connections to other communities or Vermont. These roadways can be referred to as interstates, arterials, collectors, and local roadways. Each contributes toward creating a street “hierarchy”, whereby each type of street should promote a combination of access and/or mobility.



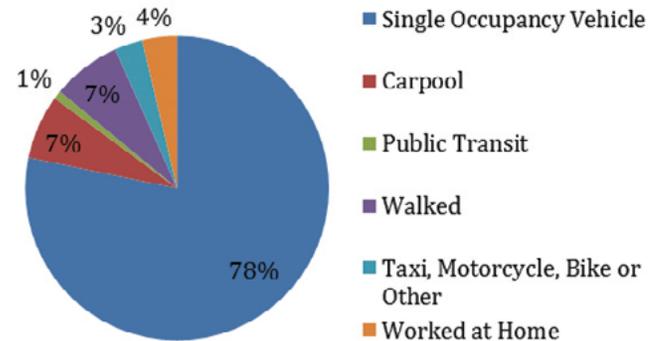
Roadways in Greenfield – Greenfield/Colrain gateway on the left and Route 5/10 on the right. Photo credit: VHB.

Greenfield is within driving distance of Brattleboro Vermont (20 miles), Boston (100 miles), Springfield (28 miles) and Pittsfield (50 miles) and lies at the junction of four highways, including: Interstate 91, Route 2, Route 2A and Route 5/10; see **Figure 2-2** for a map illustrating the transportation network. Route 2A runs through the downtown; which is made up of a dense mix of residential, retail and commercial uses. Route 2 west of I-91 is a dense area containing a mix of

retail uses, mainly big box retail type stores with smaller outparcels that include fast food restaurants, gas stations, etc. Route 5/10 travels north-south and includes a mix of residential and smaller retail type developments, including restaurants.

Greenfield is the hub of the Franklin Regional Transit Authority (FRTA). The FRTA offers six (6) dedicated bus routes including a Greenfield Community bus route that circulates throughout the Town; however, due to lack of funding, service is limited and not provided during the weekend. The John W. Olver Transit Center is the hub for FRTA bus service, as well as the local depot for Peter Pan and Greyhound intercity service. This transit center has been constructed to provide improved opportunities for patrons to use alternate modes of transportation; including the Amtrak’s Vermonter line which is being rerouted with a local stop at the center.

Figure 2-1: Transportation Modes in Greenfield



Source: U.S. Census Bureau, 2007-2011 American Community Survey

To gain a better understanding of how people move within and through Greenfield, the mode share for commuters (or workers) was reviewed. Mode share is defined as the percentage of travelers using a particular type of transportation; which could include the automobile, walking, taxi, or working from home. **Figure 2-1** provides a breakdown of the mode split data provided by the U.S. Census Bureau.²

Based on the available information the overwhelming majority of Greenfield’s working age population (85%) relies predominantly on the automobile, including driving alone or carpooling, to get to and from work. Walking is the next most popular means of commuting (7%), followed by motorcycle, taxi, or

Table 2-1: Census Journey-to-Work Data for Greenfield Residents and Employees

LOCATION OF EMPLOYMENT	PERCENT OF RESIDENTS	PERCENT OF WORKERS	LOCATION OF RESIDENCE
Greenfield	48%	40%	Greenfield
Montague	8%	10%	Montague
Deerfield	7%	4%	Bernardston
Northampton	5%	4%	Northfield
Amherst	5%	4%	Deerfield
Whately	3%	3%	Shelburne
Hatfield	2%	2%	Buckland
Springfield	2%	2%	Gill
Brattleboro, VT	2%	2%	Northampton
Northfield	2%	2%	Colrain
Bernardston	1%	2%	Erving
Hadley	1%	1%	Orange
71 Other Towns / Cities (combined)	14%	24%	101 Other Towns / Cities (combined)

Source: U.S. Census Bureau, 2000 Census Journey-to-Work Data
 Note: Other towns and cities not listed comprise one percent or less each.

2 Mode share data based on U.S. Census Bureau, 2007-2011 American Community Survey (<http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>)

bicycle (3%), and public transit (1%) is the least popular mode of transportation. Approximately 4% of Greenfield residents work from home.

Since the mode share heavily favors the automobile, it is important to also understand the commuting patterns for both residents of Greenfield and for workers of Greenfield-based employers. **Table 2-1** presents the information collected as part of the 2000 U.S. Census; which surveyed:

- Approximately 8,800 Greenfield residents who work in Greenfield; and
- Approximately 10,500 workers who live in Greenfield.

Given the substantial portion of individuals that both live and work in the Town of Greenfield, the potential exists to reduce the number of commuting trips made via automobile. While the existing mode share within the town leans heavily towards the automobile, targeted transportation improvements could be made that would promote travel by other modes. Improvements could include new sidewalks, bicycle accommodations and expanded transit service.

Transportation Roadway Network

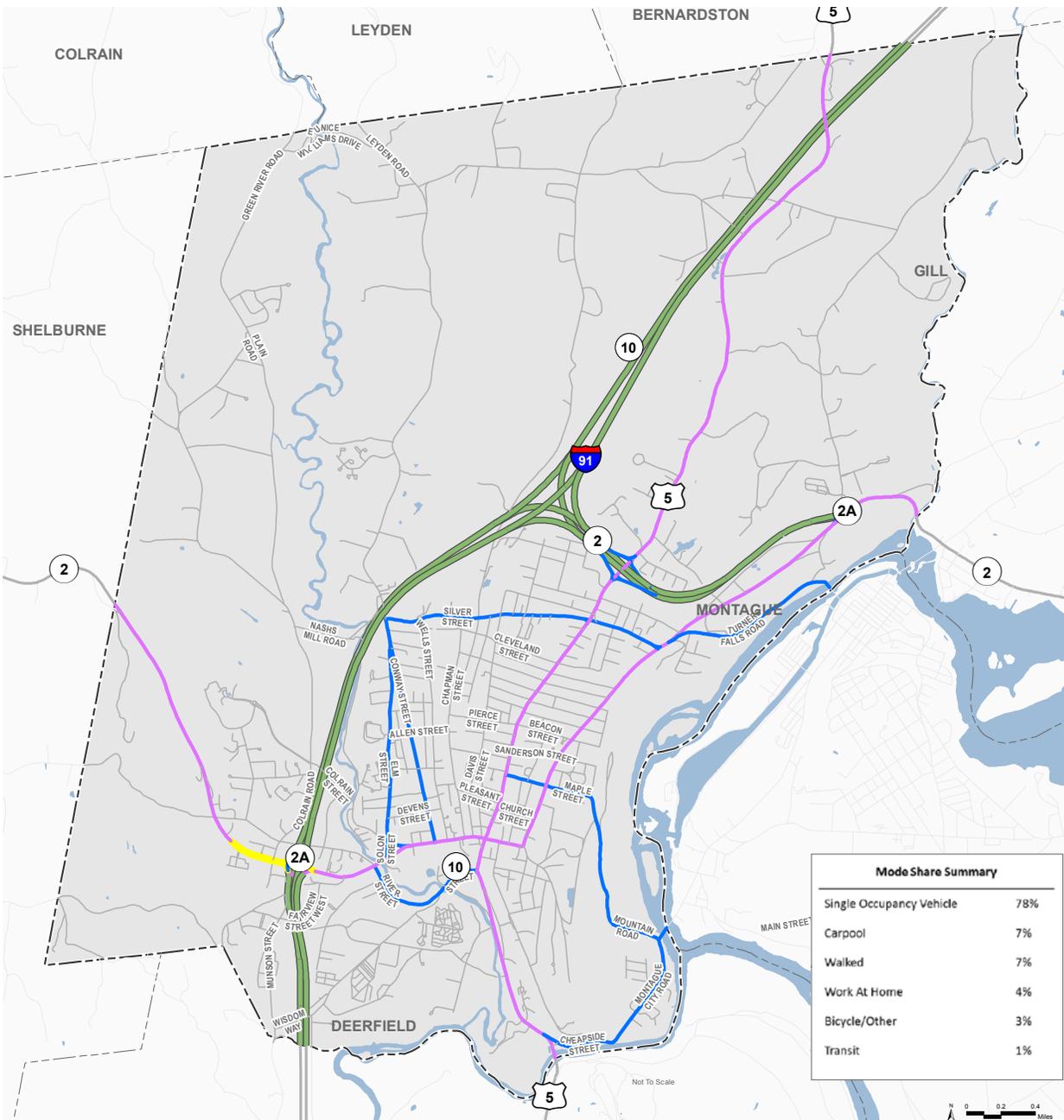
In Greenfield, there is a diverse range of street types and a hierarchy that ranges from interstates to local roadways; however, the hierarchy of some roadways in Greenfield doesn’t seem to follow the traditional guidelines. In general, interstates and arterial roadways are intended to promote mobility, whereas collector and local roadways promote access (to developments or residences). There are many streets that should be providing more vehicle mobility and less access to properties. However, the demand for development on corridors with high traffic volumes has resulted in roadways with more access points. For example, Route 5/10 (Federal Street) and Route 2A (Main Street and High Street) are classified as arterial roadways; which by definition should provide mobility to the region; however, these roadways have numerous driveways that promote more access.



Figure 2-2: Roadway Functional Classification and Traffic Conditions

Legend

- Limited Access Highway (Interstates)
- Multi-lane Highway (Not Limited Access) (Arterials)
- Other Numbered Route (Arterials)
- Major Road (Collectors)
- Local Roads
- Greenfield Town Boundary
- Surrounding Town Boundary
- Water



Mode Share Summary	
Single Occupancy Vehicle	78%
Carpool	7%
Walked	7%
Work At Home	4%
Bicycle/Other	3%
Transit	1%

Roadway Traffic Volume Summary

Location	Weekday Daily ¹	Source
<i>Interstates</i>		
Interstate 91, south of Leyden Rd Bridge	31,645	MassDOT 2012
Route 2 (Mohawk Trail), east of Route 5/10	14,400	MassDOT 2012
<i>Principal Arterials</i>		
Route 2 (French King Highway), east of Fall River Bridge	10,800	MassDOT 2012
Route 2 (Mohawk Trail), west of Interstate 91	23,200	MassDOT 2006
Route 2A (Main St), east of Elm St	12,650	MassDOT 2012
Route 2A (High St), south of Beacon Street	10,300	MassDOT 2009
Route 2A (French King Hwy), northeast of Turners Fall Road	12,500	MassDOT 2012
Route 2A (French King Hwy), southwest of Wusnch Road	5,300	VHB 2010
Route 5/10 (Federal St), north of Beacon Street	13,800	MassDOT 2010
Route 5/10 (Bernardston Rd), south of Route 2	13,950	VHB 2010
Route 5/10 (Bank Row), south of Main Street	8,500	MassDOT 2012
<i>Major Collectors</i>		
Silver Street, west of Route 5/10	8,200	MassDOT 2012
Turners Fall Road, east of High Street (one-way)	2,700	MassDOT 2012
Conway Street, north of Allen St	3,000	MassDOT 2005
Elm Street, West of Conway	2,500	MassDOT 2009
River St, south of Linwood St	6,200	MassDOT 2012
Maple St, south of Parkway St	3,200	MassDOT 2010
Pierce St, west of Route 5/10 (Federal St)	3,300	MassDOT 2012
<i>Minor Collectors</i>		
Colrain Road, south of Nash's Mill Rd	4,000	MassDOT 2006
Plain Road, north of Colrain Rd	2,000	MassDOT 2002
Beacon Street, west of Route 2A (High St)	2,600	MassDOT 2006
Wisdom Way, East of Interstate-91	1,100	MassDOT 2012
<i>Local Roadways</i>		
Wildwood, east of Route 5/10	2,300	MassDOT 2005
Cleveland Street, west of Route 5/10	950	MassDOT 2002
Adams Road, south of Lovers Lane	1,800	MassDOT 2004

Notes: 1. volumes presented as an annual average daily traffic (AADT) volume expressed in vehicles per day

VHB Vanasse Hangen Brustlin, Inc.

Data Source: MassGIS

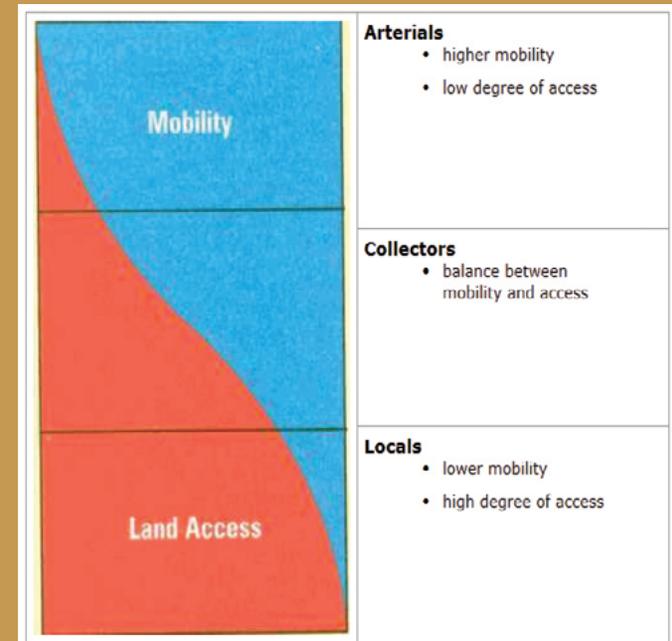
What is Access and Mobility?

One key goal in transportation planning is providing access. Access is defined as, “the ability to reach desired goods, services, activities, and destinations” (together called opportunities). Access is the ultimate goal of most transportation and can be viewed from different perspectives. For example, a particular location may be accessible by automobile but not by walking or transit, and so it is difficult to reach for non-drivers. Factors that affect access include time of day, purpose, mode choice, and distance from the origin of the trip to the destination.

Mobility refers to the physical movement of all modes of transportation. In general, major activity centers tend to have a relatively poor vehicle mobility (due to congestion), but can be successful due to excellent accessibility. This indicates that in the game of economic competitiveness, accessibility trumps mobility.

Adapted from: Litman, Todd, Accessibility: Defining, Evaluating and Improving Accessibility, VTPPI (www.vtpi.org), 2005

Roadways that are classified as interstates or arterials typically favor “mobility” over “access”. The adjacent chart is frequently used to illustrate that as mobility increases, land access should decrease. To the right of this chart there is a list of the roadway classifications and how their functional classification should relate to mobility and access.



Roadway Definitions:

- Interstates: are highways that provide mobility with access to roadways of a lower functional classification.
- Arterials: are major roadways intended to primarily service through traffic, and access is carefully controlled. This type of roadway is intended to serve moderate to high volumes of traffic and can provide regional mobility.
- Collectors: are roadways intended to move traffic from local roads to arterials.
- Locals: are roadways with the primary function of providing access to adjacent properties and to roadways of a higher functional classification.



Federal Street at Main Street. Photo source: VHB

There are almost 170-miles of roadways in the Town of Greenfield. **Table 2-2** presents the total length of roadways, by classification; which are also illustrated in **Figure 2-2**. The majority of the roadways in Town (79.7%) are classified as collector or local roadways; these types of roadways typically promote access. The remaining roadways (20.3%) are classified as interstate or arterial roadways; which typically promote mobility. It is important to understand the functional classification of a roadway, as there are different design criteria that need to be followed for developing a roadway cross section; especially if state or federal funding is being used for construction.

Table 2-2: Roadway Classification, Greenfield, MA

	CLASS NAME	LENGTH (MILES)	PERCENTAGE
Interstate	Limited Access Highway	20.5	12.1%
Arterials	Numbered Routes	13.8	8.2 %
Arterials & Collectors	Non-Numbered Routes	10.3	6.1%
Local	Local Roadway	125.0	73.6%
Total		169.7	100.0 %

Source: Based on MassGIS roadway class data

It is also important to know roadway jurisdiction to determine the types of funding that may be available and the design criteria that should apply. **Table 2-3** provides a summary of the length of roadways under the jurisdiction of the MassDOT, the town, or other private ownerships. Any roadway under the jurisdiction of MassDOT would need to go through an extensive review process before improvements can be considered. Based on this assessment approximately 19% of roadways in Town are under the jurisdiction of MassDOT with most of it being I-91 or Route 2; however, there are portions of Route 2 (west of I-91), Route 2A, Route 5/10 (north of Route 2) and Montague City Road that are also under the jurisdiction of the State.

Table 2-3: Roadway Lengths in Greenfield

ROADWAY JURISDICTION	MILES
MassDOT	31.9
Town Accepted Road	102.5
Other (Private, Institutional, etc.)	35.3
Total	169.7

Source: Based on MassGIS roadway class data

When evaluating a transportation network, it is important to know the infrastructure improvement projects that are planned. **Table 2-4** summarizes the projects that are being pursued by or through MassDOT as of August 2013. These projects are being pursued through the State’s Transportation Improvement Program (TIP). As depicted in this table, there are a few roadway maintenance projects in town, as well as several intersection improvements. The Town spends approximately \$500,000 of state Chapter 90 funding toward the paving program that resurfaces approximately five miles of roadways every year. Information on the state’s projects and the status are provided in the table below.

Road Safety

The first two Transportation Element goals involve providing safe travel routes through Greenfield for all users. Providing a safe transportation network is critical for multiple reasons beyond limiting injuries and damage to personal property. Unsafe roadways and intersections can result in dividing lines within a community and discourage travelers from using town roads, thus limiting potential business growth.

Numerous studies, conducted by both public and private entities, have looked at existing safety concerns at various locations within the town. The FRCOG and MassDOT have analyzed crash data in all of Franklin County to identify the most hazardous intersections on roadways in the region. According to the most recent FRCOG study³ in which they determined the 50 most hazardous intersections within Franklin County, 16 of the top 50 most hazardous intersections were located within Greenfield (**Table 2-5**).

Table 2-4: MassDOT Transportation Improvement Projects in Greenfield

PROJECT NUMBER	DESCRIPTION	TYPE	STATUS	CONSTRUCTION YEAR
601186	General Pierce Bridge	Bridge Rehabilitation	Design	2018/2019
603876	Resurfacing Rte. 5 and Montague City Rd	Resurfacing	Design	2018/2019
605036	Improvements on Rte. 2 (Adams Rd to FKH Bridge)	Hwy Reconstruction	Design	2018/2019
605595	Interstate Maintenance on I-91	Resurfacing	Design	2018/2019
606006	Resurfacing on Route 2, I-91 to Gill TL	Resurfacing	Design	2013/2014
606048	Roundabout Construction at Colrain Rd/College St	Hwy. Reconstruction	Design	2013/2014
606526	Girder Painting, I-91 over Country Club Road	Painting - Structural	Design	2014
606548	Replace Superstructure on I-91 over BMRR	Bridge Replacement	Design	2018/2019
607182	I-91 Interstate Maintenance	Resurfacing	Design	2016
607222	Improvements at Route 5/10 and Cheapside Street	Hwy Reconstruction	Design	2015
607223	Improvements Route 2A at River Street	Traffic Signals	Design	2014
607478	I-91 maintenance (exit 24 to 1-mi south of Lee Rd)	Resurfacing	Design	2017
607565	I-91 maintenance (Colrain St to north of Bernardston Rd)	Resurfacing	Design	2018/2019

Source: MassDOT, 2013: <http://www.mhd.state.ma.us//default.asp?pgid=content/projectsRoot&sid=wrapper&iid=http://www.mhd.state.ma.us//ProjectInfo/>

³ An Examination of Regional Crash Trends and the Identification of the 50 Most Hazardous Intersections in Franklin County (MA) from 2007 to 2009 (DRAFT), Franklin Regional Council of Governments, July 11, 2012.



Table 2-5: Hazardous Intersections in Greenfield

INTERSECTION	RANK IN THE REGION	TOTAL INCIDENTS
Wells Street at Allen Street	#5	8
High Street at Maple Street	#9	12
I-91 at Route 2 Rotary	#11	35
Conway Street at Devens Street	#13	3
Chapman Street at Pierce Street	#14	4
Main Street at Hope Street	#17	14
Route 2A at River Street	#22	15
Colrain Street at Elm Street	#27	6
Elm Street at West Street	#31	4
Deerfield Street at Cheapside Street	#32	6
Federal Street at Maple and Garfield Streets	#34	8
Colrain Road at College Drive	#38	7
Federal Street at Silver Street	#39	15
Deerfield Street at Meridian Street	#42	7
Bank Row at Olive Street	#44	4
Federal Street at Sanderson Street	#48	7

Source: Franklin Regional Council of Governments, July 11, 2012.

These locations have been depicted on **Figure 2-6** as High Crash Locations (HCL); see Transportation Issues section later in this element. While specific details for these locations were not readily available, the list provides a starting point for the town to review specific issues at each location to determine improvement opportunities.



Entrance to Route 2A just before the rotary and junction with I-91 with no pedestrian connection to opposite side of the street. Photo source: VHB.

In addition, MassDOT has also identified areas in Greenfield that are high crash cluster locations.⁴ These clusters have been identified as part of MassDOT’s Highway Safety Improvement Program (HSIP)⁵ in conjunction with the Federal Highway Administration (FHWA). The following two locations were identified; which are illustrated in **Figure 2-6**:

- High Crash Location for Bicyclists: Route 5/10 (Federal Street) between Ames Street and Leonard Street; see **Figure 2-6** for these locations. A total of six (6) incidents were reported along this section of roadway between the years of 2008 and 2010.

⁴ MassDOT Top Crash Locations map application www.services.massdot.state.ma.us/maptemplate/TopCrashLocations/

⁵ Massachusetts Strategic Highway Safety Plan (<http://www.mhd.state.ma.us/default.asp?pgid=content/traffic/shsp&sid=level2>)

Why Do Crashes Happen?

Rear-end collisions are often a result of congestion or vehicles stopping to allow vehicles to enter the mainline of traffic from a street or a driveway; also called “courtesy crashes”.

Angle type collisions typically occur when there are high side-street volumes trying to enter the mainline traffic stream.

Sideswipe collisions are often a result of on-street parking or vehicles attempting to pass vehicles attempting to turn into side streets or driveways

- High Crash Location for Pedestrians: Route 2A (Main Street) and Route 5/10 (Federal Street) between Conway Street and Pleasant Street. A total of 19 incidents were reported along this section of roadway between the years of 2008 and 2010.

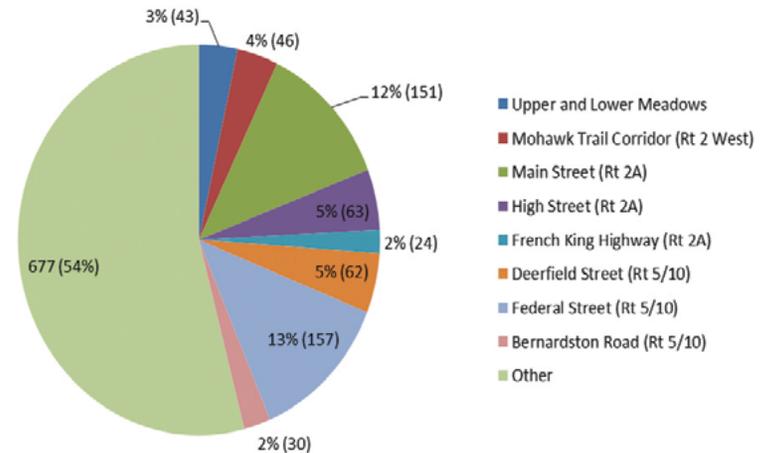
In addition to providing a summary of the high crash locations in Town identified by MassDOT and FRCOG, VHB developed a Town Wide Crash Chart to summarize the number of crashes along major corridors. This data was prepared by VHB using the MassDOT database for the most recent five years (2006 through 2010). According to this assessment Route 5/10 (Federal Street) had 157 total incidents and Route 2A (Main Street) had 151 total incidents; and were the two corridors that had the most incidents on record. The following provides some specific details on these incidents:

- Approximately 73% of the crashes on Federal Street were either rear-end (61 incidents) or angle (54 incidents) type collisions.
- There were 16 incidents along Federal Street that involved a pedestrian or bicycle.

- Approximately 72% of the crashes on Main Street were either rear-end (50 incidents) or angle (59 incidents) type collisions; it is noted that there were 11 incidents along Main Street that involved a pedestrian or bicycle.

The incidents along these corridors are likely due to: (1) high traffic volumes during the day and peak commuting hours; (2) a high number of access points (or driveways) along the corridor; which increases vehicle-conflicts; (3) lack of designated striped shoulders for bicycles; and (4) vehicle speeding.

Figure 2-3: Town Wide Crashes (by roadway)



Source: MassDOT database for the most recent five years (2006 through 2010)

Pedestrian and Bicycle Accommodations

Pedestrian and bicycle mobility are an important part of any sustainable transportation plan, as providing better access for non-motorized alternatives and encouraging these modes will help reduce vehicle miles traveled. In return greenhouse gas emissions can be reduced as the number of automobiles on the road decreases.



Pedestrian Access

The Town has approximately 80 miles of sidewalks, as illustrated in **Figure 2-4**. Most of these sidewalks are located in the more densely populated areas of downtown. The ability of Greenfield residents to commute and accomplish other errands via walking is limited once one moves away from one of the principal corridors within the town.

Through CDBG funds and Town appropriation, the Town is actively repairing and replacing sidewalks to allow for safer pedestrian access. Only 7% of residents in Greenfield walk to work; therefore, it is important to maintain and provide new sidewalks so that this number can increase. Maintaining sidewalks is also important since many of the bus stops are located along roadways that have sidewalks, so it is necessary to improve pedestrian connectivity to the residential areas. It is also important to note that the Town requires new sidewalks for new developments/ subdivisions that come before the Planning Board or Zoning Board of Appeals through the Major Development Review process. Just as important as sidewalks, pedestrian crosswalks and handicap accessible ramps are currently being reviewed.

Bicycling

There are a total of 44 miles of bikeways within Greenfield; which is depicted in FRCOG 2009 Franklin County Bike Map for Greenfield⁶; however, the majority of bikeways in town are classified as “on-road” or “shared” roadway routes that are located on low traffic roads. The major bike route within the town is called the Greenfield-Montague Loop Route; which is a shared roadway route that passes through the communities of Deerfield, Gill, Greenfield, and Montague. The on-road facilities that make up the Loop are identified by Franklin County Bikeway logo signs. In addition to this loop, bicycle accommodating shoulders are provided on a segment of Deerfield Street (Route 5/10) from the Deerfield border to the intersection of Deerfield Street and Washington Street in the north. **Figure 2-4** illustrates roadways in town that have a shoulder width of

Did You Know?

According to a 2010 study prepared by the Metropolitan Area Planning Council (MAPC), the average household in the Commonwealth drives more than 75-miles per day; which is based on data from over 149 cities and towns. This study identified Greenfield as a town where residents travel less on a daily basis than the average community surveyed. The average daily vehicles miles traveled (VMT) for residents of Greenfield was between 25- and 50-miles per day, with the lower range observed in downtown Greenfield.

What is VMT or Vehicle Miles Traveled?

A central goal of most sustainable transportation plans is to reduce overall Vehicle Miles Traveled (VMT) in a community or region; this refers to the total number of miles traveled in a vehicle in an area over a certain period of time. VMT is correlated with household density, access to transit, distance to shops/services, and proximity to employment, land use and income.

A collection of methods and strategies for reducing vehicle congestion and VMT is called a Transportation Demand Management (TDM) program. There are many strategies that can be considered as part of a TDM program; including but not limited to: improved transportation options, incentives to use alternative modes of transportation, parking management, and policy and institutional reforms.

6 More information on the FRCOG Bicycle Maps can be found at www.frcog.org/pubs/index.php

more than 5-feet; shoulders that are 5-feet or greater are determined by MassDOT to be sufficient for accommodating bicycle lanes.

There is one bicycle route in Greenfield that is off-road. This one-mile path is called the Riverside Greenway where access is provided via the Green River Swimming and Recreation area and behind the Greenfield Gardens apartment complex. This off-road path also connects to the Greenfield-Montague Loop Route.

It is also worth noting that the FRCOG recently purchased numerous bike racks and distributed them to interested businesses along Main Street, as well as at the John W. Olver Transit Center. This was done in an effort to promote both recreational cycling as well as cycling as a means of travel.



Franklin County Bikeway Sign. Photo source: Jimmy Emerson



Bicycle path to and from Green River Swimming and Recreation area. Photo source: VHB

Public Transportation

Bus and Para Transit Service

The 2013 bus services offered by the FRTA connect Greenfield to many towns in both Franklin County as well as Hampshire County to the south via five dedicated bus routes. Additionally, the FRTA also operates a Greenfield Community bus route that circulates through the city (**Figure 2-5**). It is noted that several changes to the existing FRTA fixed route bus services are proposed to go in effect in 2014; however they have not been finalized as of the date of this plan.

The John W. Olver Transit Center is a net-zero energy, multi-modal transit hub for FRTA bus service, as well as the local depot for Peter Pan and Greyhound intercity services. Besides the dedicated bus services, FRTA also provide elder, disabled, and other special transportation options for those in need. These services include transportation to medical appointments and paratransit services for those with disabilities.

Table 2-6 provides a breakdown of ridership by route for the five of the six routes that serve Greenfield. It is noted that approximately 53% of all passengers on the FRTA system use these routes. It is also noted that FRTA carries the fewest passengers of all the transit authorities in the Commonwealth.⁷

Passenger Rail

Railroads have a long and proud history in Greenfield dating back to the 1840s. The Town is located at the convergence of two important lines of the Boston and Maine Railroad, one running from Boston to New York State and the other running from Springfield to Vermont. Rail service through Greenfield is currently only used for freight; however, restoration of passenger service is scheduled to return December 2014 by extending the existing passenger rail service from the south through the Connecticut River Corridor. Amtrak's Vermonter line is proposed to be rerouted via this corridor, and the John W. Olver Transit Center would be the local connection, which would connect Greenfield to New York City as well as points north.

⁷ Based on data collected by FRCOG for the 2011 Regional Transportation Plan.

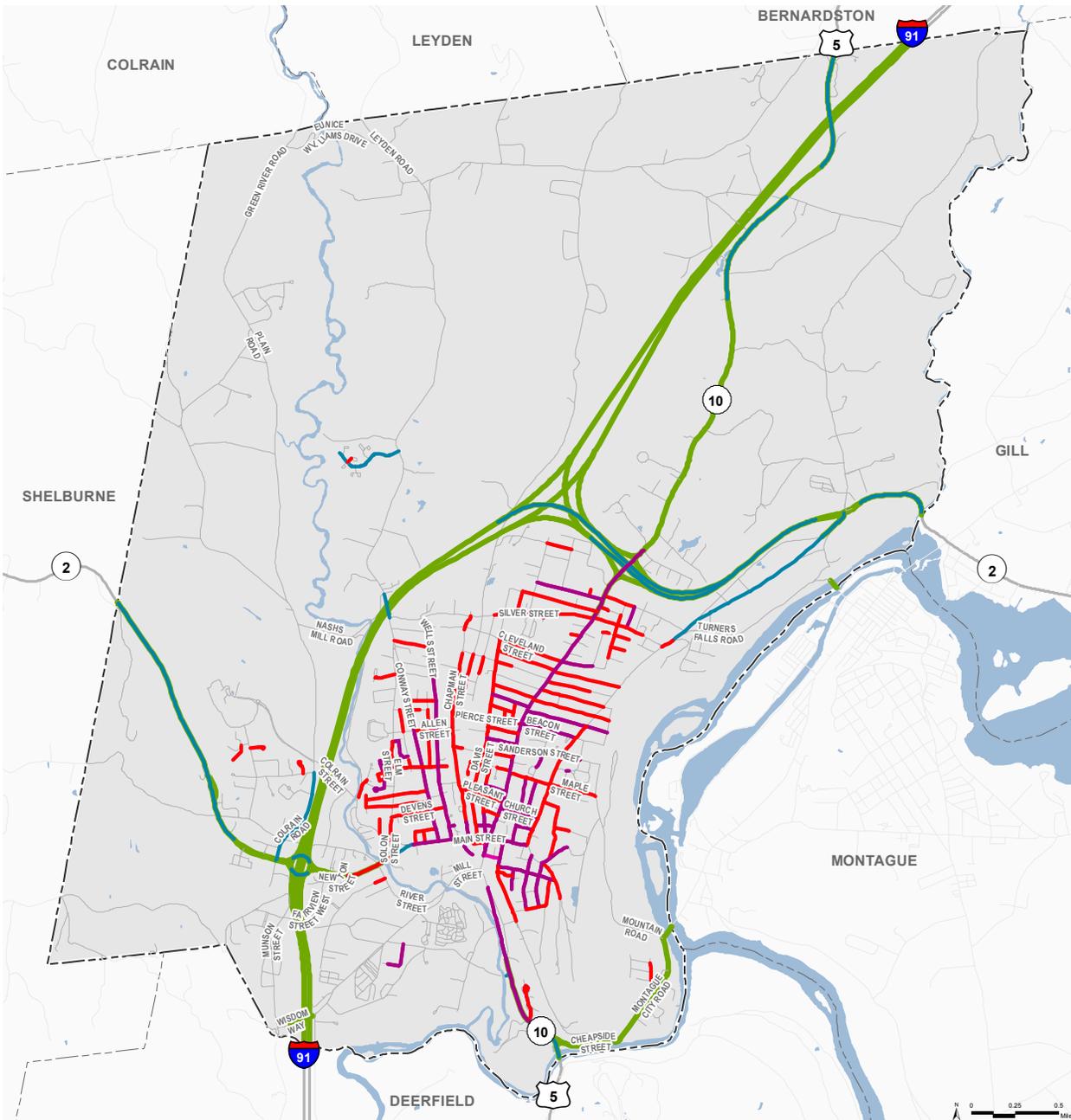


Figure 2-4: Existing Roadway Shoulder and Sidewalk Conditions

Legend

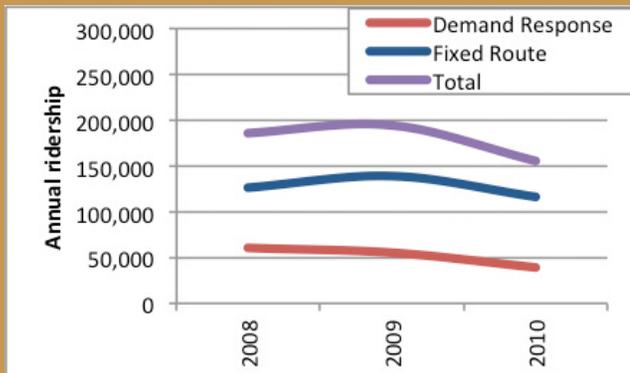
- Greenfield Town Boundary
- Surrounding Town Boundary
- Water
- Less Than 5' Wide Sidewalk
- Greater Than 5' Wide Sidewalk
- Shoulder (5' - 11' Wide)
- Town/Other Jurisdiction Road
- MassDOT Jurisdiction Road

VHB Vanasse Hangen Brustlin, Inc.

Data Source: MassGIS

Did you know?

The FRTA fixed-route and demand-response services carried more than 155,000 passengers in 2010, with over half (53%) of those passengers using the Greenfield routes. Based on data collected by FRTA and MassDOT in 2010, the annual ridership for the FRTA has decreased significantly since 2009.



Roadway Access Management

Managing the number of access points (or driveways) along a particular corridor is called access management. The goal of access management is to control (or manage) the location and number of driveways along a corridor. One measure used to determine if a corridor is managed adequately is to determine what is called “access density”; which is the measure of access points along a corridor over a certain distance. If a roadway has high access density, safety and/or mobility can be compromised. Five corridors in town were reviewed to

determine the access density. **Table 2-7** summarizes the access density for each.

Driveway spacing is generally determined by the posted speed limit. As shown in **Table 2-8**, a posted speed limit of 40 miles per hour would require a driveway spacing of approximately 530-feet, or a driveway density of 10 access points per mile (5280-feet / 530-feet). This spacing can depend on the type of roadway; for example, if a median is present in the roadway the access density could be greater since a median would limit the number of conflict points and it would provide a more efficient access.

Table 2-6: FRTA Greenfield Route Statistics

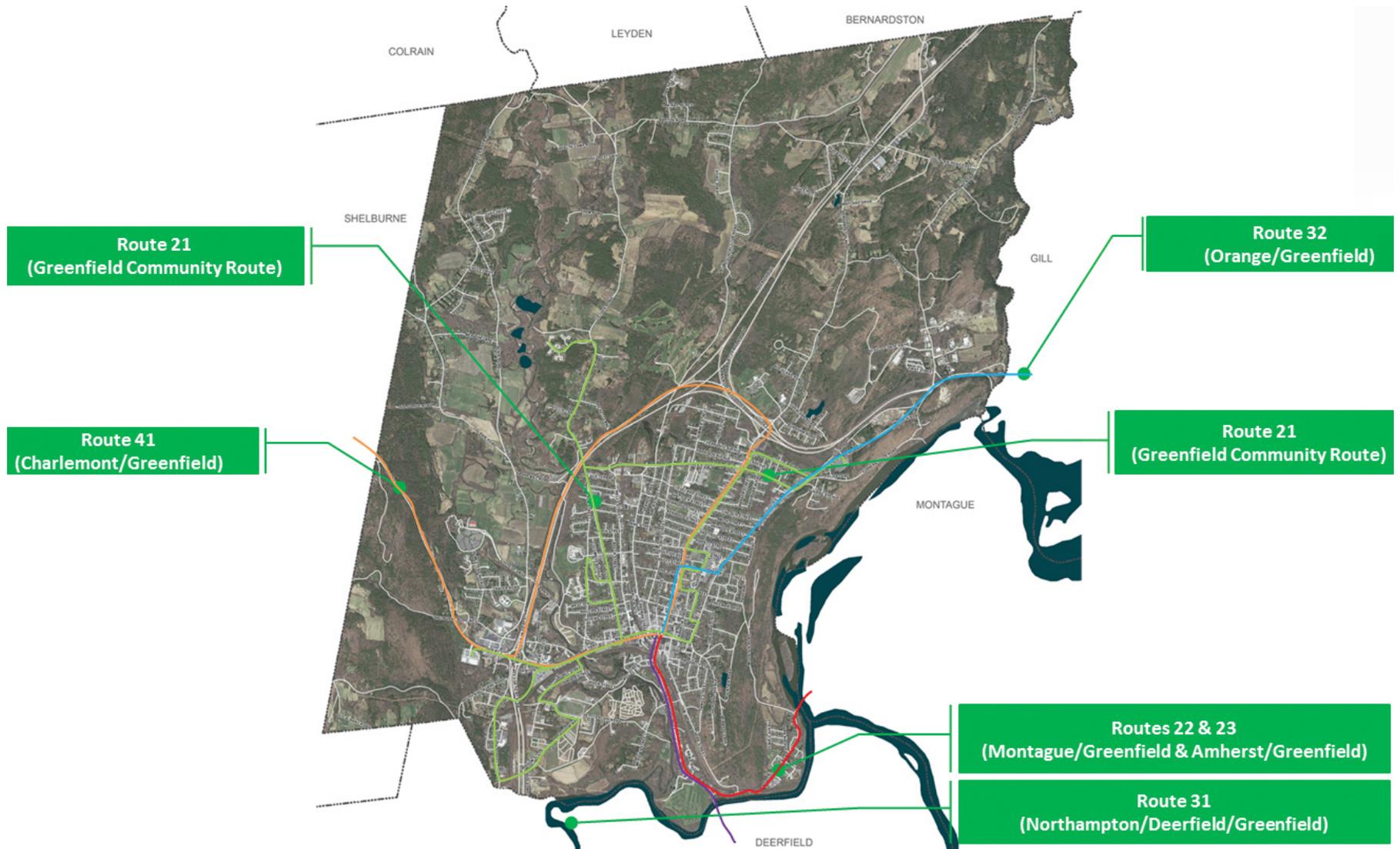
LOCATION	ANNUAL RIDERSHIP YEAR 2010	NUMBER OF WEEKDAY ROUNDTRIPS	FARE (ONE-WAY)
Route 21 (Greenfield Community Route)	25,687	9	\$1.00
Route 22 (Montague/Greenfield Route)	24,548	8	\$1.00
Route 23 (Amherst/Greenfield Route)	4,733	2	\$3.00
Route 31 (Northampton / Greenfield Route)	20,674	6	\$1.50
Route 32 (Orange/ Greenfield)	32,857	7	\$1.00
Route 41 (Charlemont / Greenfield Route)	6,014	4	\$1.50
	114,513		

Source: FRCOG, 2011 Regional Transportation Plan and data collected by FRCOG in 2009 and 2010.

Based on the tables above, each of the five principal corridors within the town has a high number of access points per mile. This high number of access points is likely a contributing factor to some of the issues that have been previously identified; however, further study is needed to consider the level of activity (or traffic generation) at each driveway. Many of the driveways along these roadways appear to be residential properties, which are not generating a lot of traffic.



Figure 2-5: Existing Public Transit Routes, 2013



Source: Produced by VHB with information from FRCOG and FRTA, August 2013

What is Access Management and what are the benefits?

The goal of access management is to control the location, number, spacing, and design of curb cuts/access points along a major roadway while promoting alternate access to parcels through supporting street systems and interconnecting driveways between parcels. Promoting improved access results in a roadway that operates more safely and efficiently for all users. Poor access management can result in the following consequences:

- An increase in vehicle crashes;
- Collisions involving pedestrians or bicyclists;
- Reduction in roadway efficiency;
- Unsightly commercial strip development;
- Degradation of roadside landscaping;
- Promotion of cut-through traffic on residential streets;
- An increase in commuting times;
- Costly improvements to correct poor access management; and
- Safe access concerns for businesses.

Access is generally based on the functional classification of a roadway, and typically access is most desired from either a collector roadway or local roadway.

Parking Infrastructure

The 2003 Downtown Master Plan provided a detailed overview of parking in the downtown area. In 2003, downtown Greenfield had approximately 2,400 parking spaces; which were divided into the following categories:

- 486 on-street parking spaces (metered and non-metered);
- 700 parking spaces in municipal parking lots; and
- 1,218 parking spaces in private parking lots.

Based on a 2010 parking inventory conducted by the Greenfield Department of Public Works, the Town managed 769 parking spaces in ten different parking lots surrounding downtown. It is unclear if the increase in parking spaces at municipal lots is a result of new construction or other factors.

According to the 2003 Master Plan, of the approximately 2,400 parking spaces, only 1,400 were occupied during the peak hour (or 58%). It was also noted that parking east of Federal Street was either approaching capacity or over capacity. In addition, parking spaces have been lost at the Courthouse and there has been an increase in demand for parking due to a larger courthouse and new transit station. Further study is need to determine occupancy rates throughout the downtown, as parking appears to be underutilized in some areas, but over utilized in others.

Greenfield is home to three electric vehicle charging stations, located at: (1) the Miles Street parking lot near Energy Park; (2) the Chapman & Davis streets municipal parking lot; and (3) the north end of the Greenfield Community College campus. There is one formal park and ride that located at 18 Miner Street; which is just off the rotary near Route 2 and I-91. This lot is identified by MassDOT as a park and ride lot and there are a total of 64 spaces.

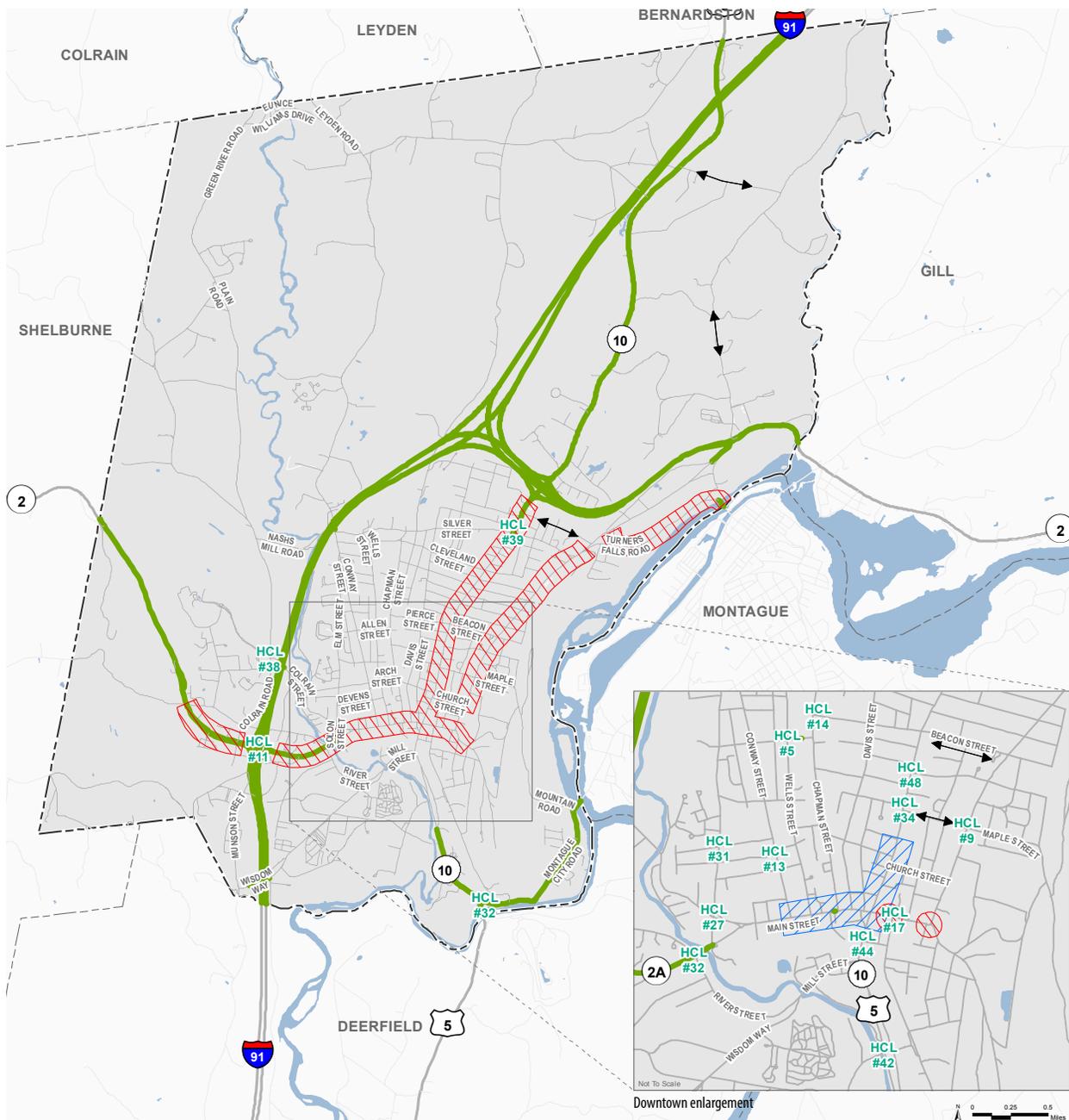
However, there are many potential or unofficial park and ride lots, as identified by FRCOG. These include one at the Route 2 and combined Routes 5/10 interchange, one in the Cherry Rum Plaza located near the Route 2 and 5/10 interchange, one in the Big Y grocery store, and one in the Home Depot.



Figure 2-6: Transportation Issues in Greenfield, MA

Legend

- Greenfield Town Boundary
- Surrounding Town Boundary
- Water
- 2010 HSIP Crash Location (MassDOT)
- HCL #xx High Crash Location (HCL/FRCOG Top 50)
- Corridor Congestion, Access, and/or Safety Issues
- Town/Other Jurisdiction Road
- MassDOT Jurisdiction Road



VHB Vanasse Hangen Brustlin, Inc.

Data Source: MassGIS

Table 2-7: Existing Access Points for Greenfield Arterial Roadways

ROADWAY	POSTED SPEED LIMIT	LOCATION	TOTAL NUMBER OF ACCESS POINTS	LENGTH OF ROADWAY (IN MILES)	ACCESS DENSITY (PER MILE)	ACCESS DENSITY (PER MILE TOTAL)
Main Street (Route 2A), between Miner Street to High St	25 mph	Northside	33	1.20 miles	27.5	67.5
		Southside	48		40.0	
Federal Street (Route 5/10), between Main Street and Route 2	30 mph	Eastside	64	1.68 miles	38.1	75.0
		Westside	62		36.9	
High Street (Route 2A), between Main Street and Silver St	20-40 mph	Eastside	48	1.42 miles	33.8	70.4
		Westside	52		36.6	
French King Highway (Route 2A), between Silver Street and Route 2	40-50 mph	Eastside	16	1.31 miles	12.2	25.9
		Westside	18		13.7	
Route Mohawk Trail (Route 2), between I-91 and Shelburne Rd*	35 mph	Northside	5	0.48 miles	10.4	20.8
		Southside	5		10.4	

Source: Based on observation data collected by VHB in 2013 and Google Earth 2011.

Notes: Roadways without signals, as well as signalized intersections are included in the totals.

*This segment of Route 2 has a raised center median with breaks at intersections to allow for access to developments on each side of the roadway.

Table 2-8: Driveway Spacing

POSTED SPEED	OPPOSITE SIDE OF ROADWAY (UNDIVIDED)		SAME SIDE OF ROADWAY (WITH MEDIAN)	
	REQUIRED MIN. DRIVEWAY SPACING	ACCESS DENSITY (PER MILE)	MINIMUM. DRIVEWAY SPACING	ACCESS DENSITY (PER MILE)
30 mph	370 feet	14	185 feet	28
35 mph	460 feet	11	245 feet	22
40 mph	530 feet	10	300 feet*	18
45 mph	670 feet	8	350 feet	15
50 mph	780 feet	7	450 feet	12

Source: NCHRP Report 348, Access Management Guidelines for Activity Centers, Table 7-8 page 63 (undivided) and TRB, Access Management Manual, Table 9-7, page 152 (median).

Transportation Issues in Greenfield

A number of transportation issues have been identified by the Master Plan Advisory Committee's Transportation Subcommittee and community stakeholders during outreach meetings and via virtual public input. Combined with the issues previously identified in this assessment, the following lists some of the critical transportation issues in town:

- Lack of non-vehicular facilities, need safer ways to move around town.
- Poor neighborhood connections to downtown.
- Too much reliance on the automobile.
- Congestion and safety issues along corridors, including: Main Street, Federal Street, Turners Fall Road, Mohawk Trail Route 2; and High Street.
- Cut-through traffic on local/residential roadways (or impact of the automobile on residential neighborhoods).
- Roadway, sidewalk and crosswalk conditions.



- Lack of gateways and aesthetics (streetscape).
- Lack of transit services, particularly on the weekend.
- There is a need to provide more on-road and off-road bicycle accommodations.
- Downtown parking and circulation needs to be reviewed
- Better transit services to/from towns farther away; example to/from the Springfield region or UMass Amherst
- High crash locations are present on numerous roadways and intersections.

Figure 2-6 locates some of the transportation issues.

Transportation Opportunities

Before strategies could be developed, general and specific transportation opportunities were identified. The following summarizes these opportunities:

General Opportunities

- Develop a way-finding signage program to encourage economic development.
- Improve gateway aesthetics and create outdoor areas for pedestrians.
- Enhance or improve bicycle accommodations on roadways.
- Provide new sidewalks and enhanced pedestrian crosswalks.
- Promote traffic calming techniques on neighborhood streets.
- Provide more off-road multi-modal options which incorporate benches, signs and maps.
- Improve bicycle parking and develop a bicycle sharing program.
- Improve deficient sidewalks.
- Improve transit frequency and bus stops.

- Implement low impact design techniques into infrastructure projects.
- Implement complete streets and safe route to schools initiatives.
- Improve sidewalk snow removal operations.
- Develop a transportation demand management (TDM) program (ride/ car sharing, carpooling, etc.).

Specific Opportunities

1. Address traffic congestion and safety concerns on Main Street, Federal Street, Turners Fall Road, Colrain Road, Hope Street, and High Street.
 - a. Perform a Road Safety Audit (RSA) on roadways or intersections.
 - b. Prepare a corridor or intersection study along these roadways including intersections and collect and review new traffic volume and crash data.
 - c. Develop specific improvement options that include Complete Street initiatives (such as bicycle accommodating shoulders, sidewalks, crosswalks, etc.), traffic calming initiatives (such as neckdowns, speed humps, etc.), and/or access management techniques (such as curb cut consolidation, internal shared driveways, or increasing driveway spacing).
4. Implement improvements to Main Street.
 - a. Collect vehicular and pedestrian data during the peak commuting hours to assess circulation improvements and pedestrian walking routes using multi-modal assessments.
 - b. Perform an on-street and off-street parking study that reviews parking utilization and turnover ratios.
 - c. Develop a corridor plan that reviews various roadway cross section

guidelines (parallel parking, bike lanes, reverse direction opportunities, grassed medians, etc.) and identifies impacts to on-street parking and roadway circulation.

- 4.** Improve traffic flow and safety at Main Street/Colrain Street, and at Main Street/High Street.
 - a. Collect updated traffic count data and review the latest 5-years of crash data from the police department.
 - b. Perform multi-modal assessments at each intersection and identify intersection improvements such as crosswalk enhancements, traffic signal timing changes, or lane changes/additions.
- 3.** Monitor cut-through traffic on Wildwood Avenue, Beacon Street, Riddell Street, Sanderson Street, and Maple Street.
 - a. Perform annual daily/hourly traffic counts at streets that experience cut-through traffic and determine if cut-through traffic is increasing.
 - b. Implement traffic calming techniques such as speed humps or neckdowns to deter traffic from cutting through side streets.
- 3.** Improve bicycle and pedestrian accommodations on Leyden Road, Mill Street, Montague City Road, and Turners Falls Road.
 - a. Review improvement options to construct wider shoulders for bicycles or provide new sidewalks to provide better connectivity in the community.
 - b. Seek funding from MassDOT or Safe Routes to School to implement necessary improvements.
- 3.** Improve transit operations and increase service.
 - a. Work closely with the FRTA to expand the town loop bus route to serve more residents more frequently.
 - b. Work closely with the FRTA to identify areas where bus shelters or waiting areas can be improved. Seek funding through the TIP for

transit activities.

- 3.** Create a bike master plan
 - a. Perform a bicycle study that evaluates locations for expanding the on- and off-road paths.





Implementation: Goals, Strategies, and Actions

In order to create a sustainable transportation system in Greenfield, we identified goals and strategies that create a fuel efficient, resilient transportation network that includes sidewalks, bike lanes, transit options, and is accessible to everyone, no matter where they live. We understand that this network is not limited to travel for residents within Greenfield. Our strategies underscore that residents and visitors should be able to travel into and out of Greenfield safely and efficiently using a variety of transportation methods. And lastly, a sustainable transportation system needs to have minimal impacts on the environment and must be resilient to changing climate conditions.



goal

1

Greenfield will have welcoming gateways as well as safe, efficient, and attractive travel corridors.

STRATEGY 1

Develop a beautification and informational plan, including a unified sign policy.

This strategy is aimed to seek opportunities to use streetscape, hardscape, and/or landscape enhancements to create a sense of place at key nodes throughout the community. Signage should provide guidance to key community features for way-finding purposes. Enforcement and implementation shall be established by existing committees and/or the planning board.

Implementation Actions:

- a. Support welcoming signage, public art, and the promotion of special events at gateways.
- b. Reaffirm Corridor Design Guidelines adopted by the Planning Board in 1993.
- c. Enhance tree canopy along streets, adopting Tree Committee recommendations of June 2013.
- d. Reduce/prioritize roadway signage to improve appearance and effectiveness.
- e. Develop a way-finding signage program to promote economic development.
- f. Improve signage to inform and encourage a higher usage rate of existing parking off Main Street.



Green corridors reduce impervious surface and enhance our streets.

STRATEGY 2

Implement Complete Streets Initiatives.

Complete Street policies shall be incorporated into all intersection or roadway improvement projects regardless of whether it is a public or private partnership. A complete street is one that provides safe and accessible options for all travel modes (foot, bike, transit and automobile) and for all ages and abilities. State and federal guidelines shall be followed to ensure that roadway cross sections (lane and shoulder width, etc.) are met for the roadway's specific functional classification and/or jurisdiction.

Implementation Actions:

- a. Incorporate a Complete Streets Policy as part of the Major Development Review Process.
- b. Establish a standard width of 11 feet for auto-travel lanes, with the option of using 10 feet where conditions allow.
- c. Identify intersection/roadway improvements using multimodal assessment methodologies approved by Greenfield DPW and/or MassDOT.
- d. Incorporate more detailed traffic impact and access study guidelines into the Major Development Review process.



Complete Streets incorporate design elements that allow all users to safely travel on our streets.



goal 1 [continued]

Greenfield will have welcoming gateways as well as safe, efficient, and attractive travel corridors.

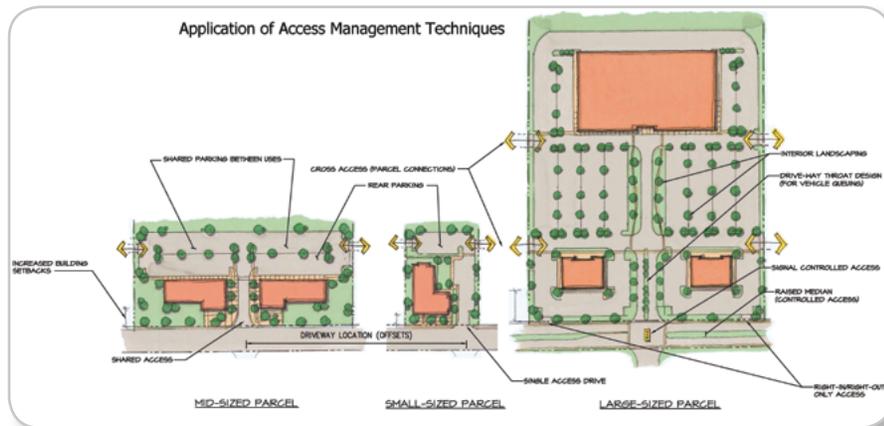
STRATEGY 3

Implement Access Management Techniques.

Access Management Techniques shall be incorporated into any intersection or roadway improvement project regardless of whether it is a public or private project, although it may be easier to implement access management techniques when larger private developments are reviewed during the Major Development Review process. Access management techniques could include curb cut/driveway consolidations, internal parcel shared access, or adequately spacing driveways based on the classification and observed speed limit for the roadway.

Implementation Actions:

- a. Improve traffic flow along major corridors by reducing vehicle-conflict points; through driveway consolidation and internal shared driveways.
- b. Reduce vehicle-crashes town-wide and on major corridors and at Highway Safety Improvement Program cluster areas identified by MassDOT.



Example of Access Management techniques for a variety of parcel sizes.

goal 2

Downtown will be safe for all modes of transportation, with smooth traffic flow and sufficient parking, including a municipal parking garage.

STRATEGY 4

Implement a Downtown Transportation Improvement Plan, including parking and traffic flow, for all modes of transportation.

The downtown has been a subject of many conversations to improve and enhance all modes of transportation. On-street parking needs to be reviewed to confirm utilization and turnover ratios so that parking space changes and a new parking garage can be justified. Further study is needed to provide a better assessment of the impacts associated with any improvements in downtown, and to obtain key stakeholders support.

Implementation Actions:

- a.** Perform an updated downtown parking assessment for cars and bicycles and make it easier to travel downtown via non-automotive modes.
- b.** Continue to seek funding for a parking garage on Olive Street to serve visitors, residents, the courthouse, and the Transit Center, incorporating pedestrian access from Transit Center to level of Main Street.
- c.** Add bike lanes or shared use markings (sharrows) along Main Street and throughout the downtown area.
- d.** Support pedestrian safety and walking areas by providing and maintaining streetscape amenities such as: a quality tree canopy, benches, outdoor dining, and improved crosswalk safety.
- e.** Encourage transit opportunities with frequent and convenient stops at downtown locations.
- f.** Improve vehicular flow and safety by seeking safe ways to reverse direction on Main Street.



Woburn Downtown street improvement - Before



Woburn Downtown street improvement - After



goal

3

Neighborhoods will enjoy an improved quality of life by a reduction in the negative impact of vehicular traffic.

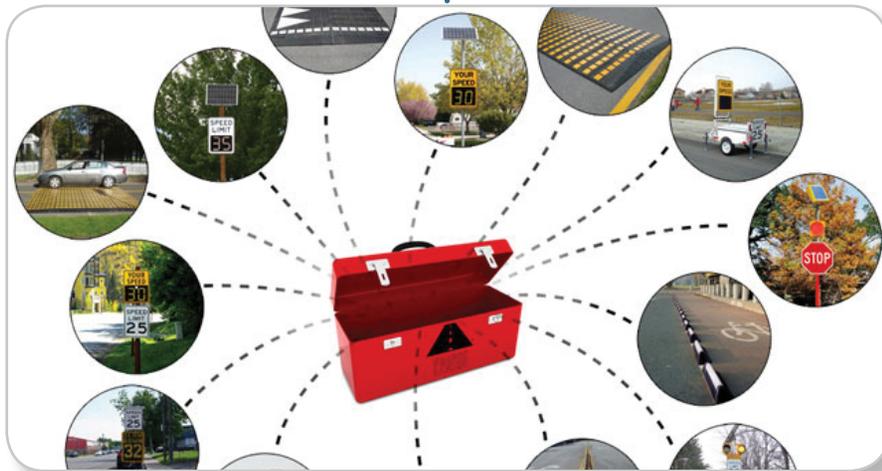
STRATEGY 5

Implement Traffic Calming Initiatives.

Traffic calming initiatives can have a significant impact on how drivers travel a roadway. Further studies are needed throughout the community to identify traffic calming techniques, as some techniques may not work well on certain roadways. Traffic calming techniques may include installation of speed humps, raised crosswalks, neck downs and textured pavements.

Implementation Actions:

- a. Work with neighborhoods to identify and implement traffic-calming techniques to improve safety on neighborhood streets, such as: speed monitors, 4-way stop signs, traffic signals, rumble strips, speed humps, roundabouts, one-way street sections, etc.
- b. Use information (such as speed monitor data) to adjust enforcement and public education efforts.
- c. Endorse House bill #3391 which would reduce the speed limit to 25 MPH in thickly settled areas (unless otherwise posted).
- d. Develop and promote a catchphrase to capture the spirit of protecting neighborhood quality of life, such as “Be a good neighbor, drive gently.”



A variety of tools, such as reduced speed zones and speed humps, can calm traffic in specific areas.

goal

4

The entire community will have enhanced walkability.

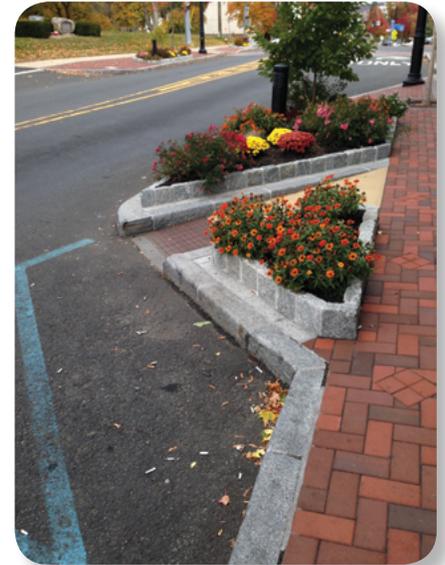
STRATEGY 6

Develop a Townwide Walkability Plan.

The automobile is the primary mode of transportation in Greenfield with approximately 85% of resident workers traveling by car. The town shall continue to enhance sidewalks and crosswalks and increase pedestrian connectivity to all residential neighborhoods from major nodes in town or the downtown.

Implementation Actions:

- a.** Increase quality and quantity of sidewalks to improve continuity; upgrade existing sidewalks to meet or exceed disability access standards.
- b.** Investigate the installation of YIELD TO PEDESTRIAN signs in crosswalks on Main Street, Federal Street and High Street.
- c.** Explore additional crosswalk safety methods, such as decorative treatments (paint patterns, asphalt imprints, etc.), LED warning systems, speed monitors, etc.
- d.** Develop a more stringent snow removal program.
- e.** Develop neighborhood trails and waterfront walkways with benches, signs, and trail maps/markers/themes at key locations.
- f.** Make walking more appealing by providing trees, vegetation, and benches; support businesses to create more interesting outdoor spaces to encourage pedestrian traffic.
- g.** Explore additional crosswalks and crosswalk safety methods, such as decorative treatments (paint patterns, asphalt imprints, etc.), LED warning systems, speed monitors, etc.
- h.** Make walking more appealing by providing trees, vegetation, and benches; encouraging and supporting businesses to create more interesting outdoor spaces; and promoting the health benefits of walking to encourage pedestrian traffic



Access from the sidewalk to a parking space



goal 4 [continued]

The entire community will have enhanced walkability.

STRATEGY 7

Adopt initiatives from current federal and state programs to enhance walkability.

The Town shall maintain communication with MassDOT and the FRCOG to stay informed on new policies and directives that promote walkability and improve pedestrian connectivity to all residential neighborhoods from major nodes in town or the downtown.

Implementation Actions:

- a. Encourage initiatives in the MassDOT/Federal Highway Administration’s Complete Streets Programs
- b. Encourage initiatives in MassDOT’s Green DOT Policy
- c. Implement Safe Routes to School; which is a comprehensive federal program for K-8th graders, and implement “Walking Bus” initiatives to increase non-automotive travel to and from school.



MassDOT launched GreenDOT to comprehensively “green” the state transportation system.

goal 5

Our town will be a place where people of all ages can safely use bicycles for transportation and recreation.

STRATEGY 8

Create and implement a Greenfield Bikes Initiative Program.

This strategy shall begin with establishing a bike committee that will oversee the development of a bike master plan. As part of this master plan further studies will be needed to develop improvement plans that accommodate bicyclists and are used to build consensus with key stakeholders before implementation.

Implementation Actions:

- a. Develop a town wide bike master plan that includes bike lanes on all major corridors of sufficient width.
- b. Establish a Bicycle Committee.
- c. Place “Share the Road” signs (and appropriate pavement markings/“sharrows”) on all major corridors that can’t accommodate bike lanes.
- d. Create bicycle boulevards (“streets with low motorized traffic volumes and speeds, designated and designed to give bicycle travel priority” – Urban Bikeway Design Guide)
- e. Endorse and disseminate the “SameRoadsSameRules” driver/cyclist education campaign (created by the Massachusetts Bicycle Coalition in partnership with MassDOT) including outreach to drivers’ education programs and the Registry of Motor Vehicles.
- f. Encourage the development of a bike-share program; develop a feasibility study to justify and locate areas to implement bike-share program.



A dedicated bike lane allows bicyclists to safely travel alongside automobiles.



goal

6

There will be dramatically increased ridership of all forms of public transportation, which will offer expanded service and accessibility.

STRATEGY 9

Increase collaboration with public transit and improve connections between public transit and other modes of travel.

Collaboration is the key to success for this strategy as public transit services have limited funding available to expand new services and enhancements. This strategy goes hand and hand with other strategies such as improving sidewalk connectivity for residents so that better access to transit can be provided. Also, transportation improvements at intersections are key to keep busses moving and on schedule.

Implementation Actions:

- a. Create a Transit Committee.
- b. Support and participate in marketing campaigns for FRTA and passenger rail services.
- c. Support increase in FRTA amenities (labeled stops, bus shelters, interactive and Wi-Fi technology).
- d. Support increase in frequency of in-town bus route.
- e. Support the resumption of evening and Saturday FRTA service.
- f. Explore creating ordinance mandating vehicles yield to buses pulling out into traffic.
- g. Increase opportunities to come and go from Greenfield.
- h. Build municipal parking garage as multi-modal connection to trains/buses.



Bike racks on transit allow bicyclists to travel further distances without driving a car.

goal 7

Fuel use, climate change emissions, and air pollution by vehicles will be reduced.

STRATEGY 10

Develop a Transportation Demand Management (TDM) Program.

The TDM Program is an approach that emphasizes the movement of people and goods rather than vehicles, increasing efficiency by expanding travel options and encouraging a shift from single-occupant vehicles. This can be encouraged through the land development review process when new developments are proposed in Town.

Implementation Actions:

- a. Work with businesses to develop shared parking areas and connections; which could allow developments to increase building or landscape areas with less parking; which would normally make a site non-conforming to zoning.
- b. Encourage employers to offer telecommuting to their employees.
- c. Ensure that non-motorized travel and public transit are addressed in every development and re-development project.
- d. Facilitate car-pooling to reduce single occupancy vehicles (for example, through information about electronic ride-sharing services, creating ride-share lots).
- e. Lead a public education campaign about the health, economic, and environmental benefits of people-powered transport, public transit, car-pooling and ride-sharing, using low-emission and fuel-efficient vehicles, and anti-idling.



Carpooling can also help to increase bike and transit use while reducing dependence on automobiles.



Telecommuting not only reduces travel time and cars on the road but also helps to improve work/life balance.



goal 8

Transportation infrastructure will have minimal environmental impact wherever possible and will be made resilient to our changing environment.

STRATEGY 11

Develop a Green Infrastructure Program.

A Green Infrastructure Program presents an opportunity to improve water quality by using “green infrastructure,” such as rain gardens and permeable pavements, and sunken planted medians to optimize the existing ecological system.

Implementation Actions:

- a. Reduce impermeable surfaces for redevelopment projects where design allows which results in less stormwater runoff.
- b. Increase the use of green infrastructure to improve water quality.
- c. Plant and maintain trees to reduce heat-island effect of paved surfaces and to improve the walkability and aesthetics of our developed areas.
- d. Upgrade transportation infrastructure to be more resilient during severe storms and weather patterns.
- e. Pursue construction of zero-net-energy buildings and collaboration between users when rebuilding/updating/constructing facilities for greater efficiencies of scale.



Green Infrastructure can be incorporated into parking lot.

Source of Implementation Illustrations:

- Green Corridor design - <http://greencorridor.ca/>
- Complete Streets design - National Association of City Transportation Officials
- Access Management Plan - VHB
- Woburn Downtown street improvement - <http://www.mass.gov/hed/docs/dhcd/cd/mdi/2012woburn.pdf>
- Traffic calming tools - <http://traffilogix.com/>
- Access for handicap from sidewalk - VHB
- Mass GreenDOT Initiative logo - www.massdot.state.ma.us
- Bike lane - www.whiteflint.org
- Bus and biker - MRTMA
- Carpooling statistics - carpooling.com
- Telecommuting - CNN
- Green Infrastructure in parking lot - EPA



ECONOMIC DEVELOPMENT

vision



Greenfield will be a living example of how social, economic and environmental sustainability maintains a creative and resilient community, with living wage jobs, a bustling downtown, a comprehensive local food system, and an excellent quality of life for diverse people of all ages. Its walkable and bikeable downtown, cultural activities, shopping options, events, recreational opportunities in the surrounding hills, rich agricultural land, locally-produced energy, market-rate housing, quality schools and colleges, jobs, restaurants and services draw people to live, work and visit Greenfield, and there is a robust transportation system that brings people to us.



Economic Development

Introduction

Economic development is a broad plan component that generally relates to policymaking and other actions designed to support the economic health and vitality of an area or community. A variety of issues of concern can fall under the umbrella of economic development, such as expanding the tax base, increasing the number of jobs, diversifying business activity, attracting new businesses, enhancing economic equity, improving workforce skills and marketability, or providing supportive infrastructure, among others.

Greenfield recognizes that a more sustainable community and future are not possible without a vibrant and resilient economy. Like many towns in the Northeast, the loss of traditional manufacturing jobs has limited the availability of good-paying jobs and eroded the industrial tax base. Nevertheless, there are existing small manufacturers providing high wage employment in Greenfield and we recognize that planning for the future involves nurturing these existing companies and providing additional space for new businesses to locate here and existing manufacturers to expand. Maintaining the economic security of the town itself, its households, and its business enterprises is critical in maintaining the quality of life that is so important to Greenfield residents, and for promoting adaptations and new concepts that can help push the town toward a greener future. At the same time, Greenfield recognizes that its economic development needs to be sustainable – complementing rather than compromising the town’s social and environmental health. The surrounding natural and agricultural bounty that helps make Greenfield a great place to live, also contributes to making it a great place to do business.

Our Economic Development Driving Forces

Our vision is driven by the fact that Greenfield possesses an economic engine made up of many assets enjoyed by its citizens and the greater Franklin County community. It is the county seat, housing most of the state and federal offices that benefit the region. We are surrounded by beautiful natural areas that stretch from the eastern ridge, forests, trails and parks to farmlands and the rivers in the west. This natural setting offers many recreational opportunities. We have a viable hospital and healthcare system serving the city and surrounding communities and an affordable community college that provides higher education and innovative programs to prepare our citizens for the workforce. There is an emerging and authentic downtown center that offers shopping, entertainment, eating establishments, and professional offices.

To get caught up in an argument over whether sustainable development is more about the environment or about people is to miss the point: it is the connection of humans, their economies and societies to the ecosystems that support them which defines sustainable development.

Source: Tracey Strange and Anne Bayley, “Sustainable Development,” Organization for Economic Cooperation and Development.



goals

In Ten Years...



1

Greenfield is the cultural, shopping and services center of Franklin County.



2

Greenfield provides living-wage jobs and a resilient and sustainable local economy to support and expand traditional and innovative business development.



3

Greenfield has a vibrant, dynamic, walkable downtown.



4

Greenfield is a magnet for 10-15% growth in new residents who support the local economy.



5

Greenfield provides educational and financial resources for sustainable economic development from both public and private entities.



6

Greenfield reduces the amount of financial resources leaving our community.

2001 Greenfield Master Plan Economic Development Goal

Seek a vibrant and diversified economic base that provides quality employment, offers a wide range of goods and services, creates a strong tax base, and fits within Greenfield's desired land use pattern.



The Economic Development goals and strategies seek to enhance our existing assets while improving upon some known deficiencies to achieve a sustainable economy. Greenfield should offer a broader range of shopping options and improve access to more market-rate housing, especially in and around its downtown core. In some professions and trades, job opportunities are limited. Inventive strategies to increase job diversity and availability, including in the clean energy, creative economy, and food industries, are important to creating a viable, sustainable future for the Town. We will continue to reduce our extensive use of fossil fuels. We will seek ways to incentivize redevelopment and infill of unused space in Greenfield for a wide range of economic development opportunities. Achieving a diverse, but unified plan for our future economic development is critical at this time.

Assessment of Greenfield’s Economy

Demographic and socioeconomic characteristics provide a quantifiable baseline against which to measure and understand future progress and identify potential issues related to labor force or business conditions. At the same time, certain intangible characteristics are also important in driving economic development.

Population

In contrast to the state as a whole, which experienced modest growth during the first decade of the 2000s, overall population remained generally static in the Franklin County region. However, as shown in **Table 3-1**, the Town of Greenfield experienced a small decrease in its residential population over the past ten years. This pattern is not unusual, unfortunately, with many older community centers across the country losing population to outlying areas. However, as the county seat and a traditional hub of economic activity located at the junction of

Routes 2 and I-91, and with evidence of changing location preferences among the millennial generation and aging empty-nesters, Greenfield is positioned to retain and capture a larger share of the county’s resident population.

Table 3-1: Population Change in Greenfield, Franklin County and the State

	2000	2011	% CHANGE
Greenfield	18,168	17,565	-3.3%
Franklin County	71,535	71,495	-0.1%
Massachusetts	6,349,097	6,512,227	2.6%

Source: American Community Survey 2007-2011 5-Year Estimates and U.S. Census 2000 SF3.

An increased residential population in the core would help support local businesses and economic activity. In addition to providing a local pool of potential customers who are likely to patronize downtown businesses, a larger population in the core can help create a “critical mass” of activity in the downtown that attracts new businesses and other visitors. Generating a sense of excitement and action – that Greenfield’s downtown is the place to meet friends, to go for individual and community celebrations, to get a good meal, to take care of errands, to people watch – will be important in facilitating the type of downtown experience and characteristics (increased retail offerings, expanded hours) that residents have indicated they desire.

Table 3-2: Income and Poverty

INCOME/POVERTY	2000			2007-2011		
	GREENFIELD	FRANKLIN COUNTY	STATE	GREENFIELD	FRANKLIN COUNTY	STATE
Median HH Income	\$33,110	\$40,768	\$50,502	\$46,018	\$52,246	\$65,981
Per Capita Income	\$18,830	\$20,672	\$25,952	\$26,229	\$28,313	\$35,051
% Population in Poverty	14.0%	9.4%	9.3%	17.2%	11.9%	10.7%
Change in Median HH Income 2000-2011				39%	28%	31%

Source: 2007-2011 American Community Survey 5-Year Estimates and U.S. Census 2000 SF3.

Income

The median household income in Greenfield was reported at approximately \$46,018 in 2011. This ranks below both the county and state medians (**Table 3-2**). Greenfield's per-capita income similarly tracks lower than the county and state values. However, Greenfield's rate of household income growth over the previous decade was higher, helping to close the income gap between Greenfield residents and the rest of the county and state. While this suggests an improving economic outlook, the lower income generation in Greenfield contributes to an elevated poverty rate of approximately 17% compared to the state-wide average of 10.7%.

Work Characteristics of Greenfield Residents

As of June 2013, Greenfield had a reported unemployment rate of 7.7% (non-seasonally adjusted), which was fairly comparable to the national rate (7.6% seasonally-adjusted, 7.8% non-adjusted) and somewhat higher than the state average (7.0% adjusted, 7.4% non-adjusted).¹ The most recent reporting from the American Community Survey² indicates approximately 9,608 residents are

participating in the labor force (approximately 55% of the total population). This participation rate is comparable to the statewide average (approximately 56% of the total population.) With comparable employment and workforce participation rates, the elevated poverty rate suggests that a substantial portion of Greenfield's local population is employed in lower pay occupations that may not provide a living wage.

Education, healthcare and social services employ the largest number of Greenfield residents by a large margin. Manufacturing and retail trade are the next largest industry employers for Greenfield residents. There is also a substantial cluster of employment within the arts, entertainment, recreation and accommodation sector, which is only slightly smaller than the manufacturing sector.

As with many other communities, the local manufacturing base has eroded somewhat in Greenfield. Over the last decade, the number of residents employed in the manufacturing sector declined by over 20%, as shown in **Table 3-3**. However, substantial employment growth occurred during that period in the education services and health care (145 employees or 5.8%) and the arts, entertainment recreation, and accommodation sectors (253 employees or

¹ Seasonal adjustment accounts for fluctuations based on the influences of factors such as weather, holidays, and other recurring seasonal events. This permits easier comparison of trends. Seasonally-adjusted data are not available for smaller geographies (e.g., municipality).

² 2007-2011 American Community Survey 5-Year Estimates.



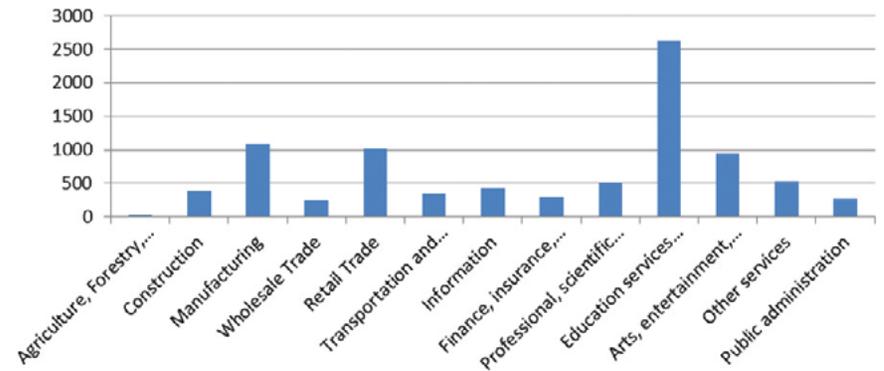
36.8%), and the demand for manufacturing employees with 21st Century skills is higher than available workers. In addition, as shown in **Figure 3-1**, Education Services rank as the top employment sector in Greenfield, as of the most recent American Community Survey results. The discussions during the master planning process indicated that there is a substantial population of local artists and craftsmen who may make up a portion of arts, entertainment and accommodations sector. There may be opportunities to make these local artisans and their work a more visible presence and enhance the Town’s image as the economic and cultural center of the county.

Table 3-3: Employment by Industry in Greenfield, MA

	2000		2007-2011		% CHANGE
Agriculture, Forestry, and Mining, etc.	42	0%	33	0%	-21.4%
Construction	355	4%	388	4%	9.3%
Manufacturing	1,377	16%	1,089	12%	-20.9%
Wholesale Trade	272	3%	244	3%	-10.3%
Retail Trade	1,093	12%	1,017	12%	-7.0%
Transportation and warehousing and utilities	355	4%	343	4%	-3.4%
Information	345	4%	428	5%	24.1%
Finance, insurance, real estate	431	5%	296	3%	-31.3%
Professional, scientific and management and administrative services	565	6%	511	6%	-9.6%
Education services and health care and social assistance	2,482	28%	2,627	30%	5.8%
Arts, entertainment, recreation, accommodation	687	8%	940	11%	36.8%
Other services	507	6%	531	6%	4.7%
Public administration	355	4%	275	3%	-22.5%

Source: 2007-2011 American Community Survey 5-Year Estimates and U.S Census Bureau 2000 SF3

Figure 3-1: Employment by Sectors in Greenfield, MA



Source: 2007-2011 American Community Survey 5-Year Estimates

Educational Attainment

As reported by the American Community Survey, over 91% of Greenfield’s adult population over 25 years of age has completed high school (**Table 3-4**). This compares favorably to the national average of 85.9% and the state average of 88.9%. However, the number of residents with college or graduate school education is slightly below the national average of 28.5%, at 26.5%. In addition, Massachusetts is a highly educated state, with nearly 39% of its adult residents having earned a bachelor’s degree. Greenfield lags both the state and Franklin County in terms of residents with a college education, both at the undergraduate and graduate/professional school level. This gap may put Greenfield residents at a disadvantage when competing for higher-paying jobs in the region.

Table 3-4: Educational Attainment (Population 25+), Greenfield, MA

LEVEL OF EDUCATION	GREENFIELD	FRANKLIN COUNTY	STATE
No Diploma	8.8%	8.8%	11.1%
High School Graduate	33.0%	29.6%	26.3%
Some College, No Degree	20.2%	19.3%	16.2%
Associate's Degree	11.5%	10.0%	7.6%
Bachelor's Degree	16.0%	18.3%	22.1%
Graduate or Professional Degree	10.5%	14.0%	16.6%
High School Grad or Higher	91.2%	91.2%	88.9%
Bachelor's Degree or Higher	26.5%	32.3%	38.7%

Source: 2007-2011 American Community Survey 5-Year Estimates

In addition to a potential disconnect for employment opportunities that require collegiate or graduate-level education, there may be gaps in vocational training for skilled labor. It was noted during the Master Plan Economic Development Subcommittee meetings that several businesses in town, including manufacturers, have reported that they have employment opportunities but are unable to find workers with the appropriate skills. This is consistent with recent survey findings presented by the Dukakis Center for Urban and Regional Policy and its reporting on statewide manufacturing trends.³

While current educational attainment may be a barrier to employment for some residents, Greenfield is home to several resources that can be utilized to improve worker education, skills and marketability. Greenfield Community College offers a variety of associate degree and certificate programs, including the relatively new Renewable Energy/Energy Efficiency and Farm and Food Systems programs. The Franklin-Hampshire Regional Employment Board operates a One-Stop Career Center in Greenfield and also sponsors training and placement

³ Center for Urban and Regional Policy, Northeastern University, *Staying Power: The Future of Manufacturing in Massachusetts*, 2008.

activities. These community college and technical assistance organizations may be able to further target training programs to help fill those jobs with local manufacturers where a gap in skilled labor has been identified.

The Franklin County Community Development Corporation (CDC) is also headquartered in Greenfield and provides a number of services to help launch and grow businesses. The CDC provides business lending, management counseling, workshops and training. In addition, it operates an incubator space, the Venture Center, in downtown Greenfield and the Western Massachusetts Food Processing Center.

Greenfield Employment Characteristics

As reported by the Massachusetts Executive Office of Labor and Workforce Development, Greenfield is home to approximately 750 business establishments. While the number of establishments in town has grown, Greenfield experienced fairly steady job losses from 2001 to 2009. Employment has rebounded slightly since then, but as of the end of 2012 remained at approximately 9,893, or approximately 6% below the 2001 figure.

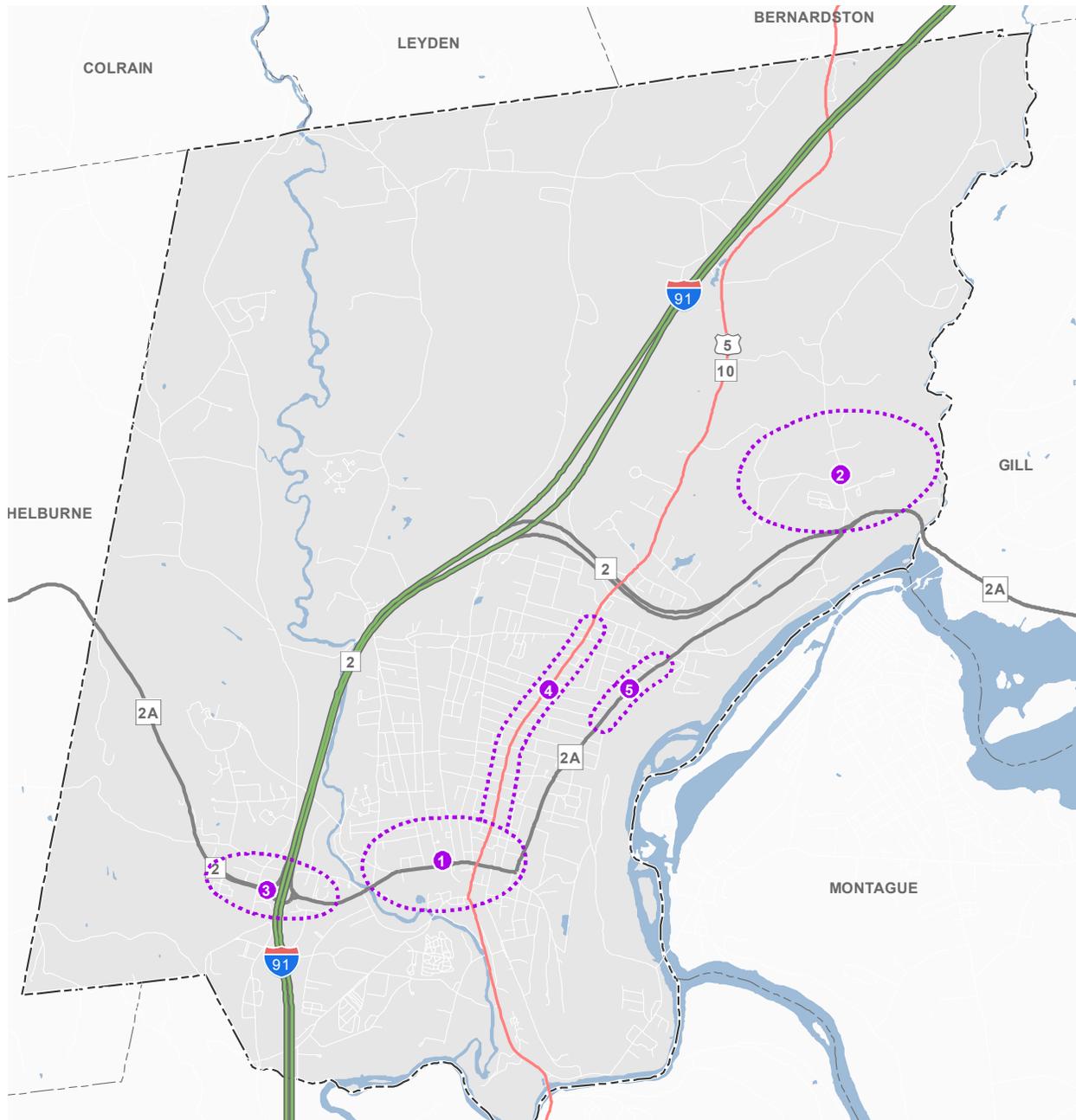
The largest industry sector within Greenfield in terms of employment is the health care and social assistance sector, followed by retail trade and educational services. These rankings are reflected in the status of the Baystate Franklin Medical Center and Greenfield Community College as the two largest employers in town. Other large employers include a mix of manufacturers (e.g., Argotec, Inc., Bete Fog Nozzle Inc., Kennemetal Inc.), service providers (e.g., Charlene Manor Extended Care), and retailers (e.g., Home Depot, Stop & Shop). Although home to some larger establishments, approximately 84% of the establishments in Greenfield have fewer than 20 employees.



Figure 3-3: Primary Areas of Economic Activity in Greenfield, MA

Legend

- Greenfield Town Boundary
- Surrounding Town Boundary
- Water
- Interstate
- U.S. Highway
- State Route
- Main Areas of Economic Activity
- 1 Downtown Greenfield
- 2 I-91 Industrial Park
- 3 I-91/Mohawk Trail Interchange
- 4 Federal Street Corridor
- 5 High Street Corridor

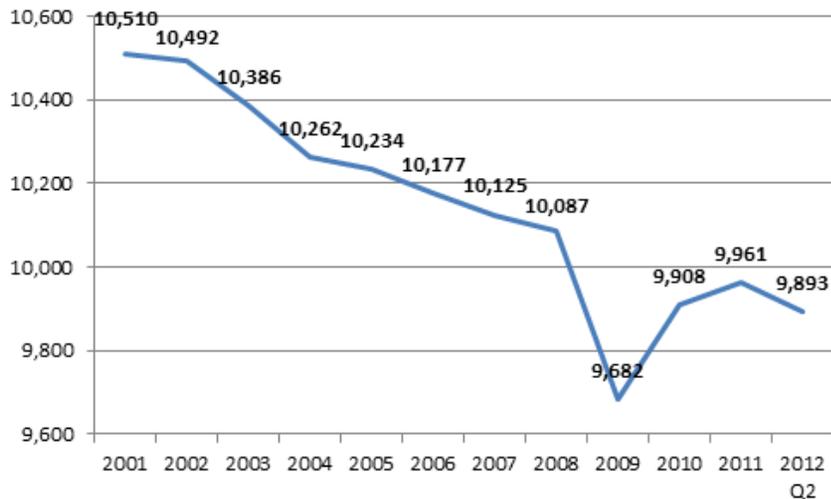


VHB Vanasse Hangen Brustlin, Inc.

Data Source: MassGIS

Although only about 7% of the Town’s land mass is used for agriculture (primarily hay and feed corn production) and relatively few Greenfield residents are employed in agriculture, Greenfield is located within an active farming region and food production is an important component of the local economy and community character. The Town hosts approximately 13 farms and a weekly farmers market on Saturdays at Court Square. It is also home to two community gardens, including the Greenfield Community Farm which is leased and operated by Just Roots, and the Greenfield Farmers’ Cooperative Exchange, whose member farms are located in the surrounding Franklin, Hampshire, Berkshire, Windham (VT) and Cheshire (NH) counties. These farms raise a variety of crops, livestock, nursery stock, and dairy, maple syrup and forest products that are then sold in Greenfield. In addition, the Town has a growing presence as a center for local food aggregation, processing and distribution, as well as cutting-edge agricultural practices.

Figure 3-2: Average Monthly Employment, Greenfield, MA



Source: Massachusetts Executive Office of Labor and Workforce Development

Business Location

Commercial activity is generally concentrated in several areas: the downtown, the I-91 industrial park, the I-91/Mohawk Trail interchanges, and along the Federal Street and High Street corridors (see **Figure 3-3**). There is also a node of commercial development along the Route 5/10 corridor near I-91 in the northern portion of the Town. These areas of economic activity are generally reflected by the commercial zoning designations (Central Commercial – CC, General Commercial – GC, General Industry – GI, Limited Commercial – LC, Office – O, and Planned Industry – PI districts.)



Greenfield Main Street. Photo source: VHB.

The downtown core is centered along Main Street and reflects traditional development patterns with a range of building types, including handsome multi-story, mixed-use buildings directly abutting the sidewalk and supporting a variety of restaurants, retailers, offices, and service providers, including independent businesses which are making an effort to source locally. Wilson’s, one of the oldest and few remaining family-owned department stores in the nation, is a downtown anchor on Main Street. While the downtown includes civic and commercial functions that can form the nucleus for an active and



Did you know?

Greenfield is home to the Western Massachusetts Food Processing Center. The Center is operated by the Franklin County CDC and promotes economic development through supporting local food producers and entrepreneurs. The Food Processing Center provides a commercial kitchen, production facilities, storage space, and business planning, management support, and technical assistance services to help launch food-based businesses. Local success stories include Real Pickles and Katalyst Kombucha.

vibrant neighborhood, many residents have reported that the lack of a mix of retail offerings and the limited hours of operation for many businesses are disincentives to shop there.

The area around the I-91 interchange has a more conventional auto-oriented commercial development pattern with shopping plazas and large-format, national chain retailers. While providing tax base support, employment opportunities, and retail choice, these types of areas often draw visitation away from downtowns for the type of general merchandise stores that used to traditionally be located in our town centers (e.g., hardware store, apparel store). Given the changing nature of retail, rather than expecting to compete on price and convenience, the downtown should build off its ability to provide a distinctive shopping and community experience in order to enhance vibrancy. There are ways for small-scale and independent operators to distinguish themselves individually and compete with larger retailers (e.g., by using local

knowledge to provide merchandise that is more responsive to customer demands, offering specialty goods that are unavailable elsewhere, providing superior service and product knowledge, etc.). However, the Town may be able to create a complementary experience to boost downtown shopping (e.g., upgrades to streetscape and public realm urban design, revised zoning to encourage multifamily residential), particularly given the changing preferences of the emerging millennial generation. This generation is beginning to enter the workforce and establish new households and is indicating an increased priority for high social and technological connectivity, multi-modal transportation choices and a multi-dimensional work-live-play environment. These types of characteristics can play to the natural strengths of mixed-use downtown areas like Greenfield.

The Federal Street and High Street corridors include smaller-scale commercial blocks that contain retail and service providers. Chain fast-food restaurants, pharmacies and gas stations are prevalent along Federal Street. Despite being a major north-south route, the streetscape is generally undistinguished and could benefit from aesthetic improvements to improve its visual character.

The I-91 industrial park provides large development sites for industrial use and is home to several of the town's largest manufacturers. The park is located at the north end of town and is generally separated and distinct from other activity areas. This arrangement is typical of traditional zoning concepts (i.e., separation of uses). However, allowing for limited convenience retail or restaurants to provide supporting services and amenities for tenants of the park may be worth consideration. The Route 5/10 node is home to a diverse group of businesses, from locally owned stores to national chains, including car dealerships, numerous gas stations, fast food, and antique stores. These businesses serve the local neighborhoods adjacent to the Route, but also serve travelers going through either I-91 or going north-south on Route 5/10.

Wages

The average weekly wage for industrial employees in Greenfield was reported as \$692. The highest paying industry sector was manufacturing with an average weekly wage of \$1,071. The next highest wages were reported to be in public administration, finance and insurance, and management. The lowest paid sectors were accommodation and food services (average wage of \$268/week), and arts, entertainment and recreation (average wage of \$299/week). Unfortunately, manufacturing employment, which provides relatively high wages, has experienced a decline over the past decade. However, it is one of the sectors that is expected to experience growth within the region.⁴ Unfortunately, the other sectors that are expected to show growth under business-as-usual scenarios tend to be in lower-wage industries. For example, regionally the largest employment growth is expected to occur in occupations such as registered nurses, nursing aides and attendants, tellers, food preparation and service, and teacher’s assistants, which (with the exception of registered nurses) tend to be on the lower end of the wage spectrum.

The US Department of Housing and Urban Development (HUD) estimated fair market rent levels in 2014 for Greenfield are show in **Table 3-5**.

Table 3-5: HUD FY 2014 Fair Market Rents

EFFICIENCY	ONE-BEDROOM	TWO-BEDROOM	THREE-BEDROOM	FOUR-BEDROOM
\$697	\$752	\$952	\$1,232	\$1,501

Source: U.S. Department of Housing and Urban Development, 2014

Housing is often considered to be affordable if the total rent is no more than 30% of income. Using that standard, a person earning the average wage for industries in Greenfield would be able to afford approximately \$830 monthly in housing costs, according to the Massachusetts Executive Office of Labor and Workforce Development (**Figure 3-4**). This would be sufficient to allow for a

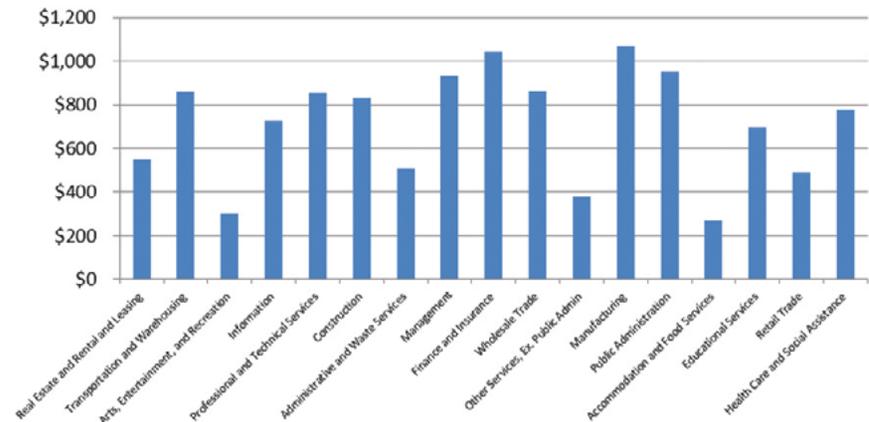
4 Franklin Hampshire Workforce Investment Area, Job Projections, 3/6/2013.

Local Currency

The Greenfield Business Association issues Greenfield Dollars – a currency that can be used at participating local businesses – to promote a “buy local” ethos and strengthen connections between local business and residents.

household to afford a one-bedroom unit without being rent-burdened. Workers in the lower paid sectors (i.e., accommodations and food service) would not earn sufficient income to support a household in a studio apartment. This suggests that the occupations that are projected to grow locally may not necessarily provide the compensation necessary to sustain satisfactory quality of life for many families. As a result, it will be important to cultivate expansion of other industries and businesses that can provide pathways to higher wage employment.

Figure 3-4: Average Weekly Wages, Greenfield, MA



Source: Massachusetts Executive Office of Labor and Workforce Development





Implementation: Goals, Strategies, and Actions

The Economic Development goals and strategies seek to enhance our existing assets while improving upon some known deficiencies to achieve a sustainable economy. Greenfield should offer a broader range of shopping options and improve access to more market-rate housing, especially in and around its downtown core. In some professions and trades, job opportunities are limited. Inventive strategies to increase job diversity and availability – including in the clean energy, creative economy, and food industries – are important to creating a viable, sustainable future for the Town. We will continue to reduce our extensive use of fossil fuels. We will seek ways to incentivize redevelopment and infill of unused space in Greenfield for a wide range of economic development opportunities. Achieving a diverse, but unified plan for our future economic development is critical at this time.



goal 1

Greenfield is the cultural, shopping and services center of Franklin County.

STRATEGY 1

Market Greenfield as a cultural, tourism, and recreation destination through a town-funded marketing plan.

Greenfield has a number of unique natural, recreational and cultural resources that make it a great place to live and visit. In order to raise its profile as a Pioneer Valley destination, the Town will initiate a coordinated marketing plan that highlights and capitalizes on these assets. Growing in prominence as a center for tourism will help generate and capture associated economic activity and support community vitality.

Implementation Actions:

- a. Hire a marketing professional to develop and oversee implementation of a marketing plan utilizing a small paid staff and, when necessary, a group of volunteer or pro-bono marketing and support staff.
- b. Do a needs assessment/study to determine why people leave town or come to town for cultural events, shopping and services, then track demographics of the responders.
- c. Develop a comprehensive communication plan to get the word out, using a website, social media, print media, blogs, and viral communication.



Sample marketing brochure - Pawtucket & Central Falls River Corridor development brochure

STRATEGY 2

Support local events, markets, and fairs that draw consumers to Greenfield and promote additional shopping in town, and ensure state and federal service offices remain located in Greenfield.

Special events programming can serve as a draw to attract visitors to Greenfield. Attracting additional visitation to Town can, in turn, promote additional patronage of local businesses both during the event, and afterwards as visitors are exposed or reintroduced to the town, have a good experience, and become repeat patrons. Civic and government institutions and services are also key community anchors. As the County seat, a Greenfield location is appropriate for these types of uses. In addition, these functions serve as an additional draw to bring visitors to the downtown, provide employment opportunities, and support an expanded customer pool of office workers.

Implementation Actions:

- a. Create a manageable permitting and licensing process for special events, including twice-monthly licensing commission meetings.
- b. Create “entrepreneur” loan fund that provides revolving funds to businesses to host events that draw people to Greenfield to spend money.
- c. Encourage and expand the availability of music events on weekends by developing relationships with local and regional musicians and booking agents.
- d. Create a unified action strategy implemented by Town Government (Executive Office, Town Council, and Department of Planning & Development) to respond to external threats to our State and Federal services.



Greenfield Farmer's market poster



Green River Festival



goal **2**

Greenfield provides living-wage jobs and a resilient and sustainable local economy to support and expand traditional and innovative business development.

STRATEGY 3

Nurture existing and new business owners, including creative economy entrepreneurs, to grow their businesses locally and sustainably.

Incubating new ventures, supporting established businesses, and retaining them in Town as they grow, will be vital in providing new employment opportunities, tax ratables, and reinforcing existing and developing industry clusters. New creative ventures that rely on knowledge workers generated by local educational institutions or that are attracted to Greenfield's lifestyle amenities provide another opportunity to help broaden and diversify the Town's economic base.

Implementation Actions:

- a.** Encourage the creation of a downtown business development center, incubator or coworking space for professional entrepreneurs.
- b.** Establish a Local Economic Development Investment revolving loan fund from a 1% tax on residential and commercial property tax or from an overall budget allocation to provide access to capital for Greenfield businesses to add new jobs, make capital investments in equipment or infrastructure, or workforce training.
- c.** Develop a Live/Work ordinance to enable developers and artisans to create and market combined living accommodations and studio space.
- d.** Create a Sustainability Resource Center (staffed organization or a website) to provide businesses with resources and information on funding opportunities to become more sustainable in their business practices and energy use in Greenfield.



Commercial kitchen

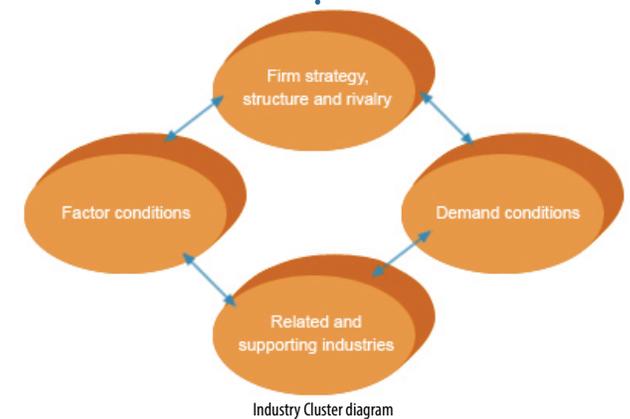
STRATEGY 4

Continue further development or redevelopment of commercial sites with sufficient supporting infrastructure for businesses compatible with local and regional industry clusters.

Greenfield contains several underutilized or vacant commercial sites and buildings that are served by existing infrastructure and would be attractive for adaptive reuse. Facilitating the return of these resources to productive use can reduce the pressure for conversion of open land, promote efficient land development patterns, reduce the need for costly infrastructure extensions, and provide unique space to support new and expanded business ventures.

Implementation Actions:

- a. Implement a business development marketing plan to target businesses compatible with local and regional industry clusters (small manufacturing, food production and distribution, green technologies, creative/arts-oriented businesses, healthcare, professional services, skill trades and education).
- b. Support development of state-of-the-art telecommunications infrastructure to increase broadband access, with special emphasis on the Central Commercial and General Commercial Zones.
- c. Create a customer service point of contact within the Department of Planning and Development and annually update all written guides to land development processes.
- d. Utilize recommendations from the Greenfield Food Study, August 2013, and other food industry resources/organizations to target and facilitate continued food-related industry development.





goal

3

Greenfield has a vibrant, dynamic, walkable downtown.

STRATEGY 5

Strengthen downtown as a welcoming, attractive, and vibrant mixed-use urban space, with the First National Bank building as a cultural center with flexible performance and event space.

Greenfield is blessed with an attractive, traditional downtown development pattern with a range of handsome buildings directly abutting the sidewalk and supporting a variety of restaurants, retailers, offices, and service providers. By building off these physical assets and taking additional actions to make the downtown more attractive, welcoming and active, downtown can be strengthened as the “place to be.”

Implementation Actions:

- a. Cultivate downtown market-rate housing by:
 - Encouraging the reuse of the upper floors of downtown buildings for market rate housing through provision of financial assistance for development and installation of elevators.
 - Revising the zoning ordinance to enable more dense housing within one mile of downtown.
- b. Support redevelopment of the First National Bank as a cultural center and flexible performance and event space.
- c. Incorporate a new Adaptive Reuse Overlay District into the zoning ordinance that provides flexibility in use, density, and dimensional requirements to encourage reuse of downtown space.
- d. Encourage stores and eateries to spill out onto sidewalks with outdoor eating where sidewalk space allows, and ensure Greenfield licensing policies support such activity.



First National Bank

STRATEGY 6

Ensure downtown is safe, easy to get to, accessible, and pedestrian/bicycle friendly.

Ensuring that the downtown feels safe and comfortable for all segments of the population (e.g., the elderly, children, residents, visitors, and bicyclists) is important in attracting a diversity of users and generating a critical mass of activity across different time periods. This includes maintaining both a comfortable personal security experience, as well as promoting safety and convenience features for non-motorized transportation alternatives.

Implementation Actions:

- a. Build an atmosphere of safety by creating a permanent downtown police presence.
- b. Revamp parking policy to complement the Town’s vision of a pedestrian- and environmentally-friendly community. This could include decreasing the required parking minimums, establishing parking maximums, and managing the parking supply to encourage walking and biking.
- c. Support biking as a transportation alternative.
- d. Improve public transit service by working with Franklin Regional Transit Authority & Greenfield Community College to expand the frequency of the downtown bus loop.



Police on bikes



Safety Countermeasures



Implementation

goal

4

Greenfield is a magnet for 10-15% growth in new residents who support the local economy.



Downtown business concert

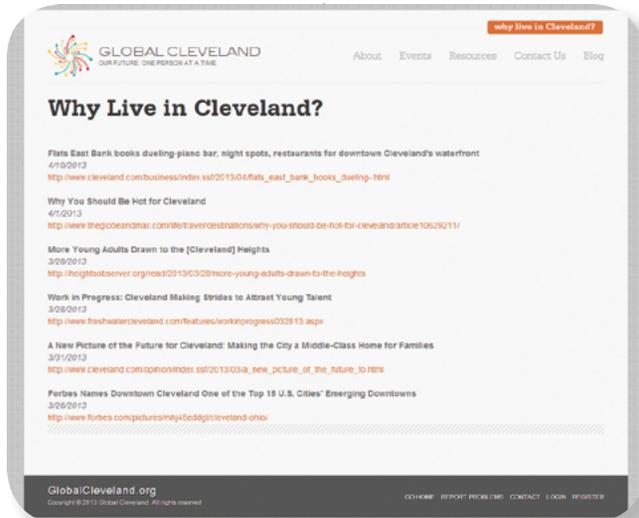
STRATEGY 7

Create multiple marketing strategies to attract a diverse population and promote the attributes that make Greenfield a great place to live, including affordable starter homes; outstanding scenic, natural, and recreation opportunities; transportation accessibility; and a culture of sustainability.

Greenfield has a number of enviable attributes including affordable starter homes, outstanding scenic, natural and recreation opportunities, transportation accessibility, and a culture of sustainability, but these advantages may not yet be fully recognized by households in the region. Effectively marketing these features will help Greenfield capture residential growth that can further support local economic activity and fiscal health.

Implementation Actions:

- a. Foster the growth of Greenfield's creative and telecommuting population through marketing residential real estate and live/work spaces to writers, artists, independent business people, etc. who are able to work out of their homes while gaining the quality of live that Greenfield has to offer.
- b. Encourage recent college graduates to remain in or relocate to Greenfield by providing this population with attractive job opportunities, housing options, and cultural amenities.



Marketing

goal 5

Greenfield provides educational and financial resources for sustainable economic development from both public and private entities.

STRATEGY 8

Promote partnerships with the Franklin/Hampshire Employment Training Center, Franklin/Hampshire Career Center, local colleges, and social service providers to align education, certification, and training offerings with the labor force needs of local businesses.

There are a wealth of training resources within the area, including the Franklin/Hampshire Employment Training Center, local colleges, and various social service providers. Local manufacturers and businesses have identified a gap in ability to find appropriately skilled labor. Partnerships with these institutions should be deepened to help tailor training programs to match identified local needs.

Implementation Actions:

- a. Support economic development partners including the Franklin County Community Development Corporation, Common Capital, and the Franklin Regional Career Center to provide training and low-interest loans.
- b. Connect business owners with local training organizations in order to help develop training programs that can satisfy their local labor needs.



Job training



Trade Adjustment Alliance





goal

6

Greenfield reduces the amount of financial resources leaving our community.

STRATEGY 9

Encourage retail options that appeal to all socio-economic groups in Greenfield and surrounding areas and promote buy-local efforts through procurement and sale of local products.

The creation of expanded retail diversity is in some ways a “chicken or the egg” question. In order to have a healthy mix of stores and extended business hours that would encourage customers to spend locally, business owners typically have to see evidence of consumer support to justify these investments. The promotion of a buy-local ethos for both retail customers and larger institutional or governmental entities can help to provide a stable revenue stream for local businesses that will encourage further investment.

Implementation Actions:

- a. Establish a local suppliers and business preference for municipal purchasing program.
- b. Encourage institutional (e.g., schools) and commercial entities to include a local preference in their purchasing programs.
- c. Support expanded acceptance and usage of “Greenfield Dollars”.
- d. Support efforts to develop an additional anchor department store.
- e. Foster locally-made products by working with retailers to help them identify local products relevant to their businesses for sale or use as part of the infrastructure of their stores.



Downtown Mixed Use



Berkshares, Inc.

STRATEGY 10

Conserve energy and build renewable energy capacity to reduce funds (consumer spending dollars) leaving our region for the purchase of energy. Reduction goal: from \$67M to \$0 in accordance with Greenfield's 2050 goal.

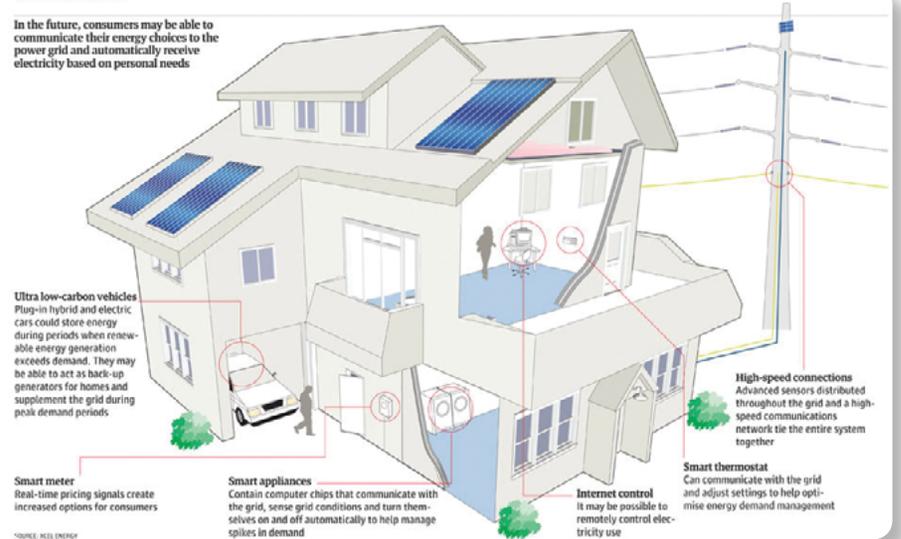
Energy bills can represent a significant, recurring expense for households and businesses. Enhancing energy efficiency creates long-term costs savings for households, expanding the amount of discretionary income that is potentially available to support local merchants and suppliers. On the commercial side, reducing energy usage can reduce operating expenses, allowing for additional investment in business development. In addition, payments to utilities currently represent money leaving the region. Building renewable energy capacity locally will allow these payments to remain and recirculate within the local economy.

Implementation Actions:

- a. Offer locally-produced green electricity options through a municipal electrical aggregation program to meet energy needs with zero carbon energy sources such as photovoltaic generation.
- b. Continue to actively participate in Green Communities and reduce municipal energy use.
- c. Continue Energy Smart Business and Energy Smart Homes programs that help businesses and residents find funds to do energy upgrades to their homes and buildings.
- d. Support local solar installers and partner with NGOs and for-profit corporations to increase residential, business, and municipal investment in solar, and other strategies to produce and use renewable energy.

The smart home

In the future, consumers may be able to communicate their energy choices to the power grid and automatically receive electricity based on personal needs



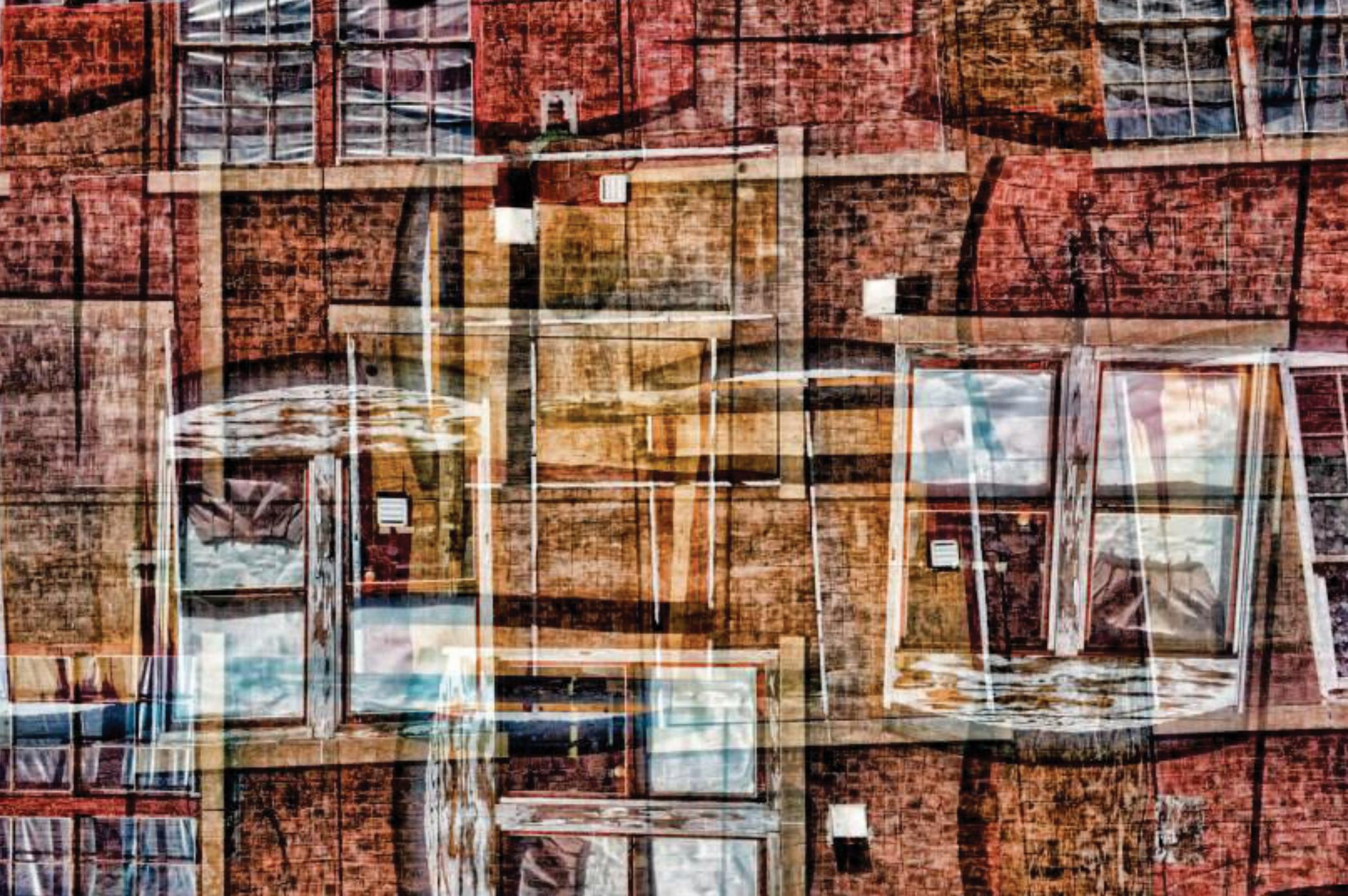
A Smart Home incorporates energy efficiency appliances, smart meters to manage energy use and low-carbon vehicles.



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Source of Implementation Illustrations:

- Sample marketing brochure - VHB
- Greenfield Farmer's market poster - http://www.artisansofwmass.com/wp-content/uploads/2013/05/2013-05-09_5.jpg
- Commercial kitchen - Richie Davis from The Recorder
- Industry Cluster diagram - <http://oregonbusinessplan.org/Portals/0/about-industry-img1.gif>
- First National Bank - Caitlin von Schmidt
- Police on bikes - http://3.bp.blogspot.com/-70IGd50Gkqg/Td5lxFFm6I/AAAAAAAAABxk/vlKHN9ok_gw/s400/BicycleCops1.jpg
- Safety Countermeasures - http://safety.fhwa.dot.gov/ped_bike/
- Downtown business concert - Maria D.
- Marketing - <http://www.globalcleveland.org/WhyLiveinCleveland.aspx>
- Job training- Steven Lane from 360preps.com
- Trade Adjustment Alliance - Glendale Community College
- Downtown Mixed Use - Jon Platek on Panoramio
- Berkshares, Inc.- <http://www.berkshares.org/index.htm>
- Smart Home - <http://static.guim.co.uk/sys-images/Guardian/Pix/pictures/2009/12/3/1259840570326/Smart-home-graphic-001.jpg>



HOUSING

vision



Greenfield's many attractive, affordable and sustainable housing options support a high quality of life, equity, and self-sufficiency. Greenfield offers to all who live here multi-modal connections to nature, opportunity, work, education, shopping, entertainment and services. A diverse housing stock with adapted, renovated and newly built units, promotes through both location and design a healthy environment and lifestyle, appealing to people of varied age and income, promoting individual prosperity and the economic vitality of Greenfield as a whole. Greenfield's economic competitiveness and home values grow through investment in the quality of all neighborhoods.

We are a community with tremendous assets; diversity, a position as an urban hub for Franklin County, our beautiful rural landscape of farms, hills, meadows, woods and rivers, and a vibrant downtown and residential core. These assets serve as the basis for strength and resilience in the face of demographic, economic and environmental change. The housing goals point towards actions that promote sustainable use of our assets, reducing energy use to reduce the negative impact of high utility bills, and reducing the negative environmental impacts generated by housing to enhance quality of life today and will contribute to a better tomorrow for all.



Housing

Introduction

Housing forms an essential part of healthy living and quality of life. It fulfills the psychological needs for privacy and personal space; physical needs for security and protection from the elements; and social needs for basic gathering spots where important relationships are forged and nurtured. Increasingly, a house also serves an important function as an economic center as more and more people seek home occupations or telecommute for their jobs.



David Brock and Jennifer Stromsten and family in front of their energy efficient home with solar panels. Photo source: Jennifer Stromsten

As a population and employment center in Franklin County, and in the Pioneer Valley region in general, Greenfield provides a diversity of housing types for nearly 8,000 households throughout the town. From historic homes in downtown Greenfield, single-family ranches in The Meadows and affordable housing options at Solar Village and Leyden Woods, the Town is continuing to diversify the housing stock. While there are still residents who lack access to quality, affordable housing that is close to essential services and public transportation, there are opportunities, through regulatory action and resource programs, to bridge that gap and ensure availability for residents at all stages of their life. In addition to providing diverse housing options, structures need to be energy efficient and sustainable, using renewable energy, sustainable building materials and low impact design to site and construct new homes and retrofit existing.

The following baseline assessment of Greenfield's housing reviews the household type, options, occupancy, location and the income levels of Greenfield residents, which helps to identify the opportunities in achieving Greenfield's housing goals through a number of sustainable strategies and actions. We'll begin this assessment with a vision and goals for the future of sustainable housing in Greenfield.



goals

In Ten Years...



1

Greenfield's policies and programs are coordinated to ensure housing units and neighborhoods adapt to meet changing needs.



2

Housing energy consumption from utilities, maintenance and automobile reliance are reduced, thereby reducing Greenfield's overall

greenhouse gas emissions and increasing our community's energy independence.

2001 Greenfield Master Plan Housing Goal:

Improve the condition of existing residential neighborhoods and encourage new residential development to provide a range of housing choices.



3

A wide variety of affordable, attractive, sustainable housing options are available in Greenfield promoting high quality-of-life and self-sufficiency for all households.



4

Greenfield supplies quality, permanent affordable housing and creative transitional and supportive housing programs that include the special challenges of homeless and carless households in a rural context.

Sustainable Franklin County – Top Three Housing Goals:

- Improve the energy efficiency of housing
- Improve the quality of existing housing.
- Locate housing near employment and town centers.



5

Community resilience and individual enjoyment of our abundant natural resources is enhanced through residential development practices that preserve local agriculture, water quality, biodiversity, and the visual integrity of the landscape.



6

Greenfield is a thriving, vibrant, regional urban center with livable, mixed income, well-situated neighborhoods within easy reach of everyday needs.



Greenfield’s Housing Assessment

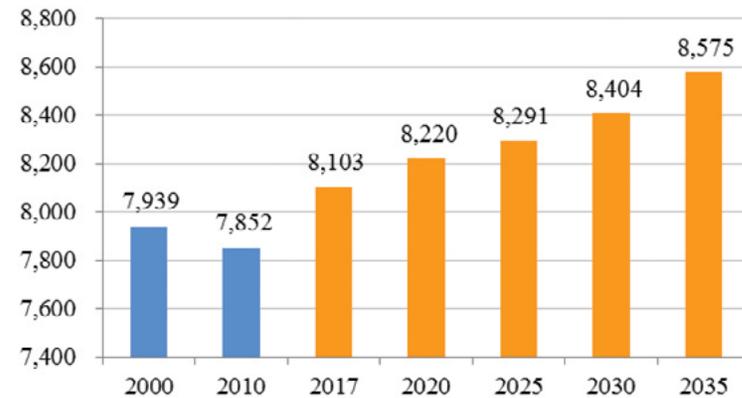
Greenfield’s Residents and Households

As of the 2010 U.S. Census, Greenfield was home to 7,852 households (**Figure 4-1**). This was a 1% decrease from the 2000 Census, even though the Franklin County Region experienced an increase of 3.4% (see Appendix for Total and Projected Households: 2000-2035). However, the Massachusetts Department of Transportation anticipates an increase in households in Greenfield, with nearly 8,100 households by 2017 and up to 8,500 households by 2035. These numbers do not take into account the potential influx of residents who may migrate out of New York City or Boston to seek refuge from the projected impacts (i.e., rising sea levels) of climate change. The Master Plan Advisory Committee commented that they would like create a plan for how to accommodate a potentially a large influx of people. However, for the purposes of this report, we will use MassDOT’s growth estimates when planning how to accommodate these new households appropriately.

In addition to understanding how many households are in the Town, type and composition is just as important to begin planning to meet both the current and future needs of Greenfield’s residents.

In 2010, the Town was close to an even split of family vs. non-family households – with only a difference of about 500 households between the two types of households. As shown in **Table 4-1** and **Figure 4-2**, family households comprised 53.4% of the Town’s overall households, with the largest number of them consisting of married couples. The U.S. Census defines a family as “a group of two people or more (one of whom is the householder) related by birth, marriage, or adoption and residing together; all such people (including related

Figure 4-1: Total and Projected Households in Greenfield



Source: U.S. Census Bureau 2000 and 2010; Projections developed by MassDOT in consultation with FRCOG

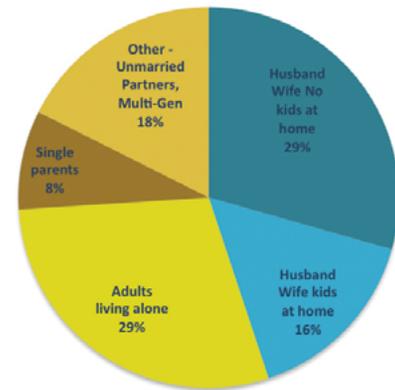
Table 4-1: Households by Type, 2010

HOUSEHOLD TYPES	NUMBER	PERCENTAGE OF TOTAL	STATE OF MA TOTALS
Family households:	4,190	53.4%	63.4%
Married-couple	2,794	35.6%	46.5%
Male householder, no spouse	364	4.6%	4.1%
Female householder, no spouse	1,032	13.1%	12.8%
Nonfamily households:	3,662	46.6%	36.6%
Total householders living alone	2,982	38.0%	28.9%
Householders 65 and older living alone	1,075	13.7%	7.7%
Total Households	7,852	100.0%	100.0%

Source: U.S. Census Bureau 2010

subfamily members) are considered as members of one family.”¹ Approximately 3,662 households are categorized as nonfamily in Greenfield, with 81% of those households occupied by persons living alone. Also important to note is that 13% of the total households in Greenfield are occupied by a resident 65 years and older living alone. This will be discussed next in greater length to better understand the age of Greenfield’s residents and the projected changes to the composition of Greenfield’s population.

Figure 4-2: Households by Type, 2010



Source: U.S. Census 2010

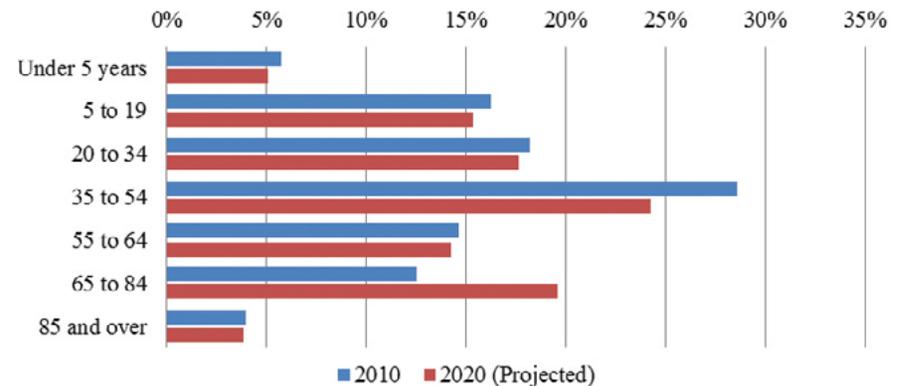
In addition to analyzing the households by type in Greenfield, it is also interesting to see how the results compared to the State average (**Table 4-1** and **Figure 4-2**). The numbers show that there is quite a bit of variance from the State averages. In Massachusetts the family households are about two-thirds of the total households in the state, while non-family are about one-third, with majority of those households comprised of married couples. The variations in sub-categories of family households didn’t vary as much, however.

In 2010, the residents between 35 and 54 years old comprised the largest age group in Greenfield at nearly 30% of the population. The second largest age group was 19 years old or younger, at 22%. These and the other results (**Figure 4-3**) are on par with the State’s 2010 results. The results are important to keep in

¹ <http://www.census.gov/cps/about/cpsdef.html>

mind when planning for current housing needs to ensure that the type of housing that is provided is on par with the age of the residents, and takes into consideration their existing needs, such as access to amenities, services, transit, schools, and work as well as providing options for a diversity in housing types – small apartment vs. a larger home – to accommodate the growing number of non-family households in Greenfield.

Figure 4-3: Percentage of Population by Age Group, 2010 and 2020 (projected)



Source: U.S. Census Bureau 2010, Estimates produced by MISER

In addition to planning for current needs of Greenfield’s existing residents, it is also important to understand the future growth projections for the various age groups. The Massachusetts Institute for Social and Economic Research (MISER) estimates projections for population for the Commonwealth. MISER is projecting a large shift in age group composition by 2020 – notably a 53.5% increase in the 65-84 year old age group (**Figure 4-3**). In 2020, MISER projects that the 65-84 age group will comprise nearly 20% of Greenfield’s population. This poses important issues regarding how to develop new, and prepare the

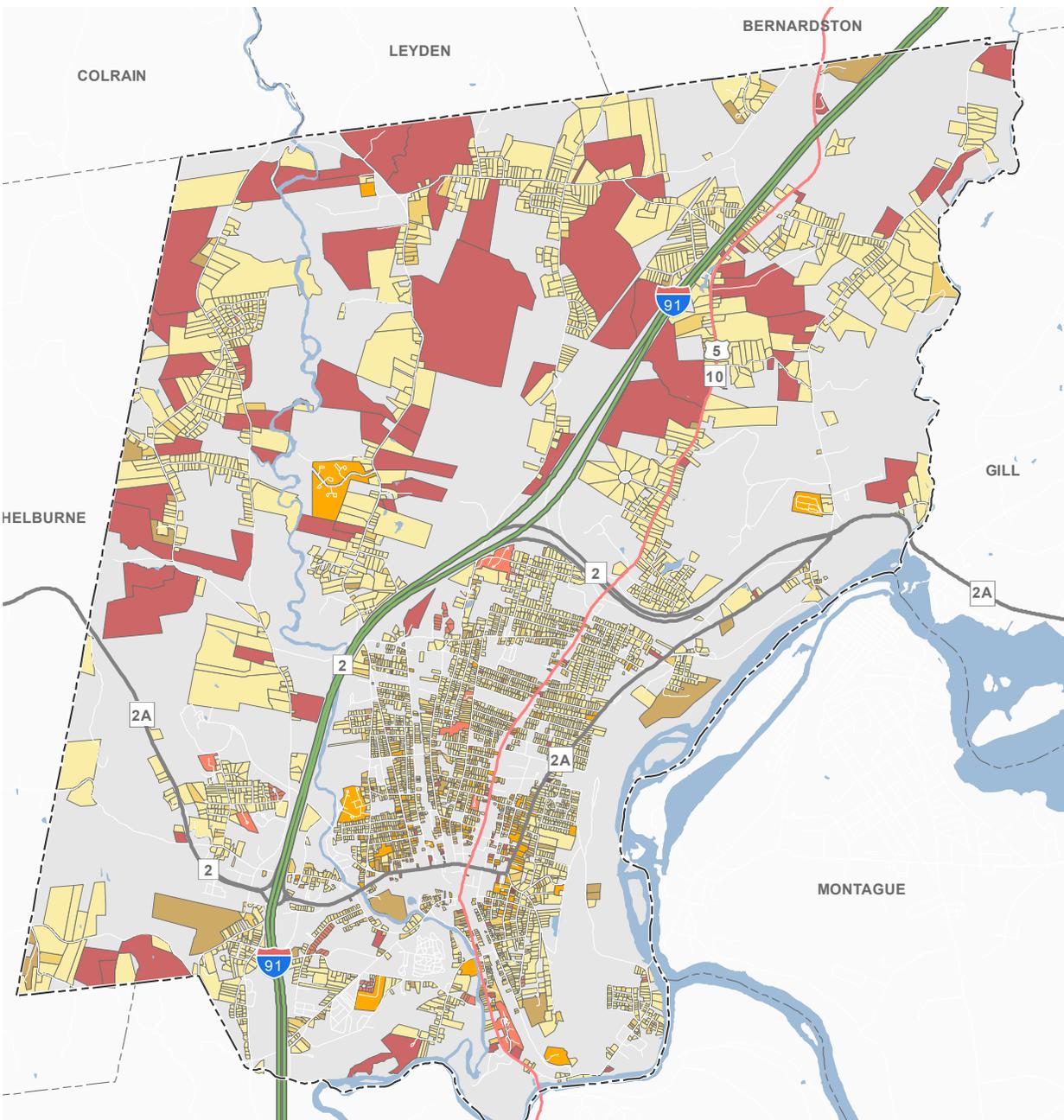


Figure 4-4: Location and Type of Housing in Greenfield

Legend

- Greenfield Town Boundary
- Surrounding Town Boundary
- Water
- Interstate
- U.S. Highway
- State Route
- Housing Type**
- Single-Family
- Two-Family
- Other Multi-Family
- Condominium
- Apartments
- Multi-Use / Residential
- Other Residential

VHB Vanasse Hangen Brustlin, Inc.

Data Source: Assessor's database, Town of Greenfield, 2013

existing, housing stock for these residents to not only age in place in their own homes and maintain independence, mobility and productivity. Older adults comprise the fastest growing sector of the population and as they retire and live longer on fixed incomes, the demand for quality, affordable, and accessible housing that is close to services and other amenities is increasing. Programs, public policy, and services should support a variety of housing options for the elderly population that includes the option for them to age in their own homes and communities. Strategies for preparing existing, and developing new, homes with these amenities are presented in the sidebar (currently in the Appendix).

While the population in Greenfield is anticipated to age through 2020, the largest age group is predicted to continue to be the 35-54 age category at 24.3%. Therefore, strategies that meet the needs of the current households, as stated above, will still be relevant to modifying existing and creating new units.

Housing Location and Options

Greenfield offers a variety of housing types for its residents, ranging from single-family homes in The Meadows to multi-family, affordable housing in Leyden Woods. It includes a mix of styles, ages (see Figure 6), and sizes. The greater downtown neighborhoods are mixed era, mixed income, and even mixed single family and multi-family. As shown in **Table 4-2**, in 2010 a large



Housing in Leyden Woods, Photo source: VHB



Housing in the Meadows, Photo source: VHB

percentage (49%) of housing is comprised of single-family detached homes, which are primarily found outside the I-91 and Route 2 beltway, in the north and northwest corner of Greenfield (**Figure 4-4**). While this is a slight decrease since 2000, it still remains the dominant household type in the Town. Single-family attached homes doubled between 2000 and 2010, but it is still a small percentage of the overall housing stock (3.6%).

Table 4-2: Number of Housing Units in Greenfield

NUMBER OF UNITS PER STRUCTURE	2000		2010		PERCENT CHANGE 2000-2010
	NUMBER	PERCENT	NUMBER	PERCENT	
1-unit, detached	4,050	48.8%	4,033	49.1%	-0.4%
1-unit, attached	198	2.4%	297	3.6%	50.0%
2 units	1,422	17.1%	1,328	16.2%	-6.6%
3 to 19 units	2,000	24.1%	1,859	22.6%	-7.1%
20 or more units	490	5.9%	617	7.5%	25.9%
Mobile home	141	1.7%	88	1.1%	-37.6%
Total housing units	8,301	100.0%	8,222	100.0%	-1.0%

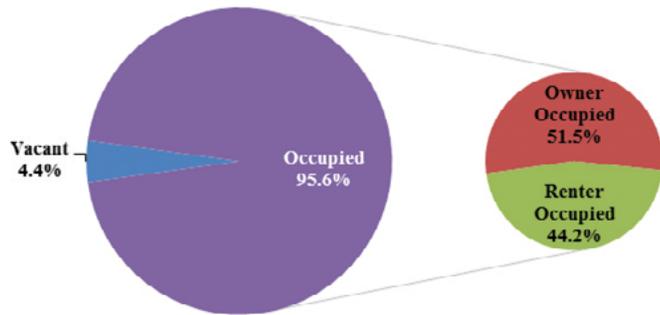
Sources: U.S. Census Bureau 2000 and 2010

Notably, however there was an increase in housing over the past 10 years in units of 20 or more, with 26% growth since 2000. Coupled with the 3-19 unit complexes, multi-family complexes represent over 30% of the Town’s housing stock. With the exception of a couple of housing developments, multi-family complexes can primarily be found south and east of I-91 and Route 2. As the Town develops these units in the future (either through conversion or new development) it will be important to ensure they have access to services, public transportation, bicycle and pedestrian facilities, and other amenities. Downtown Greenfield is an area the Town could focus on for additional multi-family residents that would address sustainable housing development for a more diverse group of existing and future residents. Multi-family dwellings are only



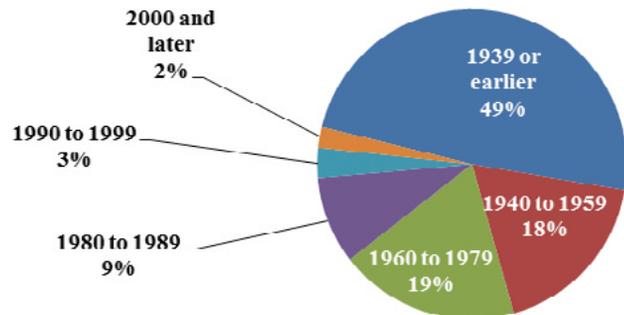
permitted by-right in the Central Commercial District in Greenfield according to the Town of Greenfield Zoning Ordinance, 2013 (see Appendix X). They require a Special Permit in any other district in Town. Also of note regarding multi-family units, congregate housing for the elderly or handicapped are only allowed by Special Permit, which can create a barrier for development of elderly housing in Downtown.

Figure 4-5: Housing Occupancy and Tenure in Greenfield, 2010



Source: U.S. Census 2010

Figure 4-6 Age of Housing Stock in Greenfield, 2010



Source: 2007-2011 American Community Survey

The tenure and age of a housing stock is an important factor in increasing quality of life for residents and creating a sustainable community. In addition to providing options for the various stages of a resident’s life – from college

students needing temporary rental housing to families who seek homeownership – the ownership and age of a home can also effect energy efficiency investments of the unit. As shown in **Figure 4-5**, the majority of housing in Greenfield is occupied (only 4.4% vacancy) and has a mix of owner-occupied (51.5%) and rental (44.2%) options. In addition, nearly half (49%) of the housing units in Greenfield were built in 1939 or earlier (**Figure 4-6**).

While energy efficiency and sustainable housing retrofits are possible for older homes, it does present challenges if a large number of renters in Greenfield are occupying these homes. Residents can often be resistant to making energy efficiency upgrades to a unit they do not own, especially when those upgrades cost money. In addition to energy efficiency upgrades, large older homes can be assessed for conversion to multi-family residences, with a strong focus on the downtown area, which addresses the need for additional multi-family housing in a compact area near essential services.

Education to homeowners, landlords and tenants, as well as access to low-interest loans and other incentive programs, is essential to creating and maintaining a sustainable housing stock. With nearly 33% of the greenhouse gas emissions coming from the residential sector in Greenfield,² providing programs and incentives will help Greenfield achieve reductions in greenhouse gas emissions, reduce utility costs for residents, and create more sustainable housing options for its residents.

The Cost of Living in Greenfield

The cost of housing is an important factor in a resident’s quality of life and sustainability. In order to understand this better, a number of data points can be reviewed including: income by household and age, the distribution of income throughout the community, monthly housing costs, average rent, and the median sale price for a home in the community.

² Greenfield Energy Audit, 2009: <http://www.greeninggreenfield.org/sustainability/greenfield-energy-audit>

Median household income defined

The median household income includes the income of the householder and all other individuals 15 years old and over in the household, whether they are related to the householder or not. The median divides the income distribution into two equal parts: one-half of the cases falling below the median income and one-half above the median. For households and families, the median income is based on the distribution of the total number of households and families including those with no income.

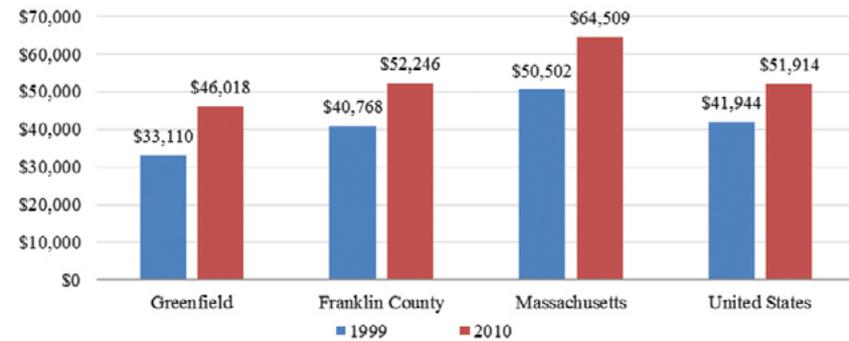
Source: U.S. Census Bureau

In order to determine what a household can afford to pay for their mortgage or rent, they need to know what their income is. In Greenfield, the median income for a household is \$46,018. This is a 39% increase from 2000. However, the median household income for Greenfield is still lower than Franklin County, the State of Massachusetts and the country.

If we narrow our focus, **Figure 4-7** indicates that a large percentage of the distribution of income in Greenfield is at or slightly above the median income, with 19.4% of the population earning between \$50,000 and \$74,999 and a 20% change over the past ten years. The second highest category belongs to the households earning between \$35,000 to \$49,999, at 18.2%. In addition, the lowest income categories are declining throughout the Town (below \$15,000 and \$15,000 to \$24,999), and there are large percentage changes in the top two income categories (\$100,000-149,000 and \$150,000 or more).

Table 4-3 breaks down the distribution according to age, where we find that the households earning the median income are 25-44 years old, and those between 45-64 earning slight above that amount. It also indicates that the aging

Figure 4-7: Change of Median Household Income, 1999 and 2010



Source: U.S. Census Bureau 2000 and 2010; 2007-2011 American Community Survey

population is below that median income at \$33,390. This is a figure to be watched carefully, to ensure there are affordable housing units available to the growing number of elderly residents.

When looking at the income distribution trends in the U.S. over the past ten years, **Figure 4-8** illustrates a different phenomenon. Interestingly, the two middle income categories where most of Greenfield's households are (\$35,000-\$49,999 and \$50,000-49,999) experienced declines between 2000 and 2010. This may be due to the decrease in overall households in Greenfield (-1.1%) in the

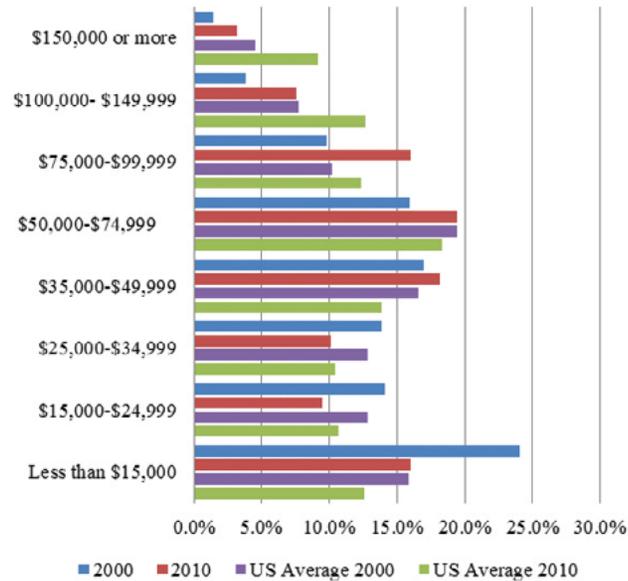
Table 4-3: Median Income by Age in Greenfield, 2000 and 2010

AGE	1999	2010	PERCENT CHANGE 2000-2010
Under 25 years	\$20,658	\$10,833	-47.6%
25 - 44 years	\$36,105	\$46,678	29.3%
45-64 years	\$43,250	\$54,938	27.0%
65+ years	\$25,806	\$33,390	29.4%
Total	\$33,110	\$46,018	39.0%

Sources: U.S. Census 2000 and 2010; 2007-2011 American Community Survey



Figure 4-8: Household Income Distribution in Greenfield and US, 2000 and 2010



Source: U.S. Census 2000 and 2010

past ten years combined with an increase in the minimum wage and a dramatic change in the ratio of the average top executive’s income versus the average factory worker or public services employee. By conducting a more thorough economic and housing needs assessment for Greenfield, a review of this data over various years may reveal more concise trends.

So what does it cost live in Greenfield? According to the Warren Group, in 2013, the median sale price was \$160,600 - \$167,250 for a single-family home and \$133,000 for a condominium (Table 4-4). For a household with good credit that makes the median income (\$46,018), securing a 30-year loan at 5% interest would make their monthly payments about \$1,086.00³. Not including property taxes or household related expenses, their annual mortgage payment would be

³ Used <http://www.mortgagecalculator.org/> to calculate estimated monthly payment.

28% of their total household income, or \$13,032 a year. After adding in taxes, utilities and other expenses, that household would be considered “housing-cost burdened.”

Table 4-4: Median Sale Price in Greenfield, 2000-2013

YEAR	PERIOD	1-FAM	CONDO	ALL
2013	Jan - Jun	\$167,250	\$133,000	\$160,600
2012	Jan - Dec	\$159,900	\$140,000	\$152,750
2011	Jan - Dec	\$160,000	\$151,500	\$155,000
2010	Jan - Dec	\$165,000	\$154,950	\$162,000
2009	Jan - Dec	\$177,250	\$142,000	\$170,000
2008	Jan - Dec	\$173,000	\$142,500	\$173,000
2007	Jan - Dec	\$184,000	\$94,330	\$178,500
2006	Jan - Dec	\$182,000	\$145,500	\$175,000
2005	Jan - Dec	\$180,000	\$136,000	\$174,000
2004	Jan - Dec	\$165,000	\$137,000	\$162,500
2003	Jan - Dec	\$144,000	\$92,000	\$137,500
2002	Jan - Dec	\$129,950	\$101,500	\$125,000
2001	Jan - Dec	\$115,250	\$103,450	\$114,700
2000	Jan - Dec	\$105,000	\$80,000	\$98,000

Source: The Warren Group, consulted in August 2013

Source: 2007-2011 American Community Survey

What is housing-cost burden? The conventional public policy indicator of housing affordability in the United States is the percent of income spent on housing. Housing expenditures that exceed 30% of household income are viewed as being moderately burdened.⁴ According to the 2007-2011 American Community Survey, 43.1% of households with a mortgage in Greenfield are moderately burdened by their monthly housing costs (Figure 4-9), with an additional 20.3% without a mortgage also moderately burdened.

⁴ Who Can Afford to Live in a Home? <http://www.census.gov/housing/census/publications/who-can-afford.pdf>

Table 4-5: Median Gross Rent in Greenfield and Neighboring Communities, 2011

COMMUNITY	MEDIAN GROSS RENT
Bernardston	\$1,218
Northampton	\$976
Shelburne	\$942
Deerfield	\$885
Easthampton	\$842
Montague	\$824
Greenfield	\$769
Athol	\$736
Orange	\$713

Source: 2007 – 2011 American Community Survey

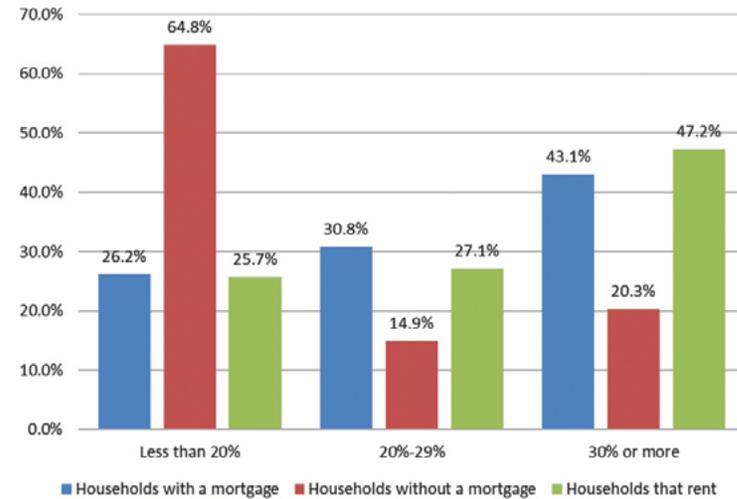
Households that rent are experiencing a much higher rate of housing burdening, with almost half of the renters (47.2%) in Greenfield paying more than 30% of their income on housing costs. This is despite the fact that the median gross rent in Greenfield is still one of the lowest in the region at \$769 a month (Table 4-5). However, this rate does not include utilities and other related household expenses, which underscores the need for assistance programs for tenants that provide education and resources on ways to save money through energy efficiency measures and access to public transportation to keep their total household-related expenses down.

Another indicator of housing burden is the Housing and Transportation Affordability Index (H&T Index). This is the combination of housing and transportation costs, which includes rent, utilities, commuting to and from work and other travel that is part of the daily household routine. The H&T Index offers an expanded view of affordability that combines housing and transportation costs and sets the benchmark at no more than 45% of household income. In Greenfield, the H&T Index indicates that the households in the neighborhood just north of Main Street are paying more than 50% of their income on housing and transportation costs.⁵ This tool, and others, can be used to determine the “hot spots” in Greenfield in order to target housing and transportation programs to reduce the burden on the community’s residents.

⁵ H&T Index: <http://htaindex.cnt.org/map/?view=2&search=l&map1=117,1044,-72.59324017999,42.588109566909,14,1,cbsa,10121&map2=117,1043,-72.59324017999,42.588109566909,14,1,cbsa,10121>

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Figure 4-9: Monthly Housing Cost vs. Household Income, 2010



Source: 2007-2011 American Community Survey

Another area of concern and focus for Greenfield in achieving a more sustainable housing stock is its two Environmental Justice Target Areas: Leyden and Plain Road Area and the town center and surrounding area (which was also identified above by the H&T Index). These areas are defined as: census tracts in which at least 12% of the tract’s population lives below the poverty level and racial minorities comprised 7% or more of the area. The Franklin County 2035 Plan found that over 20% of the populations living in these two neighborhoods are in poverty (Table 4-6). One interesting fact was that almost 20% of the residents living in the Leyden and Plain Road area do not have a vehicle. Given its location outside of the town center, it is essential that this neighborhood, and others like it, remain connected to services (via public transportation and pedestrian and bicycle facilities) so it does not become severely burdened by housing and transportation costs. As stated above, it is important to keep these areas in mind when developing and/or enhancing services for residents, including targeted outreach about the availability of resources to assist them in all aspects of their lives.



Table 4-6: Overview of Environmental Justice Target Area in Greenfield

COMMUNITY AREA	TOTAL POPULATION	PREDOMINANT MINORITY/ ETHNIC GROUP	% OF POPULATION IN POVERTY	% OF POPULATION THAT IS MINORITY		% OF HOUSEHOLDS WITH NO VEHICLE
Leyden and Plain Road area	7,188	Hispanic & Black	21.3%	13.9%		19.4%
Greenfield town center and surrounding area	1,329	Hispanic		22.7%	12.1%	11.4%

Source: Sustainable Franklin County: Fair Housing and Equity Assessment, 2013

Housing Policies, Programs and Opportunities

There are several programs, policies and opportunities in Greenfield, the region, and the Commonwealth to support maintenance and development of housing, which includes conversion of existing housing and buildings into new units as well as new construction. Engaging them now in implementing the strategies listed below will help to ensure the Town is successful in achieving its vision and goals for sustainable housing opportunities for all residents, at all stages of their life.

- Community Action:** Community Action is an “umbrella” agency that provides the overall leadership, policy guidance, coordination, and support necessary to successfully offer a wide array of essential services and actively contribute to local initiatives that are critical to building a community’s capacity for positive change. The agency provides a number of housing services including: housing court advocacy, home energy assistance, heating system repair, energy efficiency, and weatherization. <http://www.communityaction.us>
- Franklin County Regional Housing Authority:** The Franklin County Regional Housing and Redevelopment Authority (HRA) serves the housing and community development needs of the 26 towns in Franklin County. HRA works with homeowners, tenants and landlords

to access a wide variety of housing resources, including: foreclosure prevention, first-time homebuyers’ education, housing rehabilitation, rental assistance, and guidance on building codes and health inspections. They also work with municipalities in the County to apply for and administer Community Development Block Grant (CDBG) funds for infrastructure and community development projects. <http://www.fchra.org/>

- Greenfield Energy Smart Homes Program:** Greenfield, Massachusetts, experiences cold New England winters, has below-average median income, and has an aging housing stock in poor condition. The Energy Smart Homes Program will help counteract these conditions by educating residents about the benefits doing energy upgrades to their homes. This multi-pronged program aims to decrease greenhouse gas (GHG) emissions and help renters and homeowners reduce their utility bills. Conducted over three years, the program focuses on a different area of Greenfield each year. The first year focused on downtown Greenfield, where renters occupy over 73% of the households. The second year focused on non-central neighborhoods, followed by a third year focus on homes on the outskirts of town. The program alerts residents to the importance of weatherization and provides an easy-to-understand guide to existing

resources and funding opportunities available to Greenfield residents. The program matches Greenfield residents to free and low cost energy efficiency programs that can save up to 30% on heating bills and make homes more comfortable all year. <http://www.greenfield-ma.gov/Pages/index>

- **Greenfield Housing Authority:** The mission of the Greenfield Housing Authority is to provide safe, decent and sanitary housing conditions for low-income families and to manage resources efficiently. Its purpose is to promote personal, economic and social upward mobility and to provide families the opportunity to make the transition from subsidized to non-subsidized housing. <http://www.greenfieldhousing.org/>
- **MassResources:** Information on housing programs from public housing, to rental voucher and foreclosure prevention programs. <http://www.massresources.org/housing.html>
- **MassWorks Infrastructure Program:** The MassWorks Infrastructure Program provides a one-stop shop for municipalities and other eligible public entities seeking public infrastructure funding to support economic development and job creation/retention; housing development at a density of at least 4 units per acre (both market and affordable units), and transportation safety improvements in small, rural communities. The MassWorks Infrastructure Program is administered by the Executive Office of Housing and Economic Development, in cooperation with the Department of Transportation and Executive Office for Administration & Finance.





Implementation: Goals, Strategies, and Actions

The Housing Element goals and strategies focus on diverse, centrally-located, energy efficient housing that meets the needs of all of our residents at all stages of their lives. New housing development, whether it is construction of a new house or conversion of an old home or mill into multiple units, should advance energy conservation, watershed protection, land conservation and farm preservation and allow residents the flexibility to access services and employment through a variety of transportation modes, including walking, biking and transit. Overall, the housing stock should represent a livable environment that provides a high quality of life for residents of all ages, incomes and abilities.



goal 1

Greenfield’s policies and programs are coordinated to ensure housing units and neighborhoods adapt to meet changing needs.

STRATEGY 1

Conduct a comprehensive regional housing needs assessment.

While the baseline assessment for the Master Plan covers much of the needed data, a much more thorough analysis must be done to identify additional gaps in housing in Town. The assessment would include a detailed examination of demographic and economic factors, current housing market conditions, and would determine the market potential for developing additional housing units in Greenfield. It would also include detailed recommendations (number of units and/or lots; unit type and size; price/rent; housing features and amenities, etc.) for the housing types needed in the Town.

Implementation Actions:

- a. Assess needs for all stages of life, and a range of household size and income.
- b. Consider needs of aging population, and a full range of options for aging in place.
- c. Include issues affecting young adults, young families and workforce housing.
- d. Understand Greenfield’s regional market niche in providing a diverse range of housing.
- e. Incorporate the need for Youth Affordable Housing and student populations



Housing needs cartoon

STRATEGY 2

Audit and update zoning regulations, permitting and other appropriate regulations, to increase density of housing and population through adaptation and infill.

In order to meet the changing needs of both young and elderly citizens in Greenfield, housing units need to be updated and/or constructed differently. Adding accessory dwellings, allowing for smaller homes, co-housing, updating large older homes, and encouraging housing units above retail are very important issues that need to be addressed through the Town's current zoning regulations to make sure they are allowed and supported downtown and near critical services and amenities.

Implementation Actions:

- a. Adopt accessory dwelling unit (ADU) ordinance so residents can adapt homes to changing needs.
- b. Adopt a Neighborhood Pedestrian Zone to allow for more housing units on smaller lot size such as Cottage Housing - <http://community-that-works.org>.
- c. Amend ordinances to allow formal and informal co-housing.
- d. Work with local Cooperative Development Institute to foster new ownership models such as senior housing cooperatives and mixed-income co-housing.
- e. Encourage upper story apartments on and near Main Street and in other mixed-use neighborhoods.

Accessory dwelling units

An accessory dwelling unit (ADU) is a really simple and old idea: having a second small dwelling right on the same grounds (or attached to) your regular single-family house, such as:

- an apartment over the garage
- a backyard cottage
- a basement apartment

Here are two examples, one above a garage and the other a small cottage.



Accessory dwelling units



Implementation

goal 2

Household energy consumption from utilities, maintenance and automobile reliance are reduced, thereby reducing Greenfield’s overall contribution to greenhouse gases and increasing our community’s energy independence.

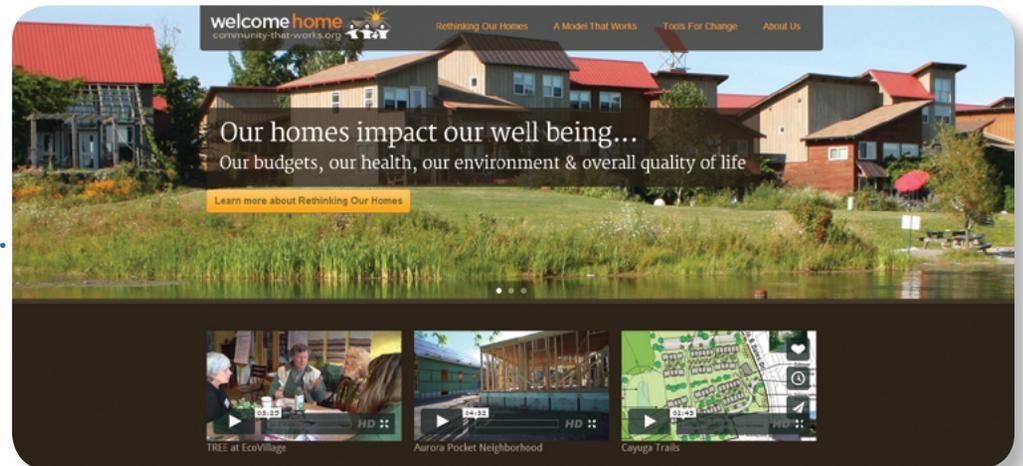
STRATEGY 3

Enhance and expand options to live in walkable neighborhoods, and reduce automobile reliance for work, services and recreation.

The Town should continue to coordinate housing and transportation planning to offer affordable housing for all ages (young and old) that allows them to walk and bike to work, school, shopping, and recreational spaces. This may require a more thorough plan to identify where additional land uses can also be supported (i.e., corner stores, bike trails, and restaurants).

Implementation Actions:

- a. Continue with mixed-use, transit-oriented development to build on the new transportation center and Greenfield’s role as county seat and crossroads.
- b. Coordinate housing with transportation planning to support existing housing clusters, particularly where aging, low-income and car-free residents are concentrated.
- c. Create a town-wide plan to add density in certain mixed-use neighborhood nodes to create more self-sufficient neighborhoods, with easy walking and biking and connections with public transportation.



Community-that-works.org website snapshot

STRATEGY 4

Replace and renew homes to create a more energy efficient housing stock.

Greenhouse gas (GHG) emissions from residential heat and electricity equaled about 33% of the total community's overall GHG emissions, and cost the community over \$28 million in 2008. In order to reduce those emissions, and to reduce utility costs, there must change the way we build new homes, and we need to do energy upgrades to existing homes to make them more energy efficient. As they become more efficient, homes should also be installing renewable energy systems to continue reducing GHG emissions, and utility costs.

Implementation Actions:

- a. Incentivize the rehabilitation of unused and underutilized buildings and large homes into energy efficient, market-rate housing with multiple units.
- b. Consider adopting a Sustainable Building Code for the town that allows for a zero-net-energy-ready standard.
- c. Continue to support public education about financial incentives (utility and other) for residential energy upgrades, such as Energy Smart Homes, and create incentives, such as green certification, for landlords.
- d. Encourage and incentivize renewable energy for new and existing homes.





Implementation

goal 3

A wide variety of affordable, attractive, sustainable housing options are available in Greenfield promoting high quality-of-life and self-sufficiency for all households.

STRATEGY 5

Create a staffed resource center to assist homeowners, tenants and landlords with education and resources on home purchase, energy use and upgrades, renovation, and financing.

Knowledge is power. Many homeowners and renters are not aware that there are numerous resources available to reduce their energy costs and have a more efficient home. An Energy Resource Center can provide owners, landlords and renters with information and support on how to utilize these programs and incentives to be more energy efficient.

Implementation Actions:

- a. Offer programming and serve as a clearinghouse for other local, state and national resources.
- b. Develop local financing tools for home-buyers and for housing rehabilitation for homeowners, this could include creating a property assessed clean energy (PACE) program.
- c. Use local revenue from electrical aggregation, Community Redevelopment Act (CRA) funds, and Community Preservation Act (CPA), to fund resource center and programs.

Property Assessed Clean Energy Financing (PACE)

Property assessed clean energy (PACE) financing supports energy efficiency and renewable energy projects by providing up-front capital that is subsequently paid back through a special assessment on participants' property taxes.

The map below shows the states with PACE-enabling legislation enacted:



26 states and the District of Columbia have legislation enabling PACE-type financing programs (existing legislation in Hawaii could allow PACE programs)

Property Assessed Clean Energy Financing

STRATEGY 6

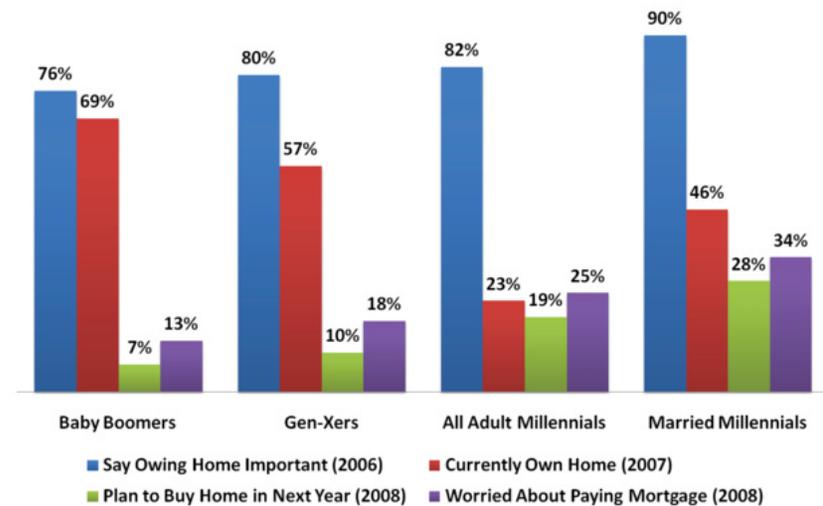
Increase housing choice, expand and update housing stock to reflect changing preferences and population.

Housing demand shifts over time. In the last century housing was created to keep up with the formation of families. Now, factors like a growing demand for walkable neighborhoods, an aging population, and more single-person households than ever is causing significant shifts in the nature of housing demand. Greenfield needs to add units, and to upgrade existing underutilized buildings to meet community goals like helping residents to age in place or start out in life. There needs to be specific focus on mobility, affordability, energy efficiency, access to services, schools and amenities.

Implementation Actions:

- a. Increase the number of available rental properties.
- b. Incentivize development of starter homes and workforce housing through District Improvement Financing or density bonuses;
- c. Expand options for residents to age in place.
- d. Create quality housing – safe, durable, energy-efficient, sustainable, and human-oriented.

Millenials and Home Ownership



Source: Frank N. Magid Associates Millennial Strategy Program

Housing ownership preferences for several generations including millennials.



Implementation

goal 4

Greenfield supplies quality, permanent affordable housing and creative transitional and supportive housing programs that include the special challenges of homeless and carless households in a rural context.

STRATEGY 7

Improve supply and access by ensuring that a full range of quality alternative housing options continue to be developed to serve diverse populations and needs, including the homeless, and those transitioning to and from independence.

Affordable housing is important at all stages of life: for students, for the single parent or “thirty-something”, and for older adults. In addition to preserving the units on the Subsidized Housing Inventory, units must also be available for households that are low to moderate income, such as our school teachers, municipal staff, and entry-level employees of local businesses.

Implementation Actions:

- a. Continue to support replacement of aging affordable housing units.
- b. Adopt inclusionary zoning to ensure ongoing replacement of low-income housing units.
- c. Ensure a full range of alternative housing options continue to be developed to serve diverse populations and needs for which typical homes and apartments are inappropriate.



Young family



Assisted living

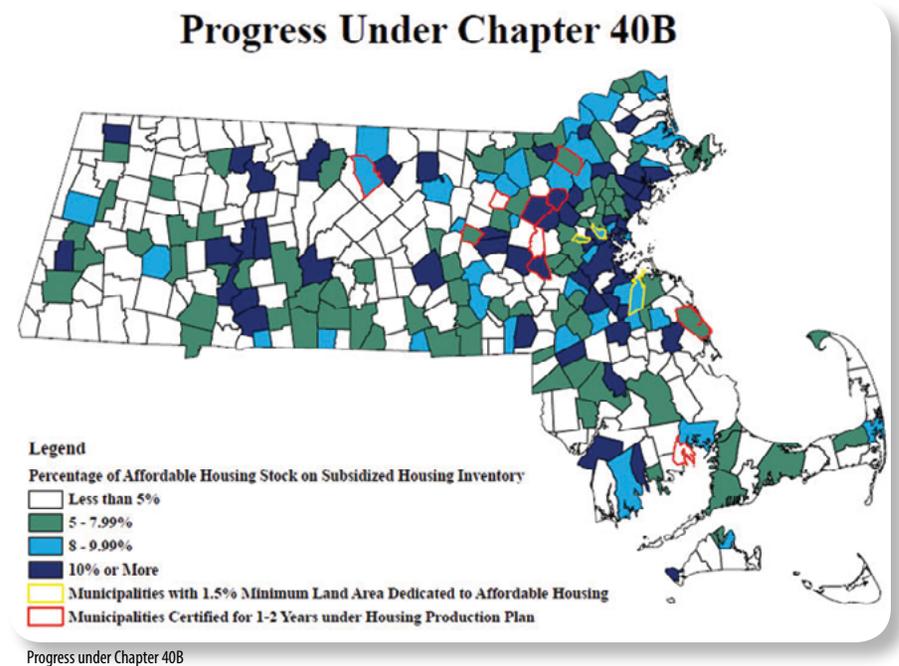
STRATEGY 8

Address Housing Demand.

After a full Housing Needs Assessment (see Strategy #1) is conducted, the Town must use the results to hone in on how to address the housing demand locally and throughout the region. This can be done by coordinating with regional stakeholders, like the Franklin Regional Housing and Redevelopment Authority, to ensure that while housing demand is being met, it is not displacing any residents due to cost or location.

Implementation Actions:

- a. Work with the Franklin Regional Housing and Redevelopment Authority and the Franklin Regional Council of Governments and other regional stakeholders to ensure municipalities achieve 10% Affordable Housing throughout the region.
- b. Augment housing options to reduce pressure on rental supply and to reduce displacement.





Implementation

goal 5

Community resilience and individual enjoyment of our abundant natural resources is enhanced through residential development practices that preserve local agriculture, water quality, biodiversity, and the visual integrity of the landscape.

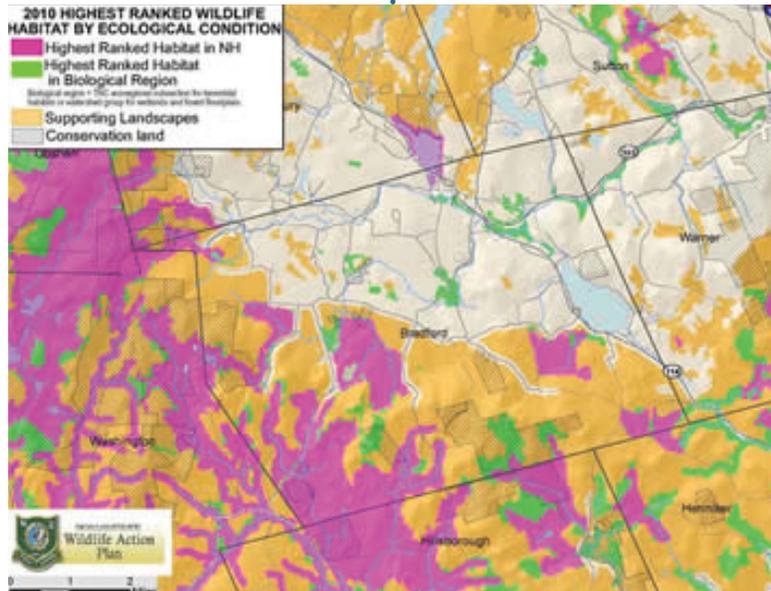
STRATEGY 9

Ensure future residential development promotes watershed protection, land conservation and farm preservation goals by focusing activity in areas with existing infrastructure.

Residential development (retrofit of existing and construction of new) needs to consider the landscape and natural resources surrounding it so as not to adversely affect water supplies, waterways, habitat or reduce agricultural land. The Town should create an inventory of its natural, cultural and aesthetic resources, layer that with the location of existing infrastructure, and use this to prioritize where new housing will be located.

Implementation Actions:

- a. Document the town's natural assets that have aesthetic and cultural value, such as waterways and rural roads, fields and forests, and agricultural lands and incorporate their protection into plans and zoning.
- b. Create an incentive bank for developers to choose from, including: parking, riparian buffer, trail connections, etc.



Bradford Highest Ranked Wildlife Habitat

STRATEGY 10

Reduce negative impacts of new and existing residential neighborhoods on natural systems while enhancing beneficial access to nature.

New and existing homes and their properties can be constructed so there is a respect and appreciation for natural resources. Low Impact Development and stormwater management, reduced impervious surfaces, connections to walking and biking trails, and support of community and backyard gardens and farming protect our resources while fostering an appreciate for, and access to, nature and how it improves our quality of life.

Implementation Actions:

- a.** Use Low Impact Development techniques such as maximum parking/impervious surface standards, performance standards to avoid/reduce stormwater runoff through municipal practices and incentives for developers.
- b.** Develop a plan for trail and bike connections, serving all neighborhoods, to natural areas.
- c.** Support agriculture and access to food through community gardens and back-yard farming.
- d.** Educate residents about yard practices that support biodiversity and resiliency, and contribute to environmental health; minimizing pesticide, water, and energy use, increasing soil fertility, using native plants, installing rain gardens and on-site water management.



Do it Yourself LID strategies for Homeowners



Implementation

goal 6

Greenfield is a thriving, vibrant, regional urban center with livable, mixed income, well-situated neighborhoods within easy reach of everyday needs.

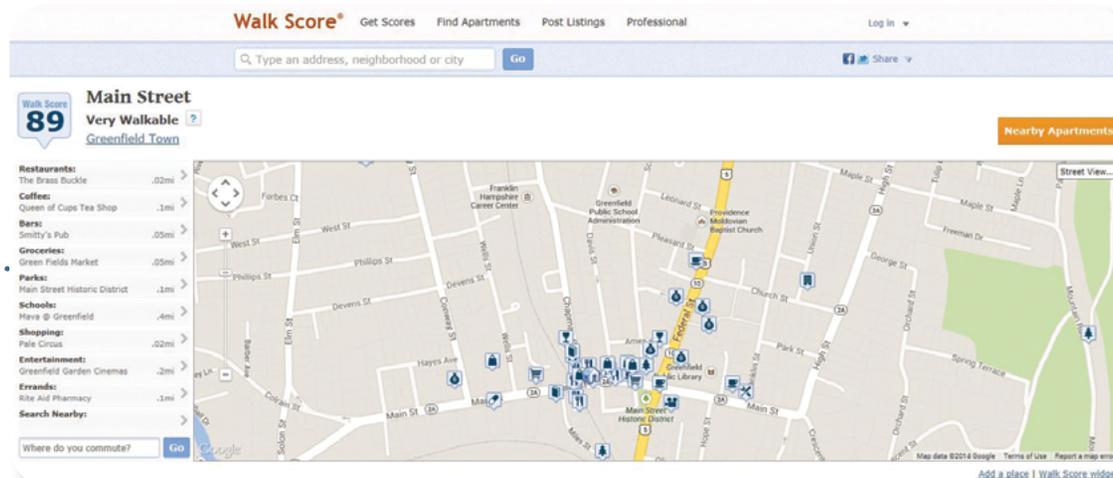
STRATEGY 11

Identify key neighborhood services, amenities and facilities and enhance connections through upgraded sidewalks, bikeways and streets.

Neighborhood-based planning is a fine-grained analysis of what and where neighborhood amenities are, where the gaps in the desired amenities might be, and what changes need to be made to meet the needs for the existing and future population in Greenfield. Amenities can include: walkability, neighborhood stores, bus stops, parks, and community gardens contribute to quality of life in a neighborhood.

Implementation Actions:

- a. Initiate neighborhood-based planning and update zoning to address town-wide needs.
- b. Divide town into neighborhoods to assess existing and desired local amenities - easy walk to school, neighborhood stores, bus stop, park, community garden, highway access.
- c. Consider a walkability-score, transit connectivity score, or some other tool for ongoing assessment of neighborhood functionality and connectivity.
- d. Develop funding tools so public improvements keep pace with private investment in homes and neighborhoods.



Walkability score for Greenfield

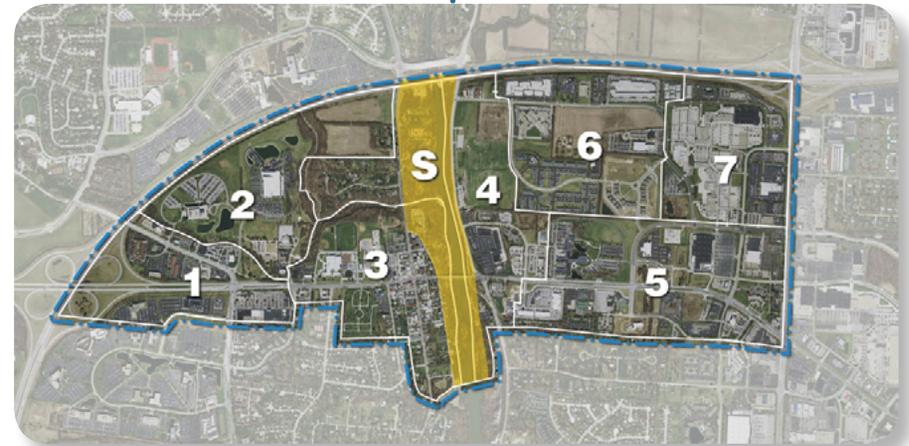
STRATEGY 12

Protect historic character of neighborhoods while facilitating improvement of housing stock.

Historic preservation is important to maintain the character of a community. Greenfield is blessed with historic homes and buildings which are still able to support housing. In addition to protecting their character, the Town could incorporate other housing strategies like providing affordable housing units, diversify the housing units available to allow live-work units to be constructed and consider aging in place needs.

Implementation Actions:

- a. Document, enhance and protect the unique character of Greenfield's neighborhoods.
- b. Make it easier to rehabilitate a variety of high-quality historic units by-right.
- c. Enhance the Health Department's capacity to pro-actively solve housing based public health issues.
- d. Improve procedures to return abandoned or tax title, or foreclosure properties into use.



Special Area Plan for Bridge Street Historic District in Dublin Ohio



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Source of Implementation Illustrations:

- Housing needs cartoon - 4-designers.com
- WelcomeHome - <http://community-that-works.org/>
- Sustainable building code - <http://www.banahuk.co.uk/images/typicalhousesection.jpg>
- Definition of PACE - <http://www.ase.org/resources/property-assessed-clean-energy-financing-pace>
- Housing Preferences - <http://www.newgeography.com/content/00123-millennials-and-home-ownership>
- Young family - CENTURY 21 Golden Realty
- Assisted living - Piedmont Assisted Living
- Progress Under Chapter 40B - housingtrustfundproject.org
- Bradford Highest Ranked Wildlife Habitat - <http://extension.unh.edu/FWT/tafw/assets/images/BradfordHighestRanked.jpg>
- Do it Yourself LID strategies - <http://www.Lowimpactdev.com>
- Walkability score for Greenfield - walkscore.com
- Special Area Plan for Bridge Street District in Dublin Ohio - <http://communityplan.dublinohiousa.gov/bridge-street-district/overview-and-purpose-2/>



NATURAL, HISTORIC AND CULTURAL RESOURCES

vision



Greenfield is recognized as a community with numerous and varied cultural amenities in a beautiful historic setting, with ready access to the rivers and fields, woods and hills of the Pioneer Valley and the recreational opportunities they provide. Our sense of place, community, and connection binds us to our Town, building civic pride and ownership which benefits the physical, cultural, and environmental health of Greenfield. We capitalize on these assets to attract visitors and new residents, as well as retaining existing residents, as a vital component of our economy.



Natural, Historic and Cultural Resources

Introduction



Sachem's Head in Temple Woods. Photo source: David L.

As one of the northern-most communities in Massachusetts's Connecticut River Valley, Greenfield has a wealth of natural and open space resources that support the vitality of the environment and quality of life at both local and regional levels. Rivers, wetlands, and forests offer critical habitat to wildlife and important ecological functions such as carbon sequestration and stormwater filtration. Heritage landscapes and farm land, which define the rural character of the Town, provide scenic attractions and contribute to the Town's economic vibrancy. Recreational resources such as parks and trails help foster healthy neighborhoods and promote active living in Greenfield.

The Town of Greenfield's historic and cultural resources offer a narrative of the Town. This story creates, reinforces, and enhances the Town's evolving identity and sense of place. It also contributes to the Town's quality of life, as historic and cultural resources have intrinsic educational, recreational, and aesthetic value.

While residents and visitors enjoy the abundance of Greenfield's natural, historic and cultural resources, it is imperative to analyze existing resource protection measures in Town and identify future needs and sustainable approaches to better preserve and utilize these resources. The Natural, Historic and Cultural Resources Element examines several natural resource, open space and recreation, and historic and cultural resource related topics that are critical to sustainability in Greenfield. In addition, this Element discusses constraints and barriers to resource preservation and promotion in Town and advances goals and strategies to better protect, preserve, and utilize Greenfield's natural, historic, and cultural resources.



goals

In Ten Years...



1

Greenfield's natural, historic, and cultural resources will be an integral part of the Town's identity with wider recognition and use.



2

Residents and visitors of all ages in Greenfield will enjoy various recreational opportunities as a vital contribution to their health and wellbeing.



3

Our natural world and the scenic, rural, and agricultural landscapes will be protected, preserved, and improved to support biodiversity and healthy living in Greenfield.



4

Greenfield's cultural life will be encouraged, expanded, and better promoted, with more established town-wide events.



5

The historic resources in Greenfield (historic buildings/ areas, archaeological sites, and heritage landscapes) will be preserved and protected.

2001 Greenfield Master Plan Natural, Historic and Cultural Resources Goal:

Protect and enhance Greenfield's natural resource systems, cultural resources, and historic buildings.



Our Natural, Historic and Cultural Resources Driving Forces

Greenfield's rich history and its natural and cultural assets are not well-known or widely used, in large part due to a lack of marketing. Economic and environmental challenges, a lack of protected land, and a lack of community pride and vision need to be overcome to attract new and retain existing residents, including people who live in the greater Pioneer Valley, in order to achieve our full potential. We must recognize that our natural, historic, recreational, and cultural assets are vital components of a robust local economy and not luxuries. We recognize conflicts will arise between natural and historic preservation and a system must be developed which includes public forums in order to resolve conflicts.

Greenfield's Natural Resources

Greenfield's Landscape

Greenfield is located in the Connecticut River Valley lowland region. The valley in Greenfield reaches nearly three miles wide and seven miles long. Over five hundred million years, this valley transitioned from an inland sea to terra firma filled with sediment when the sea floor settled. Mountains were filed down by erosion and created the uplands that form the western boundary of both Greenfield and the Connecticut River Valley. Rocky Mountain, a trap rock ridge resulting from magma movement in the basin, defines a portion of the Town's eastern boundary that separates the developed portion of the Town from the Connecticut River.

Today Greenfield's topography is characterized by large expanses of relatively flat floodplain terrain framed by forested hills and ridgelines, with the highest local elevation – approximately 870 feet above sea level – on Shelburne Hill and Greenfield Mountain in the southwest corner of the Town. Four major



Poet's Seat Tower. Photo source: MMCanonball on Panoramio Google Map

waterways, the Green, Fall, Deerfield, and Connecticut Rivers, meander through and around the town and converge near downtown Greenfield to the southeast.

Such natural formation grants Greenfield a unique landscape with rhythm and flow. The mountain ridges encircling the Town offer a number of vistas, such as Poet's Seat Tower, Sachem's Head, Shelburne Mountain, and Canada Hill Ridge which offer scenic views of the downtown area, the Connecticut River, the Rocky Mountain Ridge and beyond. The Green, Fall, and Deerfield river corridors, while carrying vital water flows through the Town, provide tremendous potential for recreational opportunities, including swimming, fishing, boating, and ecotourism, that need further exploration. Enclosed by hills and rivers, this relatively flat and open land nourishes the vibrant Town center in the south and the rich agricultural landscape in the west, primarily the Upper and Lower Meadows (see **Figure 5-1**).

In addition, there are a variety of unique geologic features in Greenfield. These resources range from the drained glacial lake plain of Hitchcock on which the

majority of Greenfield’s development sits today, to the Pocumtuck Range (or Ridge) – represented by Rocky Mountain – formed by lava flows from the Mesozoic age, to the geologic specimens – such as armored mud balls and igneous rocks – exhibited at Greenfield Community College, to dinosaur footprints occasionally spotted in the lava ridge slopes along the Connecticut River.¹

Deemed as “one of the best places in the world to study geology,”² Greenfield has the potential to capitalize, with commitment to resource preservation, on its abundant scenic landscapes and unique geologic attractions for recreation, tourism, and education purposes.

Soil and Agriculture in Greenfield

Greenfield is part of the Pioneer Valley,³ a region considered to have some of the best agricultural soils in New England, as well as the entire United States. These prime soils are the results of years of soil deposits from the Connecticut River and its tributaries⁴ (see **Table 5-1**).

These ideal agricultural soils have contributed to the rich farming history of Greenfield, dating back to 7,000 – 9,000 years BCE when Pocumtuck Indians originally inhabited the area and grew field crops. Today, there are approximately 14 farms in Greenfield, totaling 1,038 acres of land, that are permanently protected under the Agricultural Protection Restriction (APR) Program. Another 531 acres of land, in addition to the APR land, are enrolled in the Chapter 61A program for active agricultural uses.⁵

1 Geologic History of the Connecticut River Valley near Greenfield, MA. Richard D. Little, Professor of Geology, Greenfield Community College, Greenfield, MA
 2 Ibid
 3 Pioneer Valley is the colloquial name for the U.S. Commonwealth of Massachusetts’s portion of the Connecticut River Valley.
 4 2012 Open Space and Recreation Plan, Town of Greenfield, MA
 5 Chapter 61A program is a state program which allows the property to be assessed at a lower value than the land is worth on the open market to encourage people to keep land in active agricultural use. Land owner can come in and out of the Chapter 61A program on a yearly basis, therefore lands under the Chapter 61A program are not considered protected open space.

Table 5-1: Ten General Soil Types in Greenfield, MA

GENERAL SOIL AREA	ACRES	%	SEVERE USE LIMITATIONS (✗) / BEST SUITED USES (✓)					
			Development	Agriculture	Recreation	Woodland	Wildlife Habitat	Pasture
Westminster-Cheshire-Shelburne	1,380	10%	✗	✗				
Hadley-Ondawa-Winooski	410	3%		✓				
Warwick-Walpole-Merrimac	3,300	24%				✓	✓	✓
Nassau-Dutchess-Bernarston	410	3%			✓	✓		
Hollis-Charlton	280	2%	✗		✓	✓		
Merrimac-Agawam-Sudbury	1,930	14%	✗		✓			
Melrose-Buxton-Scantic	1,240	9%		✓		✓		
Merrimac-Hinckley	2,340	17%	✓					
Holyoke & Sunderland-Cheshire	2,060	15%	✗		✓	✓		
Windsor-Peat-Scarboro	410	3%	✗			✓	✓	
Total	13,760	100%	-					

Source: 2012 Open Space and Recreation Plan, Town of Greenfield, MA

Most of the agricultural land is concentrated in three main areas in Town. One is the relatively wet area of land in western Greenfield called the “Meadows”, consisting of Upper and Lower Meadows, both of which feature heritage agricultural landscapes with farms and historic houses. The other two areas are in the northern part of the Town along Leyden Road where the Wright-View Farm and the old Hastings Farm are located, and near Barton Road where Noyes Farm and the new Greenfield Community Farm site (see **Figure 5-2**). Today the majority of the Town’s agricultural land is in hay and feed corn production for local dairy farms.⁶

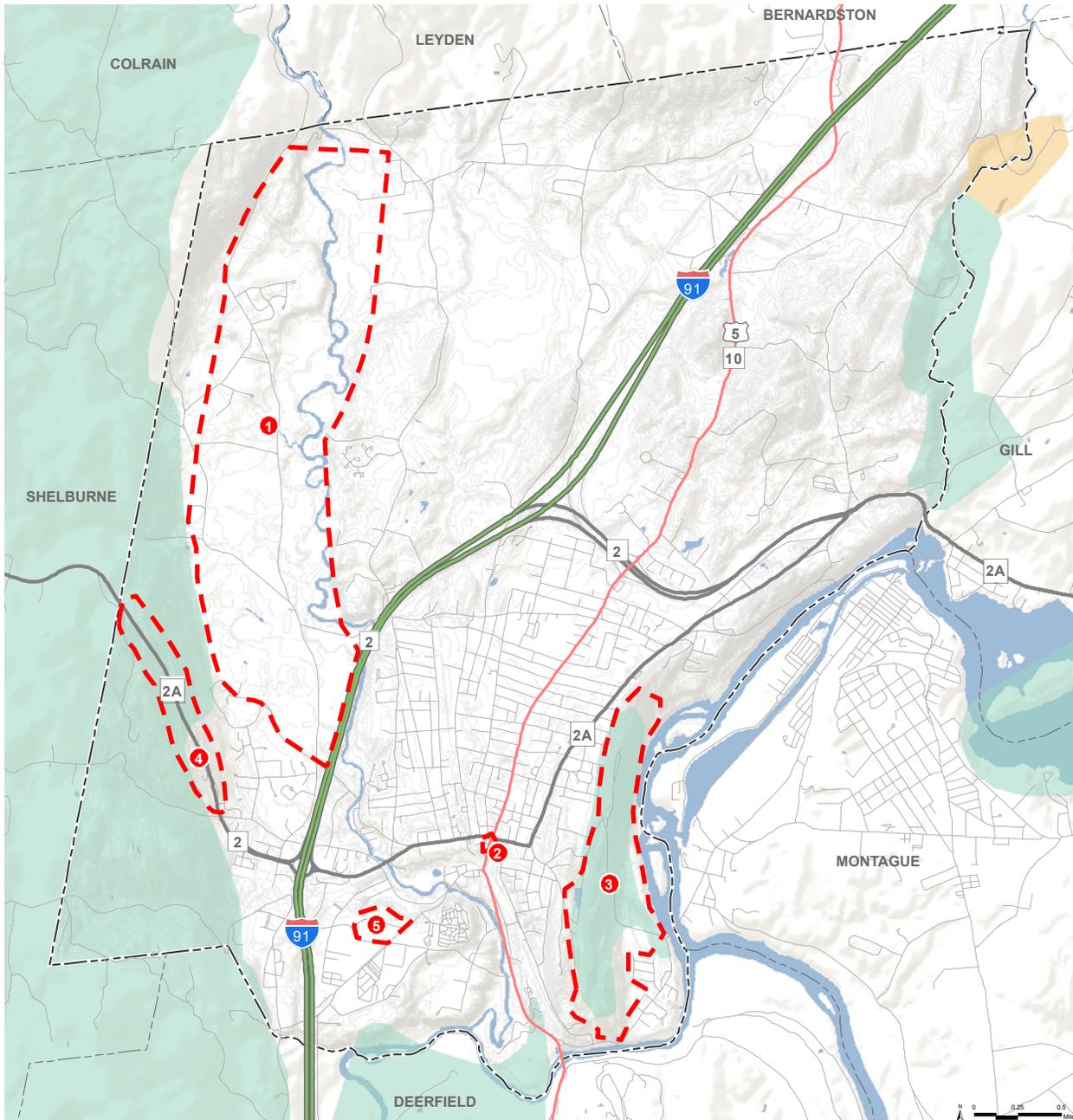
6 The Greenfield Food Study, 2013



Figure 5-1: Scenic and Unique Landscape Features in Greenfield, MA

Legend

- Greenfield Town Boundary
- Surrounding Town Boundary
- Water
- Interstate
- U.S. Highway
- State Route
- Local Road
- Scenic Landscape**
 - Distinctive
 - Noteworthy
- Priority Heritage Landscape**
 - [1] Upper and Lower Meadows
 - [2] Town Common
 - [3] Rocky Mountain Area
 - [4] Mohawk Trail Corridor
 - [5] Fairgrounds



VHB Vanasse Hangen Brustlin, Inc.

Data Source: MassGIS



Farmland in the Meadows. Photo source: VHB

While agricultural land in Greenfield has been decreasing in recent decades due to development pressure (more detail in the Land Use Element), the Town is committed to preserve its agricultural heritage. The Town of Greenfield 2012 Open Space and Recreation Plan made agricultural preservation one of the top priorities and suggested the Town take a pro-active role in protecting agricultural land through public education, promoting conservation and deed restrictions, and zoning control, etc.⁷ Furthermore, the 2013 Greenfield Food Study called on a more diverse array of food production for local consumption, as well as more diverse programs and activities along the local food value chain to promote the food culture in Town and grow Greenfield's identity as a local food hub.⁸

⁷ 2012 Open Space Recreation Plan, Town of Greenfield, MA

⁸ The Greenfield Food Study, 2013

Water Resources

The abundance of water resources helps define Greenfield's natural and cultural characters. At the southern end of Town is the confluence of the Fall, Green, Deerfield, and Connecticut Rivers. The Green River flows through the entire western portion of the Town and forms the northern border of the Towns of Colrain and Leyden. The Connecticut River forms the Town's eastern boundary with the Town of Montague; the Fall River forms the Town's northeastern border with the Town of Gill, while the Deerfield River separates Greenfield and the Town of Deerfield on the south. In addition, the Town has three ponds: Highland Pond, Maynard Pond, and Newell Pond. Highland Pond, located in Highland Park, is being actively used for various educational and recreational purposes.

Greenfield is located within two major watersheds – the eastern quarter of town is located in the Connecticut River watershed, while the western three-quarters are located in the Deerfield River watershed which is a sub-watershed of the former. The Green River runs north to south through the heart of Greenfield. It is both a water supply source and a recreational resource. The Green River watershed is a sub-watershed of the Deerfield River.⁹



Green River dams, Greenfield, MA. Photo source VHB



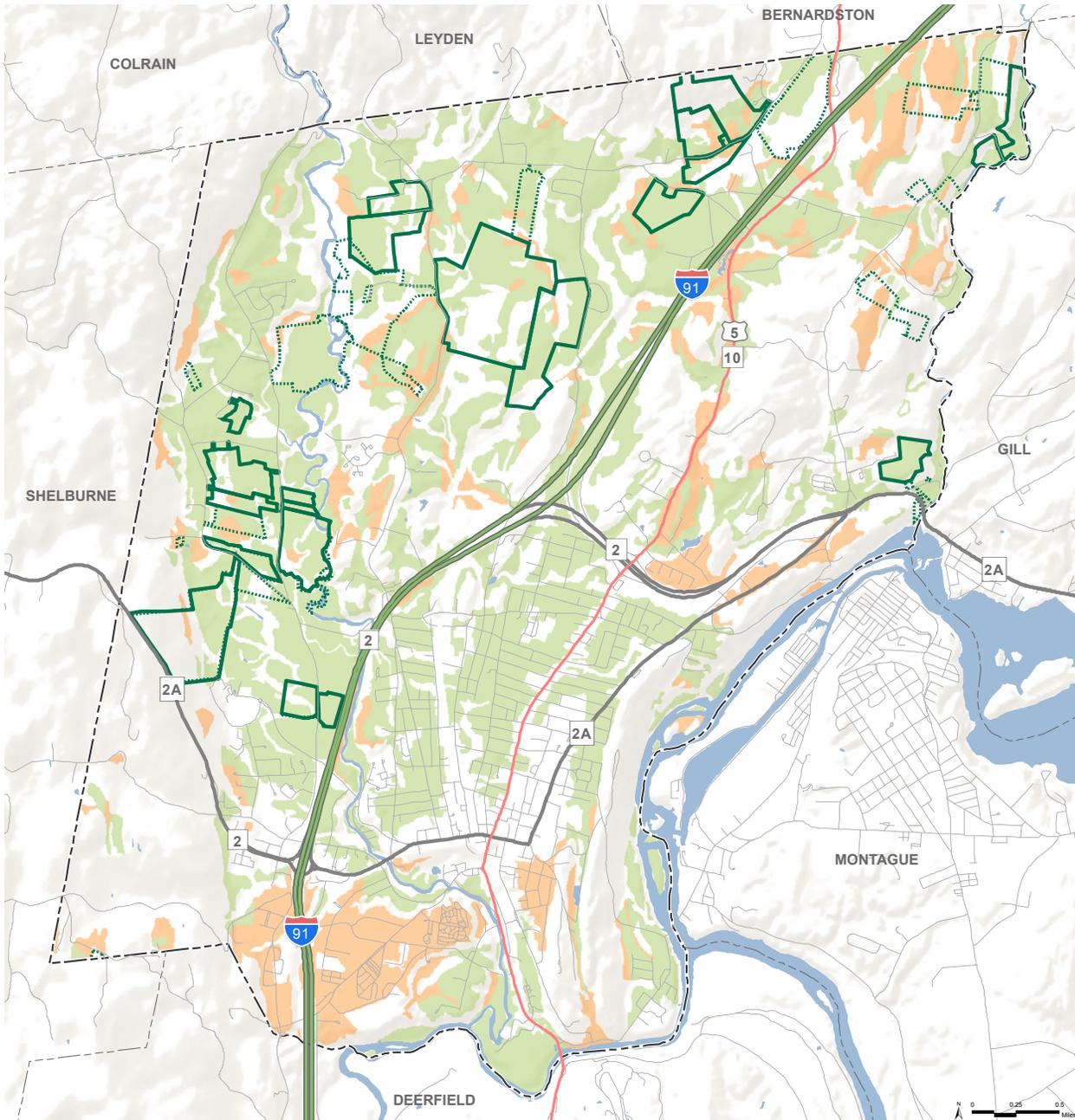
⁹ 2012 Open Space Recreation Plan, Town of Greenfield, MA



Figure 5-2: Agricultural Resources in Greenfield, MA

Legend

- Greenfield Town Boundary
- Surrounding Town Boundary
- Water
- Interstate
- U.S. Highway
- State Route
- Agricultural Preservation Restriction (APR) Land
- Chapter 61A Land (entirely or partially)
- Agricultural Soil**
- Prime Agricultural Soils
- Farmland of Statewide Importance



VHB Vanasse Hangen Brustlin, Inc.

Data Source: MassGIS

Approximately 95% of Greenfield’s residents are served by the municipal water supply system. Greenfield uses both groundwater and surface water for its public drinking water supplies. Ground water is supplied by the Millbrook wells and potentially by the Leary wells in the future. The Town established a Water Supply Protection District, a zoning overlay district composed of three zones, to protect, preserve and maintain existing and potential sources of groundwater supply and recharge areas. Surface water is supplied by the Green River behind the dam on Eunice Williams Road and by the Leyden Glen Reservoir in Leyden. Characters of these public drinking water supply sources include:

- Millbrook Wells - The three (3) wells supply high quality, naturally filtered water, which is pumped from a single subsurface aquifer.
- Leyden Glen Reservoir - The dam impounds 45 million gallons of water. The watershed contains over 350 acres of steep forested land. As a matter of policy, the land is not open to the public.
- Green River - The water is drawn from behind the dam off of Eunice Williams Drive. The source is used during the peak demand periods in the summer months.
- Leary Wells - A potential well site for municipal water supply located in northwest Greenfield. Currently not used.

Due to the number of rivers that pass through Greenfield, flooding primarily from rainfall or in combination with snowmelt is an important issue.¹⁰ Since the late 1930s, the Town has experienced 100-year flood events in many areas that were a result of heavy rainfall, including the floods of 2005. Another major flood occurred in 2011 as a result of Hurricane Irene. These flooding events led to severe damage to neighborhoods and infrastructure.

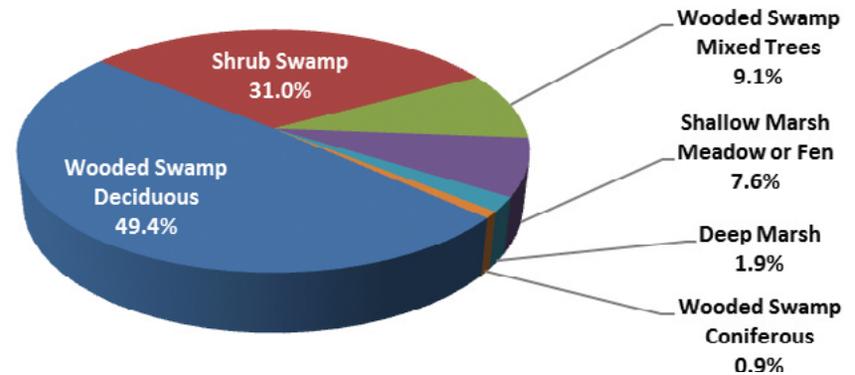
Greenfield participates in the National Flood Insurance Program and relies on FIRM (National Flood Insurance Rate Map) maps and the electronic FEMA

10 2012 Open Space Recreation Plan, Town of Greenfield, MA

(Federal Emergency Management Agency) maps to determine flood hazard areas. In an effort to reduce overall flood risk, Greenfield has adopted a zoning overlay district – the Floodplain District – to restrict development within floodplains and preserve the natural flood control and storage capacity of those areas.

Wetlands are another important water resource in Greenfield that play a significant role in the protection of public and private water supply, flood control, prevention of pollution, and provision of wildlife habitat. Currently in Greenfield there are approximately 924 acres of wetlands, excluding open water, that are subject to protection under the Massachusetts Wetland Protection Act (MGL Ch. 131, Sec. 40). The majority of the wetland resources in Town are wooded swamp deciduous (49.4%) and shrub swamp (31%) as shown in **Figure 5-3**.

Figure 5-3: Type of Wetlands in Greenfield, MA



Source: MassGIS DEP wetland data

The Massachusetts Wetlands Protection Act requires a 100-foot buffer zone around protected wetland areas, with the exception of perennial rivers and streams, which have 200 feet of riverfront jurisdiction per the Massachusetts

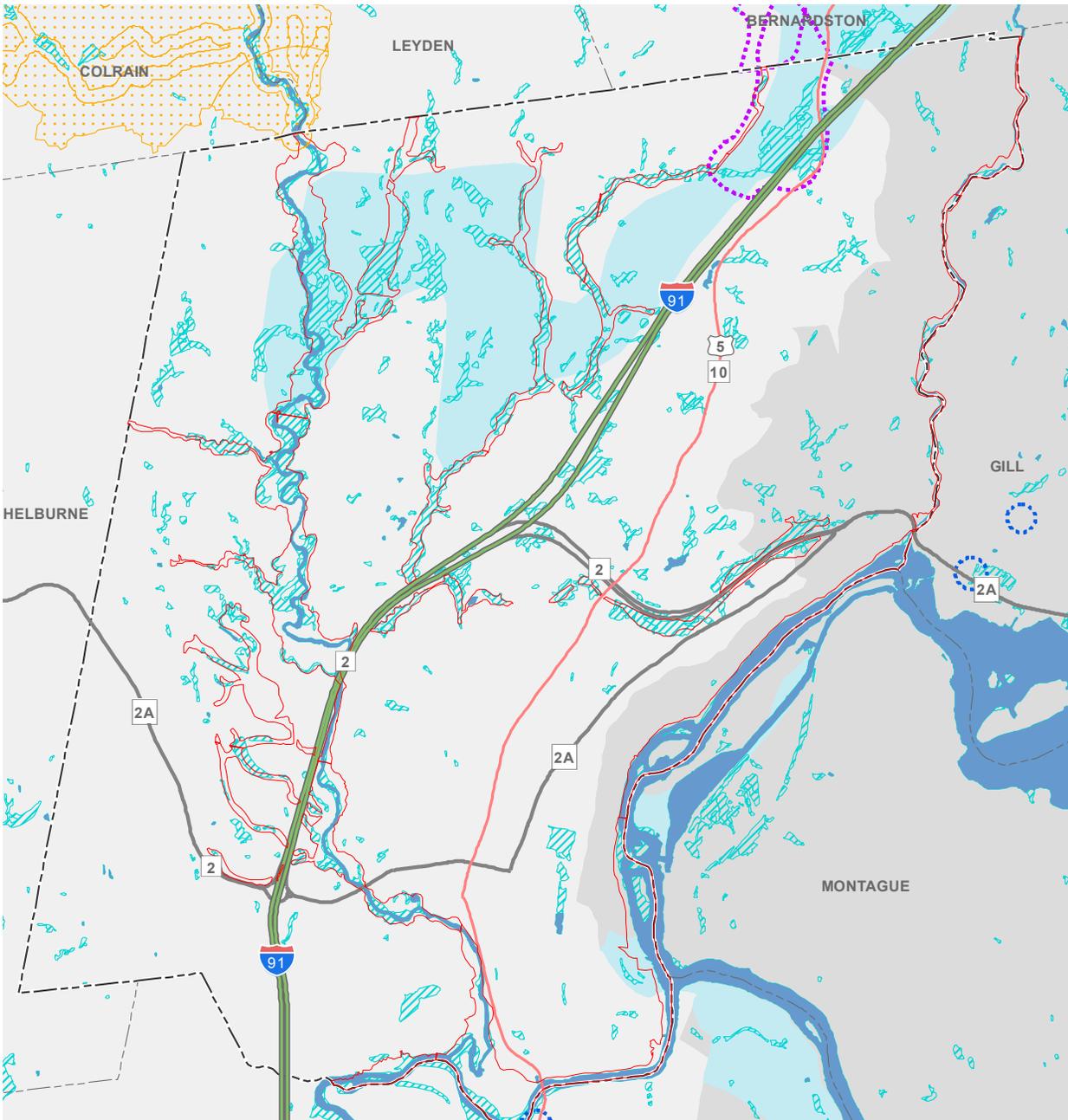


Figure 5-4: Water Resources in Greenfield, MA

Legend

- Greenfield Town Boundary
- Surrounding Town Boundary
- Interstate
- U.S. Highway
- State Route
- Connecticut River Watershed
- Deerfield River Watershed
- Open Water
- ▨ Wetlands
- Aquifers
- Green River Surface Water Supply Protection Zone (Greenfield Water Department)
- DEP Zone II - Approved Wellhead Protection Areas (Greenfield Water Department)
- DEP Interim Wellhead Protection Areas
- Floodplain

VHB Vanasse Hangen Brustlin, Inc.

Data Source: MassGIS

River Protection Act.¹¹ The Town of Greenfield Wetlands Protection Ordinance, adopted in 2001 and recently updated in 2012, defines a 25-foot “No Disturb Zone” around all resource areas, including wetlands. The Greenfield Conservation Commission is responsible for the local administration, implementation, and enforcement of the Wetland Protection Act and the Town’s Wetland Protection Ordinance.

Plant and Animal Species in Greenfield

Greenfield has diverse array of plant and wildlife species. The Town’s vegetation consists of a mixture of native and introduced species. According to the Massachusetts Natural Heritage & Endangered Species Program (NHESP), Greenfield has 259 native plant species on the Massachusetts Endangered Species Act (MESA) list that are identified as Endangered, Threatened, or of Special Concern in the context of climate change impacts (more information available in Appendix).

The fauna of Greenfield is linked directly to the quantity, quality, and diversity of soils, water, and vegetation. The NHESP has mapped out Priority and Estimated Habitats of Rare and Endangered Species to indicate the geographic extent of the habitat of state-listed rare species. Priority Habitat areas are the filing trigger for project proponents, municipalities, and all others for determining whether or not a proposed project or activity must be reviewed by the NHESP for compliance with MESA and its implementing regulations. BioMap 2, a comprehensive biological resource inventory program led by the Massachusetts Department of Fish & Game, further identifies Core Habitats¹² and Critical Natural Landscape¹³ in Massachusetts cities and towns. The latest BioMap2 report indicates that Greenfield has a total of 1,670 acres of Core Habitat and 1,587 acres of Critical Natural Landscape, of which 17.9% and 15.3%, respectively, are protected (see **Figure 5-5**).

¹¹ 2012 Open Space Recreation Plan, Town of Greenfield, MA

¹² Core Habitat identifies specific areas necessary to promote the long-term persistence of rare species, other Species of Conservation Concern, exemplary natural communities, and intact ecosystems.

¹³ Critical Natural Landscape identifies intact landscapes in Massachusetts that are better able to support ecological processes and disturbance regimes, and a wide array of species and habitats over long time frames.

Vernal pools are another important component of Greenfield’s natural environment. As temporary bodies of fresh water, vernal pools provide critical habitat for many vertebrate and invertebrate wildlife species.¹⁴ Many of the species which are entirely dependent on vernal pool habitats are listed by the state as rare species. Currently Greenfield has four NHESP certified vernal pools and 35 potential vernal pools (see **Figure 5-5**). The Deerfield River Watershed Association has a volunteer group that provides training and helps to certify vernal pools.



Wood turtle (*Glyptemys insculpta*), listed as a species of Special Concern in Greenfield.

Photo credit: Mike Jones, UMass

Trees not only promote healthier living environments for people, but also provide critical wildlife habitat. Greenfield, like many communities, suffered great losses of trees with the invasion of Dutch Elm disease. The Town of Greenfield has been dedicated to promoting street tree coverage through tree-planting programs both publicly and privately funded. Each year the Department of Public Works in collaboration with the Greenfield Tree Committee plants over 30 trees.

Threats to Greenfield’s Natural Resources

There are a number of environmental challenges to be addressed in order to achieve sustainability in Greenfield’s natural resources.

Hazardous Materials Sites

Greenfield, as many communities, has a number of contaminated sites resulting from former industrial uses. Two of these sites, the former Toyota of Greenfield

¹⁴ Natural Heritage Endangered Species Program, Vernal Pool Fact Sheet



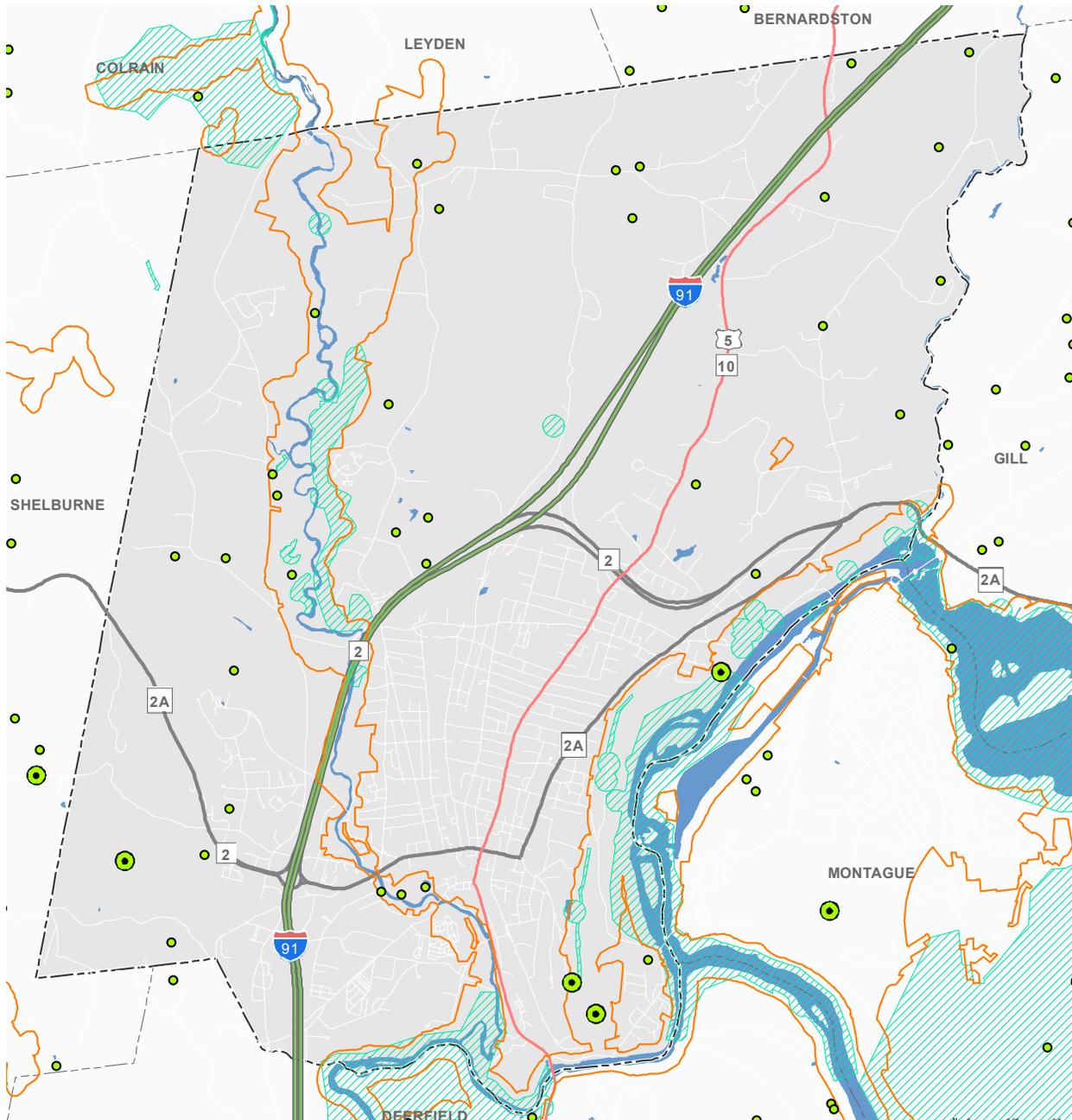
Figure 5-5: Primary Natural Habitat Features in Greenfield, MA

Legend

- Greenfield Town Boundary
- Surrounding Town Boundary
- Interstate
- U.S. Highway
- State Route
- NHESP Certified Vernal Pools
- NHESP Potential Vernal Pools
- Water
- NHESP Priority Habitats of Rare Species
- NHESP BioMap Core Habitat

VHB Vanasse Hangen Brustlin, Inc.

Data Source: MassGIS



site and the former Bendix products property, have received environmental assessments. The Toyota site located in downtown Greenfield is now the home of the new intermodal John W. Olver Transit Center serving the Franklin County region. The Bendix site has been remediated as a Brownfield site and awaits future redevelopment, potentially into an eco-industrial park.

Two other hazardous waste sites, the Greenfield Tap and Die (GTD) complex and an abandoned gas station on the banks of the Green River at 270 Deerfield Street, have been remediated and closed out under the Massachusetts Contingency Plan (MCP). These two sites, which are located close to water resources, will serve as pilot projects in Greenfield for restoration and reuse of hazardous waste sites. In addition, the former Lunt Silversmiths site located on Federal Street near downtown Greenfield has been identified with contaminants from an industrial solvent and is under ongoing testing required by Massachusetts Department of Environmental Protection (MassDEP). The Town is exploring the possibilities of acquiring and reusing this site in hope to preserve historic athletic fields and spur economic vibrancy.

Non-point Source Pollution

Non-point source pollutants such as stormwater runoff and septic system discharge have harmful effects on drinking water supplies, recreation, fisheries and wildlife. Greenfield has recognized the importance of storm-water management and continues to seek funding to develop a comprehensive plan to meet MassDEP's stormwater management standards.¹⁵

Air Quality

The Greater Connecticut region and the New York-New Jersey-Long Island region have been designated by the Environmental Protection Agency (EPA) as 8-hour ground-level ozone non-attainment areas in the summer months. As a result, the Connecticut River Valley has particularly bad air quality days during

Mitigate Ground Level Ozone

Ozone acts as a protective layer high above the earth, but it can be harmful to breathe. Ground level, or "bad", ozone is created by chemical reactions between oxides of nitrogen (NOx) and volatile organic compounds (VOC) in the presence of sunlight. Emissions from industrial facilities and electric utilities, motor vehicle exhaust, gasoline vapors, and chemical solvents are some of the major sources of NOx and VOC.

There are actions we can take to reduce air pollution and protect our health when ozone levels reach the unhealthy range:

- Choose a cleaner commute – car pool, use public transportation, bike or walk when possible.
- Combine errands to reduce "cold starts" of your car and limit engine idling.
- Conserve electricity and set your air conditioner at a higher temperature.
- Refuel cars and trucks after dusk.
- Use household, workshop, and garden chemicals in ways that keep evaporation to a minimum, or try to delay using them when poor air quality is forecasted.

In addition, actions such as participating in local energy conservation programs and mulching or composting leaves and yard waste can also help reduce air pollution.

¹⁵ 2012 Open Space Recreation Plan, Town of Greenfield, MA



the summer when ground level ozone travels up the Connecticut River valley from New York City and New Jersey.

Invasive Species

Invasive species are plants that are “non-native” to an ecosystem and spread rapidly due to a lack of competitors, displacing native species. In Greenfield, invasive species such as Asiatic bittersweet and Japanese knotweed are found in most of the Town’s parks, forests, and recreational areas. The problems associated with occurrences of invasive species include loss and destruction of habitats for wildlife, soil degradation, and reduced access to recreational areas due to an overabundance of the invasive species. Managing invasive species on town-owned properties demands a long-term commitment

Dams

The Green River is a cold water fishery and one of the most pristine river habitats in southern New England. In an effort to restore critical cold water habitat and fish passage through the entire length of the Green River, the Town has discussed whether to remove the lower Wiley and Russell Dam. According to the feasibility study completed by the Army Corps of Engineers (USACE) in 2007, removing the dam would provide fish passage around the upper three dams based on.

Open Space and Recreational Resources in Greenfield

Greenfield has long been enriched by the quality of its open environment. This environment is enjoyed by residents and visitors of the Town in a variety of ways, ranging from active participation in organized recreational activities to reflective enjoyment of the landscape’s scenic qualities.¹⁶

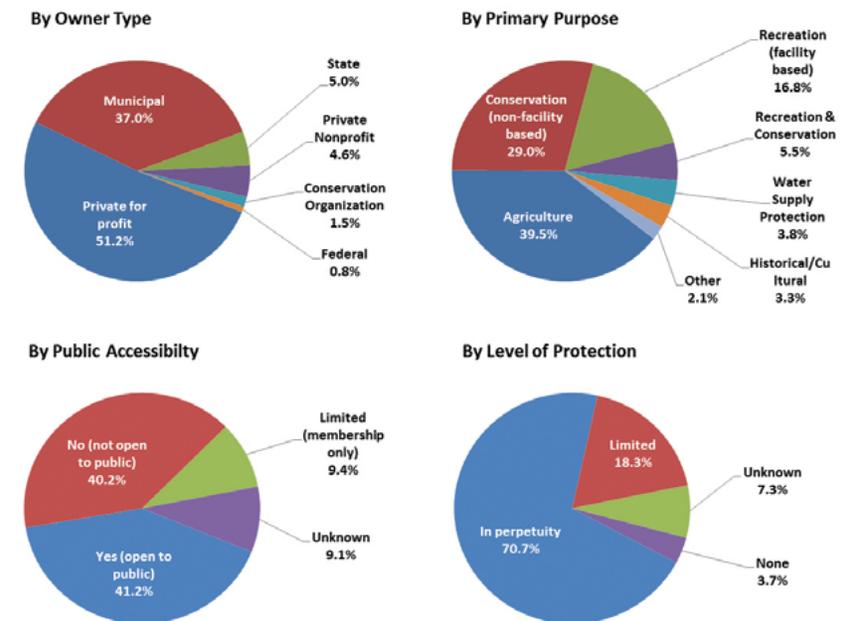
16 2012 Open Space Recreation Plan, Town of Greenfield, MA

Open Spaces

Note: “Unknown” indicates that the status of public accessibility or level of protection has not been determined for that portion of the open space parcels in town.

Greenfield’s open space is a diverse combination of historical, natural and recreational areas which includes forests, walking trails and water supply areas. According to the latest open space data available through Massachusetts Office of Geographic Information (MassGIS), there are a total of 2,626 acres of protected and recreational open space in Greenfield. The majority of these open spaces (51.2%) are owned by private for profit entities, while another 37% are

Figure 5-6: Types of Open Space in Greenfield



Source: MassGIS Protected and Recreational Open Space data, 2013

Note: “Unknown” indicates that the status of public accessibility or level of protection has not been determined for that portion of the open space parcels in town.

owned by the Town. The Town has acquired open space properties through outright purchase, donations, development agreements, and back taxes.

As shown in **Figure 5-6**, about 40% of open space is primarily used for agricultural purposes, with another 29% and 16.8% used respectively for conservation and facility-based recreation. Over 1,855 acres of open space, or 70.7% of the total in Town, are protected in perpetuity, while 481 acres have limited protection. Not all of the open space areas in Town are publicly accessible: 1,082 acres or 41.2% are open to the public, most of which are permanently protected conservation and recreation areas; about 250 acres, or 9.4%, are accessible by membership only; and another 1,055 acres of open space are not open to the public.

Recreation in Greenfield

Recreation - for active uses like organized sports and passive uses like bird watching - contributes fundamentally to the health and wellbeing of a community, as well as the pride and culture associated with it. The recreational opportunities Greenfield offers to its residents and visitors include not only areas specifically dedicated and developed for recreation and/or conservation uses but also the recreational enjoyment tied to the overall character of the Town's natural and cultural and historic landscape.



Greenfield Swimming Area and Bike Path. Photo source: VHB

Parks and Recreation: Luxury or Necessity?

What are the roles of parks and recreation resources in a community? Some people think of them as a luxury, but a glimpse at the benefits of these resources tells us that parks and recreation are necessities for a healthy and vibrant community.

Economic Value

Parks and recreational resources make a community a desirable place to live, work, and visit. They help improve tax base and attract businesses and tourists, thereby contributing to the ongoing economic vitality of the community.

Health and Environmental Benefits

Creating and promoting places to be physically active can improve individual and community health through increased exercises and reduced stress. Parks and recreational areas also help improve water and air quality, produce habitat for wildlife, and provide places for children and families to connect with nature.

Social importance

Parks and recreation are tangible reflections of the quality of life in a community. They reinforce the sense of public pride and cohesion in the communities. They provide gathering places for families and social groups as well as for individuals. They offer places for health and well-being that are accessible by persons of all ages and abilities. In addition, they help to deter crime and help our youth develop into contributing members of our communities.



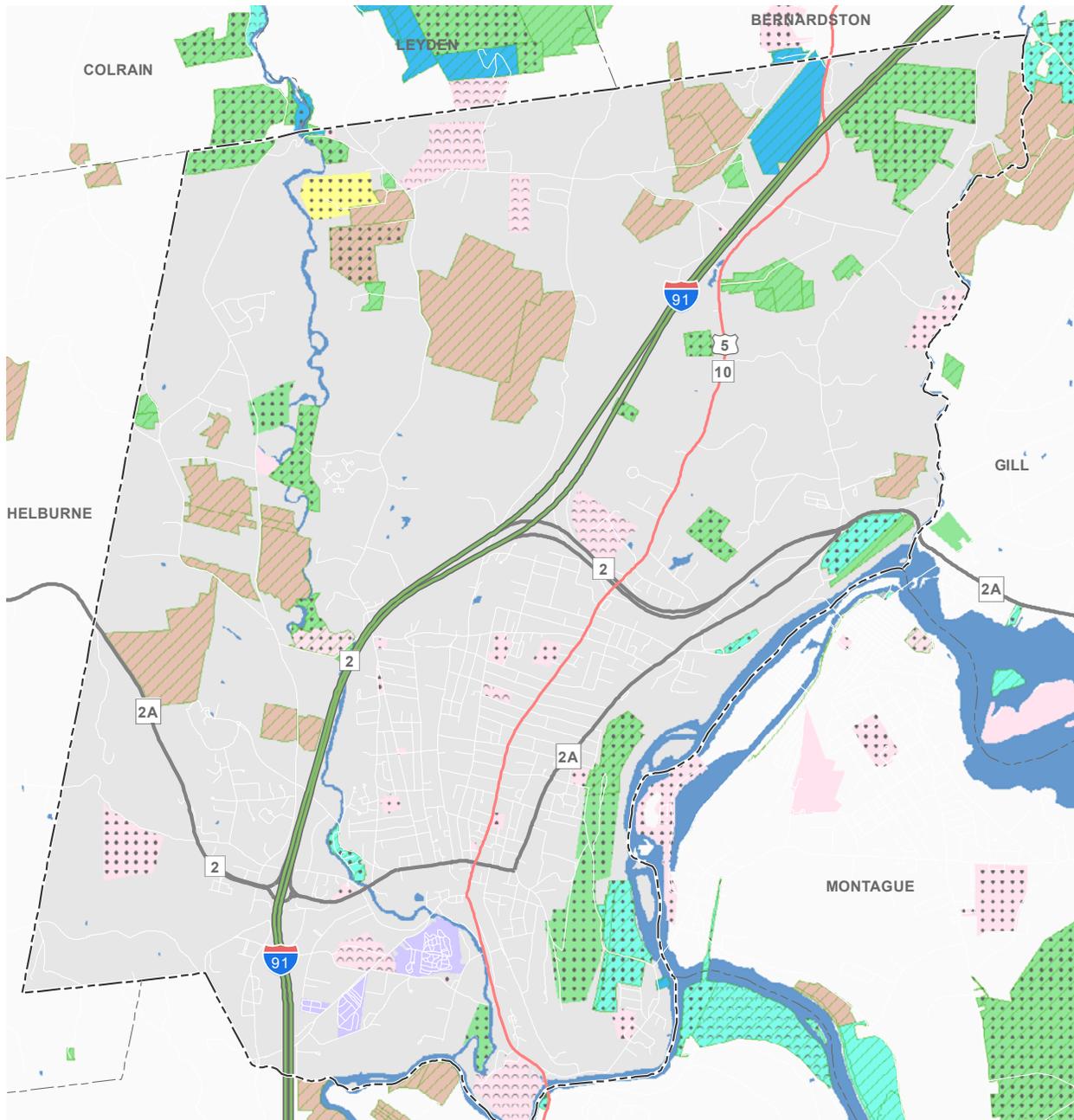
Figure 5-7: Open Space and Recreation Opportunities in Greenfield, MA

Legend

- Greenfield Town Boundary
- Surrounding Town Boundary
- Open Water
- Interstate
- U.S. Highway
- State Route
- Open Space by Primary Purpose**
- Conservation
- Recreation
- Recreation and Conservation
- Agriculture
- Historical/Cultural
- Water Supply
- Other
- Protected in Perpetuity
- Full Public Access
- Limited Public Access

VHB Vanasse Hangen Brustlin, Inc.

Data Source: MassGIS



Currently there are 18 town-owned conservation areas, parks, fields, and playgrounds that are publicly accessible for athletic and recreational uses such as baseball, tennis, swimming, playgrounds, picnicking, and hiking, etc. These resources range from small playgrounds to major fields like the Abercrombie Field and Beacon Field. Also included are large parks and conservation areas like the Rocky Mountain Park with trails connected to the regional trail network and the Griswold-GTD Conservation Area which offers a two mile long Stewardship Trail and nearly 200 acres of open space that are fully accessible to the public. Managed by the Parks and Recreation Department, the School Department, the Conservation Commission, or DPW, most of these recreational areas are concentrated in the southern half of the Town where population density is higher or in the northern half along the Green River and near Interstate 91.

In addition to town-owned recreational facilities, there are a number of privately-owned and managed sites in Greenfield that are for recreational uses. These sites are of various sizes and locations and offer recreational opportunities like camping and golfing. Although most of these privately-owned recreational facilities have limited general public access (i.e., access if granted through membership), they help retain valuable open space resources in Greenfield and draw residents and visitors alike.

Compared to active recreation that usually involves structured landscape and organized activities, passive recreation, such as hiking, running, and fishing, is less consumptive and often occurs in more tranquil and solitary environments with less human influence. The rich natural and cultural resources in Greenfield present great potential for passive recreational opportunities. Mountains and ridges offer scenic views of the Town and beyond for hikers. Woods, ponds and wetlands, particularly in accessible conservation areas such as the Griswold Wildlife Reserve, become ideal locations for bird watching. Miles of rivers and banks not only support vital wildlife habitats but also bring immense potential for water-based recreational activities such as fishing, kayaking and canoeing. River walks and trails provide critical, direct access to Greenfield's water resources.

The Green River, which runs through Greenfield, is of particular interest to the Town in terms of both the passive and active recreation opportunities it presents. In 2007, the second phase of the UrbanRiver Visions program, funded by the Executive Office of Energy and Environmental Affairs, was completed in Greenfield to rediscover this hidden treasure in Town. The public charrettes envisioned the creation of continuous river trails, pedestrian bridges, and water access points along the stretch of the river close to the town center.

Historic and Cultural Resources

The Town of Greenfield began its path toward becoming the center of economic and cultural activity in Franklin County at the end of the American Revolution. At that time, it was a hub of civic activity. The Town's early residential neighborhoods, which reflect the Town's rich architectural legacy, developed around nineteenth and twentieth century commercial and industrial activity. Early commercial activity centered on Court Square and expanded along Main, High, Bank Row, and Federal Streets. Industrial development, particularly factory buildings and mills, built up along the Green River and Falls River. Early industrial activity included textile manufacturing followed by more advanced manufacturing operations such as innovative cutlery and precision machine tools, which made Greenfield one of the wealthiest communities in Massachusetts (DCR 2009). Greenfield by the 1840's had set out to become a pioneer in precision metalworking, recruiting skilled workers from Europe. The Green River Works produced the first Bowie knife and later the first thread cutting dies.



Farmland Meadow. Photo source: VHB



Agricultural production played, and continues to play, a vital role in the development of the Town. Farmland production traditionally focused on dairy and tobacco. While tobacco is no longer grown, corn, hay, and vegetables are grown and harvested. Other significant agricultural land uses in the Town include forage and land in orchards. The main agricultural district in the Town is located in the valley along the Green River. This area, also known as “the Meadows,” contains well-preserved eighteenth century farmhouses and outbuildings, which are representative of a time when the Town was primarily an agricultural community (DCR 2009).

Baseline

The Town of Greenfield possesses many historic and archaeological resources, including properties listed in, or eligible for, the National Register of Historic Places (NRHP); properties listed in the Massachusetts State Register of Historic Places; and properties included in the Inventory of Historic and Archaeological Assets of the Commonwealth. The Town also enjoys numerous self-identified heritage landscapes and a state-designated scenic byway. The following discussion includes a description of these categories as well as the specific resources within the Town.

National Register of Historic Places (NRHP)

The NRHP was established by the National Historic Preservation Act of 1966, and is the official list of the nation’s resources worthy of preservation. The NRHP includes properties of local, state, and/or national significance in the areas of American history, architecture, archaeology, engineering, and culture. Resources may be nominated individually, or in groups, as districts or as multiple resource areas and must generally be older than 50 years. The National Park Service, within the Department of the Interior, administers the NRHP.

Architectural and Archaeological Resources

The Town has ten historic properties listed in the NRHP, including four historic districts and six buildings (NPS 2013). The most recent listing is the Franklin County Fairgrounds, which was listed on June 15, 2011. The Franklin County Fairgrounds is representative of the agricultural history of the Town, and is the site of one of the oldest continuously operating county fairs in the country (DCR 2009). **Table 5-2** depicts NRHP-listed properties in the Town along with their locations, listing dates, and resource types.



First National Bank on Bank Row. Photo source: Caitlin von Schmidt

Historic properties listed in the State Register of Historic Places, but not listed in the NRHP include the First Franklin Courthouse (15 Bank Row) and the First National Bank and Trust of Greenfield (9 Bank Row). Both of these properties are protected by preservation restrictions, as are two of the NRHP-listed properties (Franklin County Fairgrounds Roundhouse Barn and the Leavitt-Hovey House). Both buildings are located within the

Did you know?

Established in 1982, the Massachusetts State Register of Historic Places is a comprehensive listing of buildings, objects, structures, and sites that have received local, state, or national designations based on their historical or archaeological significance. Properties listed in the NRHP are also listed in the State Register.

National Register-listed Main Street Historic District (MHC 2010). **Figure 5-8** depicts historic properties listed in the State Register, which includes properties listed in the NRHP, except for the location of the Riverside Archaeological District. The location of any archaeological sites must be kept confidential in order to protect them.

The Inventory of Historic and Archaeological Assets of the Commonwealth lists over 600 properties in the Town (MHC 2013). The Appendix provides a complete listing of these resources.

Added to the NRHP in 1975, the Riverside Archaeological District is a rare example of an NRHP-listed archaeological district. The Riverside Archaeological District was the site of Native American encampments as well as the location of a military encounter between colonial forces and Native Americans during King Phillip’s War in 1676 (Levine et al 1999).

Did you know?

The Inventory of Historic and Archaeological Assets of the Commonwealth includes all buildings, structures, sites, and objects that have been recorded on inventory forms in the Commonwealth. Not all inventoried properties have received an official designation or have been officially evaluated for their significance.



Garden Theatre Block, Photo source: VHB

Table 5-2: NRHP-listed Properties in Greenfield

PROPERTY	LOCATION	LISTING DATE	RESOURCE TYPE
East Main-High Street Historic District	Roughly bounded by Church, High, E. Main, and Franklin Streets	March 16, 1989	District
Franklin County Fairgrounds	89 Wisdom Way	June 15, 2011	District
Garden Theatre Block	353-367 Main Street	September 1, 1983	Building
Leavitt-Hovey House	402 Main Street	December 22, 1983	Building
Main Street Historic District	Main Street between Chapman and Hope Streets, also along Bank Row	October 13, 1988	District
Newton Street School	70 Shelburne Road	October 27, 1988	Building
Riverside Archaeological District	East of Adams Road to the Lily Pond area of Barton Cove, and north of Turners Falls village to Riverside cemetery (Levine et al 1999)	July 9, 1975	District
Tavern Farm, Old	817 Colrain Road	March 10, 2005	Building
Old Post Office	442 Main Street	December 20, 1985	Building
Weldon Hotel	54 High Street	August 6, 1980	Building

Source: NPS 2013, Levine et al. 1999

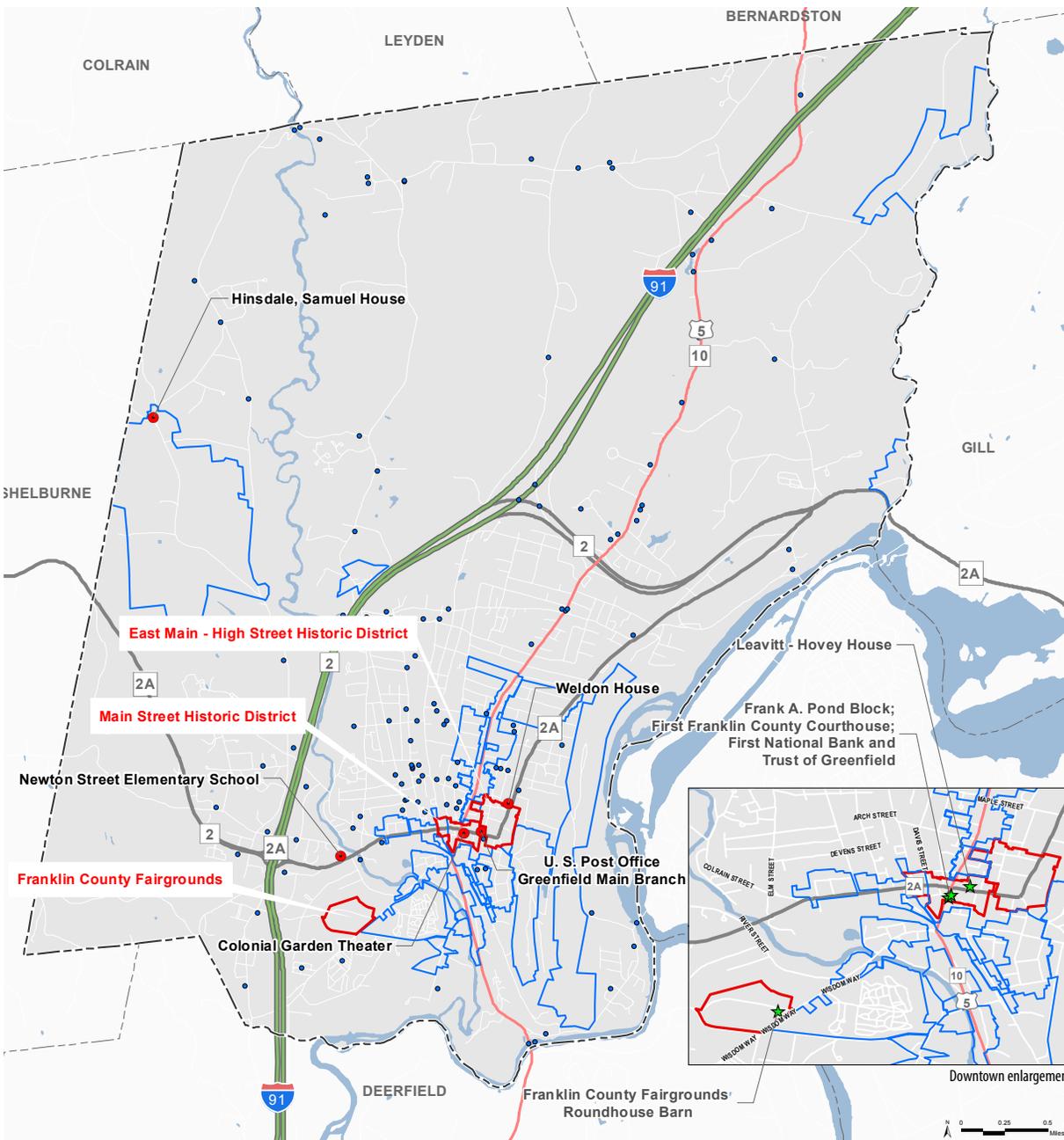


Figure 5-8: Historic Resources in Greenfield

Legend

- Greenfield Town Boundary
- Surrounding Town Boundary
- Water
- Interstate
- U.S. Highway
- State Route
- Nat'l Register of Historic Districts
- Inventoried Area
- ★ Preservation Restriction Properties
- NRHP Individually Listed Properties
- Inventoried Properties

Note: There are 314 inventoried properties not shown within the 21 inventoried areas on this figure. The identity and locational information for the individually inventoried properties and areas can be found at <http://maps.mhc-macris.net/>

VHB Vanasse Hangen Brustlin, Inc.

Data Source: MassGIS

In addition to the Riverside Archaeological District, there are six historic-period and 25 prehistoric-period recorded archaeological resources within the boundaries of the Town (MACRIS Maps 2013).

Heritage Landscapes

Heritage landscapes are defined as “places created by human interaction with the environment that help define the character of a community and provide a sense of place” (DCR 2009). The Heritage Landscapes Inventory Program supports inventory and planning projects, construction projects, preservation maintenance projects, and public education and stewardship activities. The Massachusetts Department of Conservation and Recreation (DCR) sponsors the Heritage Landscape Inventory Program, which documents and analyzes unprotected historic landscapes throughout the state.

In January 2008, the Town collaborated with DCR to hold a heritage landscape identification meeting. During this meeting, residents and town officials identified and prioritized the natural and cultural landscapes within the Town that embody the community’s unique character. Meeting participants identified 33 landscapes, including five Priority Heritage Landscapes: Town Common area, Franklin County Fairgrounds, Mohawk Trail, Rocky Mountain area, and the Meadows. **Figure 5-1** depicts the Priority Heritage Landscapes in the Town. The Greenfield Reconnaissance Report (see Appendix), provides more detailed information on all other heritage landscapes recognized at the heritage landscape identification meeting.

Scenic Byways

Scenic Byways are distinctive roadways that meet certain eligibility requirements of the Federal Highway Administration (FHWA). These requirements involve a roadway’s natural, cultural, archaeological, historic, scenic, and recreational qualities. State-designated scenic byways in Massachusetts are established in accordance with the National Scenic Byways

Program, which itself was established under the Intermodal Surface Transportation Efficiency Act of 1991. Under this program, FHWA provides grant opportunities to states to preserve and enhance existing resources and to generate new possibilities for economic growth (MassDOT 2013). Funding is contingent on official scenic byway designation and the completion of a corridor management plan.

The Town contains a portion of the Mohawk Trail, which is one of five state-designated scenic byways in Franklin County. The Mohawk Trail Scenic Byway was one of the first state roads to be constructed as a scenic route (1914), and in 1953 became one of the earliest designated Scenic Byways in New England (DCR 2009).

In 2009, the Franklin Regional Council of Governments (FRCOG) completed the Mohawk Trail Scenic Byway, Eastern Section Athol to Greenfield, Corridor Management Plan (FRCOG 2009). FRCOG is currently carrying out many of the recommendations outlined in the plan, including tourism and historic facilities improvements (for example, the installation of interpretive signs) and the purchase of scenic easements (FRCOG 2009).

Current Preservation Measures

A proactive approach to historic preservation is an important element of sustaining a town’s identity and sense of place as well as the benefits of a town’s historic properties for future generations. Regulatory tools designed to preserve existing historic properties in the Town of Greenfield include the powers of the Greenfield Historical Commission, the Town’s demolition delay ordinance, preservation restrictions, and federal and state regulations (i.e., Section 106, Chapter 254, MEPA). These regulatory tools are discussed briefly below, and a more detailed review is provided in the Appendix.



Greenfield Historical Commission

The Town established the Greenfield Historical Commission in 1972 to preserve and protect the historical and archaeological assets of the Town, including areas, landscapes, buildings, parks, objects, and archaeological sites. According to the Commission's rules and regulations, it has three primary responsibilities:

- To participate in research, advocacy, survey, and public education programs designed to preserve the Town's historic and cultural assets;
- To hear and decide on cases of demolition in accordance with the Demolition Delay Ordinance, Chapter 58 of the Town Code; and
- To investigate the desirability of establishing Local Historic Districts; to propose changes in the boundaries of Local and National Historic Districts; to report on the historical and architectural significance of the properties within any proposed historic district; to hold public hearings on any such reports; and to submit final reports with its recommendations to the Town Council (Town of Greenfield 2011).

As part of these duties, the Commission provides advisory comments on project reviews to the Planning and Zoning Boards to support the preservation of the Town's historic resources and character. The Commission has not yet established any local landmarks or districts.

Demolition Delay Ordinance

The Town adopted a Demolition Delay Ordinance (Chapter 58 of the Town Code) to preserve and protect buildings that constitute or reflect distinctive features of the architectural, cultural, political, economic, or social history of the Town. The Demolition Delay Ordinance provides the public with an opportunity "to review and provide comment to the Historical Commission on applications to the Inspector of Buildings for a permit to demolish 'significant' historic buildings" (Town of Greenfield 2012). According to the ordinance, a building is "significant" if it is listed or eligible for inclusion in the NRHP, listed in the State Register of

Historic Places, or recommended by the Historical Commission and approved by the Town Council (Town of Greenfield 2012). Although available, the Town has not yet invoked the Demolition Delay Ordinance.

Preservation Restrictions

A preservation restriction is a legal contract by which the property owner agrees the property will not be changed in a way that would compromise its historic and architectural integrity. Preservation restrictions are specifically tailored to the individual building and the elements being sought to be preserved. Some agreements only protect a building's façade, while some include stipulations to protect elements of the interior, significant architectural details, or significant landscapes.

Among the properties in the Town listed in the State Register of Historic Places, four have Preservation Restrictions: First Franklin County Courthouse, First National Bank and Trust of Greenfield, Franklin County Fairgrounds Roundhouse Barn, and the Leavitt-Hovey House (MHC 2013).

Federal and State Regulations

Section 106

Section 106 of the National Historic Preservation Act of 1966, as amended, requires that any project that receives federal funds or is required to obtain permits, approvals, or licenses from a federal agency is required to be reviewed



First Franklin County Courthouse. Photo source: VHB

for its effects on historic properties. If a property is determined eligible for listing in the NRHP or is already listed in the NRHP, then the impact of the proposed project on the resource must be determined by the federal agency or its assignee and concurred upon by the Massachusetts Historical Commission (MHC). If the project is determined to have an adverse effect on the resource, the federal agency must consult with the MHC in order to determine mitigation options.

Typical examples of federal undertakings that do, and can, take place in the Town are the requirements of U.S. Army Corps of Engineers (ACOE) permits for development projects and Federal Highway Administration (FHWA) supported road improvement projects.

Chapter 254

Chapter 254 of the Massachusetts General Laws (M.G.L., Chapter 9, Sec. 26-27C), as amended by Chapter 254 of the Acts of 1988, requires that any undertaking involving state funds, permits, approvals, or licenses be reviewed to determine whether the proposed project will have an adverse effect on a property listed in the State Register of Historic Places. If it is determined that the project will have an adverse effect on a listed property, then the state agency and/or the project proponent must consult with the MHC to determine mitigation measures. Previously inventoried properties which the MHC opines are eligible for the NRHP are also subject to this review.

Chapter 254 could be relevant in the Town if any of the Town's 600-plus properties listed in the Inventory of Historic and Archaeological Assets of the Commonwealth are subject to any projects that require state involvement, such as state highway access permits, superseding Order of Conditions, or state funding agency programs for road improvement, community development, or residential and/or commercial development.

MEPA

The Massachusetts Environmental Policy Act (MEPA) is a comprehensive review process that requires state agencies to account for the potential environmental impacts of projects involving state licenses, permits, or financial support. This public process requires a thorough study of potential environmental impacts and the development of feasible mitigation options designed to avoid or minimize those impacts. Historic properties listed in the State Register of Historic Places, or (as of 1998) the Inventory of Historic and Archaeological Assets of the Commonwealth, are included in the list of environmental factors that must be considered in the MEPA process.



Public Art in the Main Street Historic District. Photo source: VHB

Cultural Attractions and Organizations

Cultural attractions and organizations carry on and evolve an area's cultural heritage for the enjoyment of residents as well as tourists. The Town of Greenfield has a wide variety of cultural attractions and organizations that celebrate its cultural heritage. Some of the Town's cultural institutions include:

Greenfield Local Cultural Council

The Greenfield Local Cultural Council (GLCC), an official Town committee comprised of volunteers, supports heritage and natural history, performing and visual arts, and participatory and experimental events in the Town of Greenfield. GLCC is a member of the Massachusetts Cultural Council's Local Cultural Council program, a grassroots cultural funding network. In 2012, GLCC awarded \$9,000 to 15 local artists, performers, and venues (GLCC 2013). GLCC provides more information on its organization and operations at www.greenfieldlocalculturalcouncil.org.



Museum of Our Industrial Heritage

The mission of the Museum of Our Industrial Heritage is to “celebrate industrial heritage through preserving, collecting, and educating the public, with an emphasis on Franklin County and Athol, Massachusetts” (IndustrialHistory.org). The organization offers on-site exhibits that display artifacts from the area’s factories and mills. It also provides walking tours of the Green River, the site of water-powered mills that helped spur local industrial activity. The Museum of Our Industrial Heritage is located on the Green River at Meade Street at the site of the Newell Snow factory, which is associated with the beginnings of industry in the Town of Greenfield and one of Greenfield’s leading industrialists, Newell Snow (MHC 1984).

Green River Festival

The Green River Festival (GRF) began as a hot air balloon festival in 1986, but developed into a premier music event over the years through the addition of an increasing number of musical acts. Past performers include 10,000 Maniacs, CAKE, Emmylou Harris, and Los Lobos. In 2013, the GRF presented over 30 musical acts across three stages. The festival still offers hot air balloons and balloon rides, along with local food and crafts. The two-day festival takes place on the grounds of Greenfield Community College and is sponsored by the Franklin County Chamber of Commerce. Information on the Franklin County Chamber of Commerce can be found at www.franklincc.org.



Balloons rising at the Green River Festival. Photo source: Caitlin von Schmidt

Wormtown Music Festival

Taking place at Camp Kee-wanee, an arts-centric summer day camp, the Wormtown Music Festival features three days of music and two nights of camping in the woods among other activities (Wormtown Trading Co. 2013a). The Wormtown Music Festival is an annual event sponsored by Wormtown Trading, which also sponsors the StrangeCreek Campout. The StrangeCreek Campout also takes place annually at Camp Kee-wanee and features musical entertainment and wooded camping among other activities (Wormtown Trading Co. 2013b). More information on the Wormtown Music Festival can be found at <http://wormtownmusicfestival.com>.

Artspace

Founded in 1973, Artspace strives to “encourage and nurture the appreciation of and participation in the Arts” (Artspace 2009). Artspace offers weekly classes and workshops, and is known for its exhibition space. Artspace also implements an outreach program, advocating for the importance of the arts in the community. Artspace provides more information on its organization and operations at <http://franklyarts.com/home>.

The Arts Block

The Arts Block consists of two properties: the Arts Block and the Pushkin. The Arts Block building contains the Wheelhouse, a performance venue; the Smithsonian Café and Chowder House; and the Queen of Cups, a teahouse. The Pushkin is home to periodic performances and art shows. Both buildings have permanent art installations and are located within



The Arts Block. Photo source: Yes Exactly Web Design

the Main Street Historic District, listed in the NRHP as of October 13, 1988.

Old Greenfield Village

Old Greenfield Village is an outdoor museum, a replica of a New England town as it appeared in the late 19th century. The site celebrates local heritage, and includes numerous reproductions of shops and settings complete with original goods, signs, and display items. Attractions at Old Greenfield Village include, but are not limited to, a general store, a church and schoolhouse, blacksmith and tinsmith shops, and a drug store (Old Greenfield Village).

Pioneer Valley Symphony and Chorus

The Pioneer Valley Symphony Orchestra (PVS) was founded in 1939, making it one of the oldest community orchestras in the United States. PVS consists of over 200 volunteer musicians that perform six symphonic concerts per year. Performances include family, educational, and choral programs, and take place primarily in the Town of Greenfield; performances also take place in the Towns of Northampton and Amherst (PVS 2013).

Greenfield Winter Carnival

Greenfield Winter Carnival is a Greenfield tradition dating back to 1922 organized by the Greenfield Recreation Department. Held on the first weekend in February, this three day celebration features many indoor and outdoor activities. Sledding, ice skating, ice carving, fire dancers, fireworks, family fun day, Sleigh Bell Run, Breakfast with Frosty, K9 Keg Pull, chili cook off, and a Cardboard Sled Race are only some of the events held each year at Beacon Field and around town.



Winter Carnival Sleigh Ride. Photo source: Greenfield Recreation Department.

Energy Park Summer Concert Series

The Energy Park was constructed from 1997-1999 through a partnership between Northeast Sustainable Energy Association (NESEA) and the Town of Greenfield located in downtown Greenfield. The park features a caboose museum, native plants and gardens, interpretive signage, solar panels, and a performance stage. Concerts are held at the park throughout the summer organized by the Recreation Department, featuring local and national musicians including Catie Curtis, Lucy Kaplansky, Rani Arbo & Daisy Mayhem, Lori McKenna, Jay Ungar & Molly Mason, the Franklin County Musicians CoOp, and the Greenfield Military Band.



Summer Concert. Photo source: Town of Greenfield

Greenfield's Independence Day Community Celebration & Fireworks

Greenfield's Independence Day Community Celebration is a cherished tradition in Greenfield organized by the Recreation Department. Musicians and vendors draw crowds of families and friends to Beacon Field throughout the evening. The Annual Fireworks Display illuminates the skyline as the fireworks are launched from Poet Seat Tower, delighting both the young and old.



Fourth of July sunset at Beacon Field. Photo source: Caitlin von Schmidt

Greenfield Lightlife Triathlon

The Greenfield Lightlife Triathlon was founded in 1984 and continues to flourish after 30+ years. The USAT sanctioned Triathlon is held on the first Sunday in August and is organized by a volunteer triathlon committee along with the



Recreation Department. Situated in the heart of Franklin County, the course meanders through the back roads of Greenfield and features swimming in our very own Green River. Traditionally the course passes through the Historic Eunice Williams Covered Bridge, but with the damage from the 2011 Tropical Storm Irene, the course has been temporarily re-routed. The Triathlon features international and sprint distances for individual athletes as well as two and three person teams. In Greenfield, our motto is "To Finish Is to Win!"



Lightlife Triathlon. Photo source: Town of Greenfield

Riverside Blues & BBQ Festival

The Riverside Blues & BBQ Festival began in 2011 as a collaboration between Ryan & Casey Liquors and the Recreation Department. This three day festival is held in October at Beacon Field and features BBQ, Blues, and Brews. The festival's BBQ competitions are sanctioned by the Kansas City Barbeque Society and the New England Barbecue Society. Teams travel from all over New England and beyond to compete for prize money and bragging rights. International, national, regional, and locally recognized Blues artists have graced the festival stage including Vaneese Thomas, Janet Ryan, Suzie Vinnick, Wildcat O'Halloran, Samirah Evans, among others. Throughout the weekend, hundreds of beer samples are available from both local and national breweries. Multiple other contests are held throughout the weekend including a



Riverside Blues & BBQ Festival. Photo source: Town of Greenfield

pie eating contest, mustache contest, keg toss, barrel roll, and stein hoisting contest.

Halloween Downtown Trick-or-Treat and Rag Shag Parade

Greenfield's Downtown Halloween event is a family favorite in Greenfield. Adults and children alike wander the streets in their Halloween costumes collecting treats from local businesses. The Recreation Department, along with the Greenfield Business Association, coordinates the festivities with the help of many other



Halloween Parade. Photo source: Town of Greenfield

organizations. A Rag Shag Parade, Costume Contest, giant pumpkin carving, and free movie at the Garden Cinema are featured throughout the event.

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Implementation: Goals, Strategies, and Actions

The Natural, Historic and Cultural Resources' goals and strategies underscore the unique role these resources play in Greenfield. In addition to preserving these precious assets in our town, we recognize that our rich history, and cultural and recreational activities, are not well known. The goals and strategies therefore aim to promote our assets to increase civic pride, and an appreciation and respect for the natural, historic and cultural heritage that has made Greenfield what it is today. They also aim to overcome economic and environmental challenges by attracting new and retaining existing residents, including people who live in the greater Pioneer Valley, in order to achieve our full potential. We must recognize that our natural, historic, recreational, and cultural assets are vital components of a robust local economy and not luxuries. We recognize conflicts will arise between natural and historic preservation and a system must be developed which includes public forums in order to resolve conflicts.



goal 1

Greenfield’s natural, historic, and cultural resources will be an integral part of the Town’s identity with wider recognition and use.

STRATEGY 1

Establish a marketing plan for natural, historic, and cultural resources.

The purpose of the marketing plan would be to identify and promote Greenfield’s natural, historic, and cultural resources to maximize the appreciation of and use of these resources by local residents and tourists. The plan will include strategies related to institutional support, individual property maintenance and/or protection, and consolidated marketing techniques that will increase recognition of and respect for these resources.

Implementation Actions:

- a. Create an educational campaign and marketing strategy for Greenfield’s conservation and tourism resources.
- b. Develop a public arts program to foster lively and attractive streetscapes through public/private partnerships.
- c. Install information kiosks and signage on Town Common and throughout Greenfield.
- d. Create partnerships between the Town and its many museums through collaboration on town-wide events and/or creation of way-finding signs.
- e. Complete and publish an inventory of natural, historic, and cultural areas and make information readily available to the public.



Appton-mem-trail-bench



Santa Monica park art

goal 2

Residents and visitors of all ages in Greenfield will enjoy various recreational opportunities as a vital contribution to their health and wellbeing.

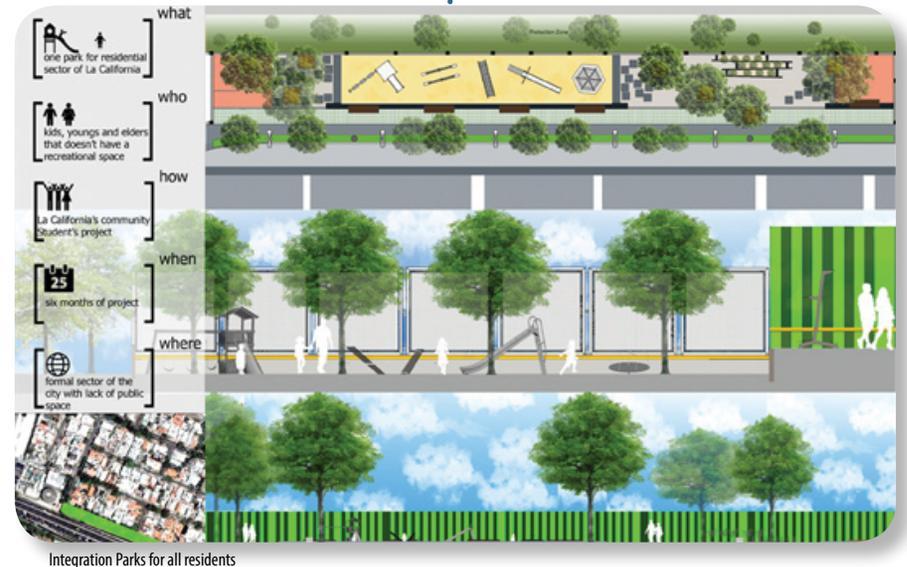
STRATEGY 2

Identify existing and create new year-round recreational facilities that are accessible to all generations in Greenfield.

Identify and maintain existing recreational facilities in Greenfield. Create new recreational opportunities to meet unfulfilled needs. Make sure existing and new recreational resources provide year-round and diversified usage. Make sure these resources are universally accessible and capable of satisfying recreational needs of all generations in Greenfield.

Implementation Actions:

- a. Create a permanent Open Space Committee.
- b. Provide more recreational opportunities for teen and elderly populations.
- c. Provide better maintenance for existing facilities, especially preventative.
- d. Develop new events and activities while continuing to support existing events through strengthened Recreation Department and public/private partnerships.
- e. Implement the 2012 Open Space and Recreation Plan.





goal

3

Our natural world and the scenic, rural, and agricultural landscapes will be protected, preserved, and improved to support biodiversity and healthy living in Greenfield.

STRATEGY 3

Identify, celebrate, and preserve open space; continuous wildlife habitat and migration corridors; significant view corridors; heritage landscapes, watersheds, wetlands, and rivers; and agricultural land.

Maintain an up-to-date inventory of all natural resources in Greenfield, including open space, wildlife habitat, view corridors, heritage landscape, water resources, and agricultural land. Prioritize the preservation of these resources in all decision-making processes. Foster a culture of celebrating and self-identifying with these valuable resources in Greenfield.

Implementation Actions:

- a. Ensure the rural and scenic character of Greenfield.
- b. Coordinate with local communities and regional organizations.
- c. Celebrate our agricultural history, explore community agriculture, and foster a balanced food supply in Greenfield.
- d. Enhance stormwater management and promote land preservation along rivers to ensure high water quality of our rivers and drinking water.



Scenic view in Greenfield



UC Davis Natural Resources Projects Inventory

STRATEGY 4

Review, update, and enforce the Town’s Zoning Ordinances and environmental regulations to protect all of the above.

Review the current Zoning Ordinances and existing environmental regulations of Greenfield to make sure they are geared towards protecting the Town’s valuable natural resources. Update these regulations in a changing context to address outstanding and emerging preservation issues and meet the Town’s long term preservation needs. Strengthen code and law enforcement for successful implementation of preservation actions..

Implementation Actions:

- a. Protect our remaining and precious agricultural land in Town through the Agricultural Protection Restriction (APR) and Chapter 61A programs.
- b. Explore ordinances to reduce noise and light pollution.

Case study about farmland preservation in Amherst, MA



goal

4

Greenfield’s cultural life will be encouraged, expanded, and better promoted, with more established town-wide events.

STRATEGY 5

Create a downtown Cultural Center at the First National Bank to support existing activities and create new town-wide events and programs.

A downtown cultural center would provide gathering space for existing and potentially new cultural groups/institutions, performance spaces, and galleries. Locating the center at the First National Bank would ensure the continued use and preservation of a historic property, while bringing more residents and tourists into the downtown area.

Implementation Actions:

- a. Include flexible performance and exhibition space.



First National Bank photo



Cultural Center of Cape Code



STRATEGY 6

Support existing and create new town-wide cultural events through public/private partnerships.

The Town could enhance its cultural attractions through its own investments along with leveraging the capital and other resources of a private entity. This would provide greater public benefit with fewer public funds. The Town could encourage mutually beneficial relationships with private entities through efficient administration and open, transparent communication.

Implementation Actions:

- a. Streamline permits, licensing, and zoning processes for creative enterprises.
- b. Encourage café style outdoor seating.
- c. Encourage the presence of food trucks downtown.



Wilmington NC truck-a-roo

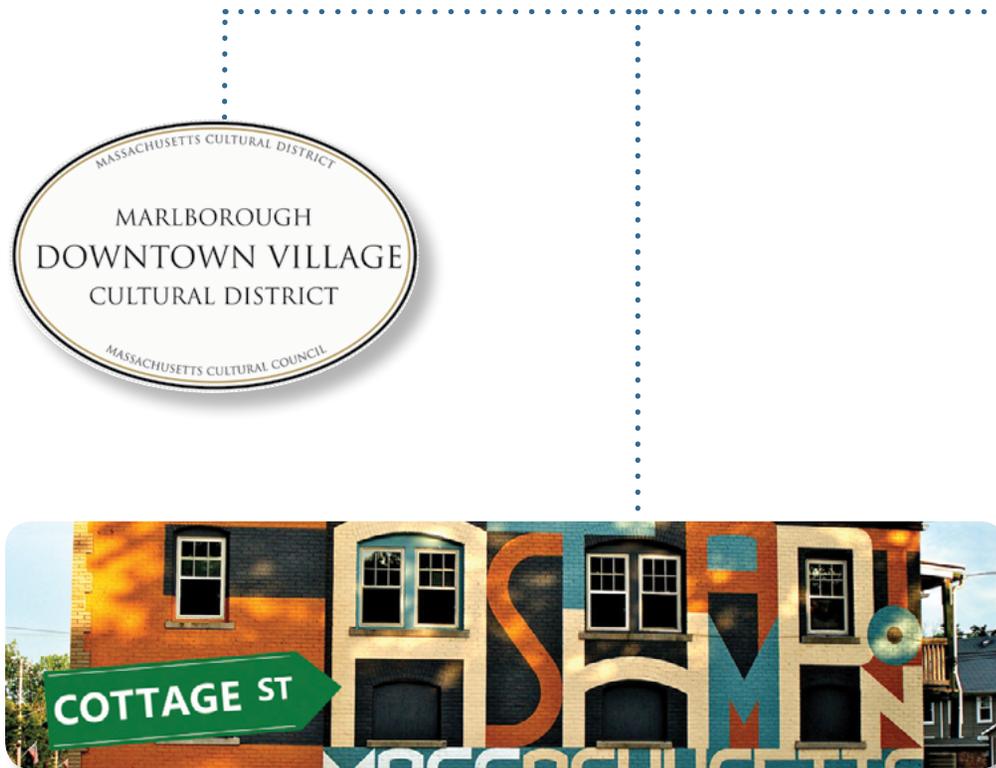


Bakers Oven Outside dining



goal 4 [continued]

Greenfield’s cultural life will be encouraged, expanded, and better promoted, with more established town-wide events.



Cottage St Cultural District in Easthampton

STRATEGY 7

Apply for Cultural District designation from the Mass Cultural Council.

The Cultural Districts Initiative is a program of the Massachusetts Cultural Council that was launched in April 2011. There are currently 17 Designated Cultural Districts in Massachusetts, none of which are located in the Town. Designation can foster local cultural development by attracting artists and cultural enterprises, tourists, and private investment into a specific geographic area with an existing concentration of cultural facilities. Added benefits of the program may include the preservation and reuse of historic buildings and the enhancement of property values.

Implementation Actions:

- a. Expand museum offerings and exhibitions.
- b. Foster the creation of a Children’s Museum.
- c. Celebrate Greenfield’s History.

goal 5

The historic resources in Greenfield (historic buildings/areas, archaeological sites, and heritage landscapes) will be preserved and protected.

STRATEGY 8

Develop and implement a plan for historic preservation that includes creative reuse of historic buildings, the creation of local historic districts, and the nomination of additional National Register historic districts and individual properties.

A formal historic preservation plan would enable the Town to define an overall vision for the protection of its historic resources. This plan would identify the needs and proposed solutions of existing efforts as well as provide the policy direction for Town-led preservation efforts in the long-term.

Implementation Actions:

- a. Ensure the Historical Commission’s recommendations regarding protection and preservation ordinances are enacted and carried out.
- b. Revitalize the Historic Commission with better marketing materials both online and in print, and develop an independent website including digital historic building inventory to increase citizens’ knowledge and interest.
- c. Create and/or promote financial incentive programs to preserve historic facades.
- d. Identify and preserve historic landscapes and view corridors.
- e. Research designation as a Main Street Community or incorporate National Main Street Center principles (National Main Street Center: www.preservationnation.org).



Typical Façade Elements

Facade Improvement elements



goal 5 [continued]

The historic resources in Greenfield (historic buildings/areas, archaeological sites, and heritage landscapes) will be preserved and protected.

STRATEGY 9

Support the passage of the Community Preservation Act.



The Massachusetts Legislature passed the Community Preservation Act (CPA) in 2000. Local adoption of the CPA would enable the Town to create a dedicated fund for the preservation of historic resources and open spaces, the purchase and creation of new outdoor recreational facilities, and the development of affordable housing. Funding for these activities typically includes a voter-authorized surcharge on local property tax bills of up to 3% and annual distributions from the state’s Community Preservation Trust Fund.

Source of Implementation Illustrations:

- Appton-mem-trail-bench - umvrhc.org
- Integration Parks for all residents - www.asla.org/2010studentawards/367.html
- Scenic view in Greenfield - DEMOSTHENIS on Panoramio
- UC Davis Natural Resources Projects Inventory - <http://ice.ucdavis.edu/project/nrpi>
- Amherst Farmland case study - http://www.mass.gov/envir/smart_growth_toolkit/pages/CS-ag-amherst.html
- First National Bank photo - Caitlin von Schmidt
- Cultural Center of Cape Code - www.cultural-center.org
- Wilmington NC truck-a-roo - www.wilmingtondowntown.com
- Bakers Oven Outside dining - thebakersonshelburne.com
- Marlborough Downtown Village - Fredpennersplace on Panoramio
- Cottage St Cultural District in Easthampton - www.pioneer valley.info
- Facade Improvement elements - www.cityofclintonnc.com
- Support CPA - Community Preservation Coalition



PUBLIC FACILITIES, SERVICES, AND ENERGY

vision



Greenfield has updated facilities that are energy-efficient, well-maintained, and well-staffed. Creative ideas and innovation have enabled the Town to find synergies and build new state-of-the-art facilities that will meet the needs of Municipal staff, emergency services, the library, and services for seniors, youth and others for the next century and beyond. All new buildings are built to zero-net-energy ready specifications, and all projects will make Greenfield's infrastructure greener, less expensive to maintain, and more resilient to increased storms. Greenfield will generate clean energy that significantly reduces its dependence on fossil fuels, and reduced the amount of money that leaves the community to pay for energy. Greenfield has strengthened its role as the county seat by advocating for and retaining state, federal, and private services that serve both Greenfield and Franklin County residents.



Public Facilities, Services, and Energy

Introduction

Addressing a town's facilities, services and energy use are central to moving toward sustainability. Greenfield's ability to provide quality, state-of-the-art facilities depends on effective capital planning and a commitment to sustainability, implementation, asset management policies, and the amount of revenue available for municipal operations. Greenfield, like many other Massachusetts municipalities, has limited resources available to maintain and expand services and facilities, so careful planning is necessary just to keep up with current demand, let alone the expansion or replacement of facilities in the future. There are several items that typically factor into assessing the future needs and the adequacy of municipal facilities. The functions they serve are largely determined by three factors:

- The form, size and organization of the community's local government;
- The community's land use pattern; and
- Population growth projections;

When communities make investment decisions on a year-to-year basis, without a comprehensive capital improvements plan in place and using sustainability as the framework, they are at greater risk of prioritizing short term projects that jeopardize future investment in the Town's infrastructure and services.

Today, Greenfield has some municipal facility needs that should be addressed within the next few years and needs a comprehensive plan to address and prioritize mid to long term needs.

As noted above, in addition to planning for Greenfield's built public facilities, programs, and staffing, we also need to consider our *(continued on page 188)*



Greenfield Town Hall. Photo source: Peter Letson

What is a Community Facility?

A community facility is any municipal property that has been improved for public purposes, such as a town hall, library, fire station or school.

It also includes municipal utilities such as water or sewer service, and parks, playgrounds and cemeteries.



goals

In Ten Years...



1

Municipal buildings, equipment, and operations meet the Town's needs and are accessible, efficient, resilient, well-staffed, and well-maintained.



2

The Department of Public Works will have an updated budget and capital improvements plan, and sustainable funding to provide the necessary services to the Town of Greenfield.



3

The library, and senior and youth services have adequate, healthy facilities and expanded staffing and programs, and state, federal, and private services remain in Greenfield.



4

Green Infrastructure Practices will reduce municipal infrastructure costs, protect public health and safety, and preserve natural areas.



5

Greenfield will be a showcase “clean energy city” and be 40% of the way to meeting its 2050 goals to reduce CO2 by 80%, and to reduce the money we spend on energy that leaves the region from \$67 million per year (2008) to ZERO.

Sustainable Franklin County - Top Three Infrastructure Goals:

- Protect and expand “green infrastructure” to reduce flooding, purify air and water and decrease energy use for cooling.
- Improve broadband internet access.
- Maintain or upgrade sewer and water infrastructure.

Sustainable Franklin County - Top Three Energy Goals:

- Promote energy conservation and efficiency.
- Increase the quantity of locally-produced clean energy.
- Reduce the use of fossil fuels.



energy consumption, building durability and impact on the environment and potential projects and programs that can improve the way our Town produces and consumes energy. While there are numerous successful projects we can point to, we need to identify the next round of projects, programs, and initiatives that will set Greenfield apart as a regional leader in energy efficiency, renewable and sustainable energy practices. Through an Energy Audit undertaken by Greening Greenfield, a collaborative effort of the Town of Greenfield and the citizen Greening Greenfield Energy Committee, it was determined that in 2008, the Town, (including businesses, and residents and public facilities), spent \$86 million on energy \$67,144,850 of which left our community.¹ This raised several questions. How can our community reduce the costs that go toward energy? What are our new goals for energy consumption and reduction of greenhouse gas emissions? How can we leverage the untapped economic development potential associated with reducing energy use and creating new projects and programs?

Greenfield's public services and facilities range from buildings, programs, staff, and resources that all provide critical support for the everyday needs and operations of our community. These services and facilities also use energy to operate, which requires an analysis of municipal and community-wide energy use. This element of the Sustainable Greenfield provides an assessment of the existing conditions for these facilities, programs, and services and outlines recommendations for meeting the needs of current and future residents and businesses.

Our Public Facilities, Services, and Energy Driving Forces

Many of our buildings have served us well for over a century, and we now see an opportunity to create and implement a major long-range capital improvement plan and build new buildings or do major upgrades that embrace the principles of sustainability. In particular, we see the need for a larger Town Hall that houses all Town staff and fosters communication and collaboration; a library that is a vibrant community center that is sized for Greenfield and the surrounding community; and a senior center that is healthy and located near the Community Center. There is a need for new fire trucks that are housed in a facility that can accommodate them, and that space may be co-located with Emergency Services and Police, and have shared facilities with the DPW. Recognizing that a majority of our water, sewer and drainage infrastructure is between 50-100 years old, we see a need to plan and implement a system-wide upgrade. We also see a need for adequate staffing of Town departments, and a new downtown police station. This is an excellent time to assess and update our municipal facilities because of a new understanding of sustainability and new techniques and technologies are available to reduce heating, lighting, and cooling costs; sewage sludge disposal; reduce stormwater runoff, and heat island effect.

¹ Source: Greenfield Energy Audit

Greenfield's Public Facilities, Services and Energy

The municipal services that Greenfield provides are fairly typical of Massachusetts towns. To residents and businesses in just about every city or town, many local government services qualify as “essential” regardless of whether the state mandates them. For example, municipalities do not have to provide solid waste disposal services, youth services, recreation programs, a senior center or a public library, but the towns that provide these services often consider them important to the quality of life and an indispensable part of what it means to be a community.

This section of the Master Plan focuses on the public facilities and services that most directly affect the quality of life in Greenfield for its residents, businesses and visitors. This includes the Town Hall, Public Works, Recreation, Police, Fire, Council on Aging, Health, and Library. Greenfield's schools are addressed in the Education Element of this Master Plan. The following provides a brief discussion of each of these departments and their facilities.

Town Hall

In 2010 the Town of Greenfield retained Gorman Richardson Lewis Architects (GRLA) to review the space needs of the Town Hall Offices and to determine the feasibility of designing an addition to address the current and future needs of the Town Hall. The following text is an excerpt from the executive summary of that report which outlines the approach towards building an expanded Town Hall facility that will provide the space needed to accommodate many of the town departments. Refer to the Appendix for the full report.

“The initial conceptual idea was to expand Town Hall at the location of the existing obsolete Annex building, while maintaining the historically significant Town Hall Building. Through a series of interviews with all Town Hall Department

heads and key personnel, GRLA developed a responsive project program outlining present and future space needs for Town Hall departments. GRLA and the design team analyzed the existing site and building to understand the constraints and opportunities for expansion.”

It was determined that an addition for the major components would best suit the Town's needs. Due to the limited functionality of and space at the existing Annex, the Town's decided to



Greenfield Town Hall. Photo source: VHB

What functions should a Town Hall provide?

A modern Town Hall facility has to respond to many diverse activities:

- Easy access for residents to pay taxes and related town bills
- Easy access to make inquiries about project planning and approvals process
- Access to public hearings and meetings on a full range of topics
- Confidential discussions regarding veterans' issues, retirement and personnel issues
- Town accounting and treasurer activities and secure and confidential filing requirements
- Confidential legal proceedings and discussions
- Access to the Mayor and Mayor's staff
- Adequate and secure filing needs for all departments
- Communication amongst all departments



remove the Annex building and design a new building which would house the primary Town Hall functions. The Annex building was demolished in December 2013.

Soil exploration and existing building inventory was completed, programming was completed and the design team developed some initial designs responding to the town department needs. The usable space within the existing town hall was about 11,000 square feet while the future town hall programmed needs totaled about 20,000 square feet inclusive of circulation, with much needed multiple and larger meeting rooms and expanded vaults and secure storage.

Consequently GRLA designed a building addition totaling about 28,000 square feet on 4 levels including a basement level. This footprint was developed taking advantage of the existing Annex location and adjacent parking area which provides direct and accessible access to the new building.

The existing Town Hall building will have some program uses developed within its footprint but by and large the existing building will be maintained as additional meeting space as well as historic museum display space for the town. Code required updates will include a full fire protection sprinkler system as well as other MEP upgrades.

The new building has key design and system components that will qualify it for LEED (Leadership in Energy and Environmental Design) Gold certification. The preliminary LEED checklist indicates a rating of at least 61 (Gold minimum = 60) with potential of another 15 or so points dependent on final design and evaluations. Sustainable aspects include:

- Sustainable site planning and design including applicable landscape and Low Impact
- Development aspects
- Stretch energy code compliant exterior envelope and enhanced

insulation levels

- Energy efficient HVAC systems and controls to optimize performance and reduce operating costs
- Ground water heat pump system evaluation
- White roofing material to reduce solar heat gain in summer
- Occupancy sensors for all lighting systems
- Substantial daylighting through the use of curtain wall and larger glazed areas as well as
- Sunscreening devices and light shelves to bring daylight further into the spaces
- Low flow plumbing fixtures and potential for waterless urinals to further reduce water use to approximately 40% below standard
- Construction waste recycling to be over 90%
- Potential for a photovoltaic system on the roof to offset electric use and enhance educational opportunities
- Use of only low or no VOC-emitting materials for all finish materials
- Bike racks, showers and recycling center

Department of Public Works

The Department of Public Works (DPW) includes the Divisions of Engineering, Water, Sewer/Drainage, Recycling/Solid Waste/Transfer Station, Highway and Traffic, and Parks and Forestry. The department coordinates efforts with Central Maintenance, Licensing, Parking, School Department Planning, Building Inspections, and the public on a regular basis. Many activities also require coordination with state and federal regulatory agencies. These responsibilities

are coordinated with a staff of 58 individuals, which was at a high of 100 in the past.

The DPW Town Yard on Wells Street includes the main garage/ administrative building, which needs a roof replacement in 2014. There are two sand/salt storage buildings, one of which is in good condition and the other is dilapidated and in need of replacement. The Department maintains all 150 of the Town's vehicles in-house, many of which are 20 years old. As required to be a designated Green Community, Greenfield has a fuel-efficient vehicle purchasing policy in place for the purchase of new vehicles and the replacement of existing vehicles.



Greenfield DPW Staff hard at work. Photo source: Greenfield DPW.

The Town is responsible for maintaining 120 miles of roadways and 78 miles of sidewalks. Funding for roadway maintenance is primarily achieved through the Massachusetts Chapter 90 Program, which provided approximately \$650,000 for both FY12 and FY13. Between 2010 and 2012, 11.3 miles of roads have been repaved. According to the DPW, the Town has an inventory of and information on what has been paved in the last 10 years. The DPW has plans to update its Pavement Management software in order to keep track of the pavement condition index (PCI) for each road. The Massachusetts Chapter 90 Program is the only source of funding for road maintenance and design. Chapter 90 Program funding levels are set by the state Legislature every budget year and may vary significantly from year to year. It is important to note that the life of a newly paved road can be extended from 10 to 50 years if maintained. Current costs of road maintenance and reconstruction vary dramatically and the Town DPW would like to explore alternative methods of providing ongoing

maintenance of the roads that could be more cost effective and extend the life-expectancy of the roads.

There are nine bridges that fall under the Town's jurisdiction, three of which are considered to be deficient based on recent inspections. The covered bridge on Eunice Williams Drive has been closed due to damage from Tropical Storm Irene in 2011. The Massachusetts Climate Change Adaptation Report recommends that cities and towns assess their bridges and culverts to address the impacts of increasingly severe storms.² The Connecticut River Watershed Council also calls for assessing "continuity" of streams around culverts – i.e. no "waterfalls on downstream end of the pipe." For these and other reasons, it is important that the Town continue its efforts to assess and plan for improvements to this public infrastructure.

The Water Distribution and Water Facilities Divisions are responsible for the operation and maintenance of the Town's water supply, distribution, as well as treatment of wastewater. The Town supplies water through the Leyden Glen Reservoir, the Green River and one well field. The Town has 103 miles of water mains and approximately 70% of these mains are over 50 years old. Given that the life expectancy of water mains is 60 years, the Town is faced with the need to plan for replacement or lining of these mains over the next 10-30 years. The other identified capital need is to increase water pressure on the west side of town.

The Town's sewage treatment facility treats 1.8 million gallons per day. The plant is considered to be in good condition with no major imminent capital needs. However, space constraints in the building could inhibit future equipment installations. Another challenge is the proposed new Massachusetts Department of Environmental Protection (MassDEP) regulations that would require certain plant upgrades. Similar to the water mains, there may be a future need to line or replace the sewer lines.

² See <http://www.mass.gov/eea/air-water-climate-change/climate-change/climate-change-adaptation-report.html>

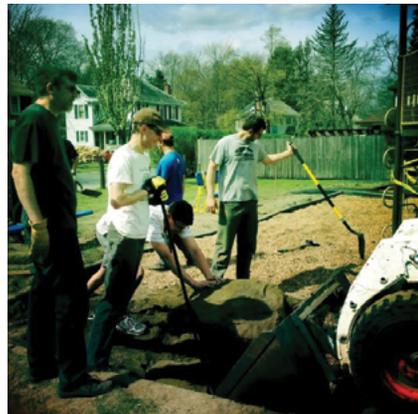


A feasibility study is underway to determine if the Town should move forward with an anaerobic digester to reduce the quantity and cost of disposing sewage sludge and generate energy as a by-product. Such a facility could accept food and other organic waste and make curbside composting pick-up cost effective. A similar facility is located in Rutland, MA.³

In addition to a weekly pay-as-you-throw trash collection, the Town has a curbside recycling program with bi-weekly collection. The Town is considering more frequent collection in an effort to increase the recycling rate. The Town is slated to negotiate a new solid waste collection contract by July 2014 and it is hoped that the disposal costs incurred by the Town can be reduced. In terms of yard waste, the Town does not have space to compost effectively. Currently the town moves materials from the Transfer station to Martin's Farm, a local farm in Greenfield that does organic composting.

Recreation

While recreation programs are included in Natural, Historic and Cultural Resources Element, this Element will focus on recreation facilities. There are 21 parks and recreation facilities including those on school property totaling approximately 239 acres of land. These include playgrounds, ball fields, tennis and basketball courts, picnic facilities, bike paths, and the Green River Swimming Area. The total acreage excludes passive open space and conservation lands. Some of the ball fields are heavily used and require



Beacon Playground Construction. Photo source: Caitlin von Schmidt

significant upkeep to maintain a viable playing condition. The 2012 Open Space and Recreation Plan identifies specific needs for many of these facilities which includes formalized maintenance and planting plans, upgraded equipment, boat access to the Green River, networked trail systems, and specific amenities at certain parks such as parking and signage. The Plan further recommends finding new resources, pursuing partnerships, leveraging other funds, and relying on the stewardship of volunteers.

The Parks and Forestry Division of the Department of Public Works is responsible for the maintenance and care of town-owned park land. Work includes maintenance of town parks, the swimming area, preparation and lining of athletic playing fields, and all school grounds. In spite of the fact that the Recreation Department hires 30-40 employees on a seasonal basis, the financial resources available for maintenance do not meet the demand given the high level of usage at some of the parks and ball fields.

The Recreation Department staff includes two full-time positions, a Director of Recreation and a Program Supervisor along with the 30-40 seasonal employees, and coordinates over 275 volunteers for special events, park clean ups and recreation programs. The Recreation Department works closely with the Recreation Commission, which consists of five members and two alternates appointed by the Mayor and approved by the Town Council, serving staggered terms. The Department manages over 25 recreational programs each year, in addition to six large annual events, and the management of the Green River Swimming and Recreation Area and the Energy Park including the summer concert series. They partner with over 60 local businesses and organizations. The Recreation Department's Capital Improvements Plan can be found in the Appendix.

³ See http://quasarenergygroup.com/pages/profile_rutland.pdf

Police

The Police Department has 23 officers of the Patrol Division, four detectives in the Investigative Division, and 10 special officers. The Administrative Division includes the Police Chief, Lieutenant, Firearms Officer and three administrative personnel.



Greenfield Police Station. Photo source: Greenfield Planning Department

The existing police station has been deemed to be inadequate and the Town is considering the construction of a new 44,000 square foot Public Safety Building that would house Police, Fire, Emergency Dispatch and Emergency Operations. At this point in time, the estimated cost for such a facility is \$16.5 million. A full description of the Public Safety Building can be found in the Feasibility and Design Services for Proposed Public Safety Facility study in the Appendix.

Fire

The Fire Department has a staff consisting of 29 full-time and 14 part-time firefighters, plus administrative support. They provide fire and rescue, and EMS services with an average of 2,500 calls per year. The Fire House was constructed in 1936 and significantly renovated in 1998, but it is at maximum capacity. The Department operates with four fire engines (the oldest is from 1988), as well as a tower truck, rescue vehicle, and fire boat. To offset a bulk of its heating oil consumption, the Department generates heat by burning wood pellets.



Greenfield Fire Station. Photo source: Greenfield Planning Department

Staffing is a major concern of the Department. Ideally it should have two engine companies on duty at all times, but the current staffing level does not provide enough capacity since each engine company needs at least three personnel. The Department's major capital needs include a new station (which is part of the new public safety complex under consideration), a new sub-station, and updates to its vehicle fleet and fire apparatus. A full description of the Public Safety Building can be found in the Feasibility and Design Services for Proposed Public Safety Facility study in the Appendix.

Council on Aging

The Greenfield Council on Aging (COA)/Senior Center is open to any Greenfield resident 55 years of age and older, as well as younger disabled adults. For people who do not have access to a car, bus transport to the Senior Center is available through the Franklin Regional Transit Authority either via regularly scheduled routes or its Demand Response service. A wide variety of services are available including health consultations, exercise and dance programs, meals, games, financial and insurance assistance, benefits counseling, and day trips – some of which require a fee. The COA/Senior Center is located at 54 High Street, Suite 2. This space is rented. It is too small, and has health issues caused by mold. COA has been looking for a new location and funds to move for several years.

Staff includes a Director, Finance/Office Manager, Activities Director, and Custodian. In addition to staff, the Council on Aging is supported by five

Greenfield COA Volunteer Philosophy Statement

"Volunteers partner with staff to enrich activities, programs, and services offered by the Council on Aging. The Council on Aging is committed to creating meaningful opportunities for volunteers to express their talents, skills, and wisdom to benefit community life."



Officers, thirteen Board Members and numerous volunteers. The COA publishes and distributes a free, “Senior News”, that includes a programming and a calendar of events and is distributed at many drop-off sites throughout town, including Town Hall, the Library, some senior housing sites, and other locations

Health

The Health Department has a director, a health inspector, and a public health nurse. They are involved in a variety of programs related to community health including tobacco control, nutrition, food safety, and safe living quarters; environmental health (mosquito control, waste management); emergency preparedness; community outreach; and education and school health services collaboration. In addition, the Board of Health has jurisdiction over the permitting and inspection of Title V septic systems. The Board of Health is responsible for making health policy for Greenfield, which includes:

- Creating new policy and regulation
- Holding public hearings on existing policies and regulations
- Hearing variance requests for existing policies and regulations

The Board consists of 3 members, appointed by the Mayor as described in the Greenfield Charter. Each member serves a 3-year term. A physician or health care professional is required to be one of the three members.

Health Department Mission Statement

The Greenfield Board of Health seeks to preserve and protect the health and well-being of the residents of Greenfield. The Board of Health protects the public health, prevents and controls disease, promotes safe and sanitary living conditions, and protects the environment from hazards. To this end the Board of Health promulgates, interprets and enforces regulations.

Library

The Greenfield Public Library is housed in a wood-framed building built in 1797 with a masonry addition constructed in 1908. There are eleven full-time, six part-time, and one per diem librarians on staff.



Greenfield Public Library. Photo source: Caitlin von Schmidt

The building has been listed in the National Register of Historic Places (Leavitt-Hovey House). There have been no additions or expansions since the building became the public library in 1908. Currently it has 11,000 square feet of gross usable floor area, which is below the industry standard of 32,000 square feet for Greenfield’s population. Since the library has outgrown its capacity, additional space with better accessibility is needed.

Energy

Reducing energy use combined with producing energy locally, cleanly, and renewably is a high priority for Greenfield - and central to achieving sustainability. After performing an Energy Audit in 2009 (see more below) the Town committed to reduce greenhouse gas emissions from fossil fuels by 80% by 2050, and to reduce money that left the community due to energy expenditures from \$67 million (in 2008) to ZERO by 2050.

This Element gives an overview of what Greenfield has done, and goal #5 lists big picture strategies to move toward achieving our 2050 goals. Since energy is used in every aspect of our lives, more specific energy-related goals and strategies can be found in every Element of this Master Plan.

In June 2010, Greenfield was the first Town in Massachusetts to be designated as a Green Community. That same year, in October, Greenfield received Governor

Patrick's Leading by Example award for its collaborative efforts with the Greening Greenfield Energy Committee. Today the Town has several programs to help residents and businesses reduce their energy use, and the municipality has achieved the goal of reducing its energy use by 20% over the past five years. Municipal energy use reductions have been made possible by a \$1.9 million investment in building energy upgrades through a contract with an energy service company (ESCO); installation of light emitting diode (LED) traffic signals; purchase of more fuel efficient vehicles; and energy upgrades to several schools.



Solar panels on the John Olver Transit Center.

Additionally, the first near-zero-net energy housing development, Wisdom Way Solar Village, and the first zero-net-energy transit center, John Olver Transit Center, in the country were constructed in Greenfield. Two electric vehicle charging stations support the community and are conveniently located downtown. Greenfield also works successfully with several developers that understand both the environmental and economic benefits of energy efficiency, and have rehabilitated – and, in some cases repurposed – several historic brick buildings in the downtown. The Town is also home to the Northeast Sustainable Energy Association.



Solar farm at the Greenfield landfill. Photo source: Greenfield Planning Department

Greenfield's energy-related programs for residents include the Energy Smart Homes program, which helps residents find funds to do energy upgrades to

their homes. The Energy Smart Homes program was made possible by a 3-year grant from the U.S. Environmental Protection Agency, which ends in 2014. This program works very closely with the Mass Save programs and with Greenfield's Rehab Housing program funded by Community Development Block Grant (CDBG) funds. The Energy Smart Homes program has provided over \$1 million to Greenfield to do energy upgrades, and residents have saved over \$250,000 on their utility bills as of 2013. The Town also offers an Energy Smart Business program to help businesses in a similar way.

In addition, the Town implemented a number of energy efficiency and renewable energy projects over the last few years including:

- A 2.009 megawatt (MW) solar farm was completed in June 2012. It has produced over 3,181 MWh to date and in fiscal year 2013 produced 58% of the municipal electric load and costs the Town only \$0.01 per kilowatt (kWh). The project is connected to the grid resulting in credit to the Town's account on a monthly basis. In 2013, the solar farm reduced Greenfield's electricity costs by over \$215,000.
- Two wood pellet boilers were installed at the Fire Station, which reduced oil consumption by 81%.
- New energy efficient windows were installed at the Town Hall.
- Oil burners at the Town Hall and at the Town Offices at 20 Sanderson Street were converted to natural gas.

The Town has several other projects in the pipeline for 2014:

- Long lasting, energy-efficient LED fixtures will replace roughly one-third of the Town's street lights and are expected to use 68% less electricity and save the Town close to \$50,000 in the first year of operation.
- A 1.0-1.5 MW solar array is proposed for the town well field that is



expected to be in part, or completely, owned by the Town in order to receive the highest benefit. It is expected to cost in the range of \$3-5 million and Renewable Energy Bonds and/or Qualified Energy Conservation Bonds are anticipated to fund the project.

- The Town received a technical assistance grant along with Montague, Shelburne, and Buckland to assess clean energy strategies and incentives and develop a roadmap for Greenfield's energy future.
- The Town received a grant from the Mass Clean Energy Center to explore the feasibility of an anaerobic digester with a combined heat and power facility at the transfer station.
- The Town is seeking approval for a municipal aggregation program to supply electricity to all utility customers in Greenfield. The aggregation will offer a greener electricity product from renewable energy for the same (or less) cost as the utility's basic service.
- The Town is launching a Greenfield Solar Challenge program that emulates the MA Clean Energy Center's Solarize Mass Program which will aggregate the purchase of photovoltaic systems and drive down the cost of installation for residences and businesses

Several other renewable energy projects are being contemplated over the next few years including a community solar garden to complement the Greenfield Solar Challenge program for those who may not be able to install the equipment on their own properties; encouraging a photovoltaic array as part of the redevelopment of the Bendix property, and the installation of a photovoltaic array at the new high school and on the Federal Street School.

The Greenfield Energy Audit and Greening Greenfield campaign

In 2007, the citizen group, the Greening Greenfield Energy Committee (GGEC), approached Mayor Christine Forgey and together they launched the Greening Greenfield campaign. The campaign's goal was to make Greenfield a more sustainable and vibrant place to live, and to achieve this by using "greening" as the economic and inspirational engine to build a sustainable Greenfield so that current and future generations can sustain and enjoy life in this beautiful, abundant valley.

The campaign was in response to the fact that on a global level, climate change is happening faster than anticipated, oil supplies are shrinking while demand is growing, and population is exploding. Locally, regionally and nationally we are experiencing economic stresses due to job loss, and higher energy and food costs. The Greening Greenfield brochures states that its strategy to address these issues is to:

- Reduce carbon emissions by working with ICLEI – Local Governments for Sustainability's and writing and implementing a sustainability plan. The ultimate goal is zero emissions and waste, as well as clean air, water, and food.
- Collaborate with individuals, groups, businesses and town government. Use cooperative learning, public relations and advocacy. Bring financial and human resources to the table.
- Use existing technologies to reduce the need for costly and polluting fossil fuels. We will also help build new sources of energy that do not emit toxic or climate change emissions.
- Foster sustainable: land use and agriculture; transportation: local economies, green businesses, jobs and manufacturing; healthy and

equitable lifestyles; and quality education, health care, arts, entertainment, parks and recreation.

- Advocate for local, regional, state and federal policies that support its sustainable vision.
- Greening Greenfield adopted the definition of sustainability as stated by the 1987 Brundtland Commission as follows:

“Sustainability is a system of thinking that strives to meet the present economic, social and environmental needs without compromising future generation’s ability to meet their own needs.”⁴

In 2008, the Town and GGEC collaborated on a town-wide energy audit and published the Greenfield Energy Audit in 2009. As an outcome of the Audit, Mayor Forgey announced two aspirational goals for Greenfield:

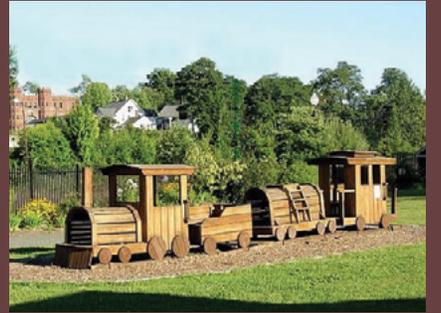
- Zero energy dollars spent by Greenfield residents will leave the region by 2050; and
- Cutting climate change emissions by 80% by 2050.

To achieve these goals, three questions were developed to identify strategic actions, as follows:

- Does it reduce our energy use? Are we doing more with less?
- Does this new source of energy produce zero carbon emissions, zero toxic waste, build the local economy, and avoid any unintended consequences?
- Is this a game-changing technology, behavior, or idea that opens new doors to doing things better?

Another outcome of the Greenfield Energy Audit and Green Communities designation was the creation of a new Town committee: the Sustainability Advisory Committee. The purpose of this committee, as stated in the Ordinance, is to “assist the Town in meeting its Green Community obligations and 2050 goals by identifying, recommending, and implementing programs that foster a vital, sustainable and resilient community, by addressing the oil depletion and climate change crisis, and the three interlocking aspects of sustainability: the economy, the environment, and society.” This committee, which includes Town staff and citizens with equal voting privileges, started meeting in February 2013.

⁴ <http://www.greeninggreenfield.org/about-us>





Implementation: Goals, Strategies, and Actions

In order to develop sustainable community operations, we identified a number of goals and strategies that prioritize adequate staffing, budgets, resources and long-term maintenance and resiliency of its facilities. Incorporating ecological functions – such as rain gardens, bioswales and other stormwater infiltration techniques – into our public works and parks projects, is also essential to protecting our water quality and quantity and lowering municipal costs through reduced wastewater treatment. The last goal is that, in ten years, we will be a showcase clean energy community, will reduce greenhouse gas emissions by 40%, and will reduce energy dollars leaving Greenfield to zero.



Implementation

goal

1

Municipal buildings, equipment, and operations meet the Town’s needs and are accessible, efficient, resilient, well-staffed, and well-maintained.

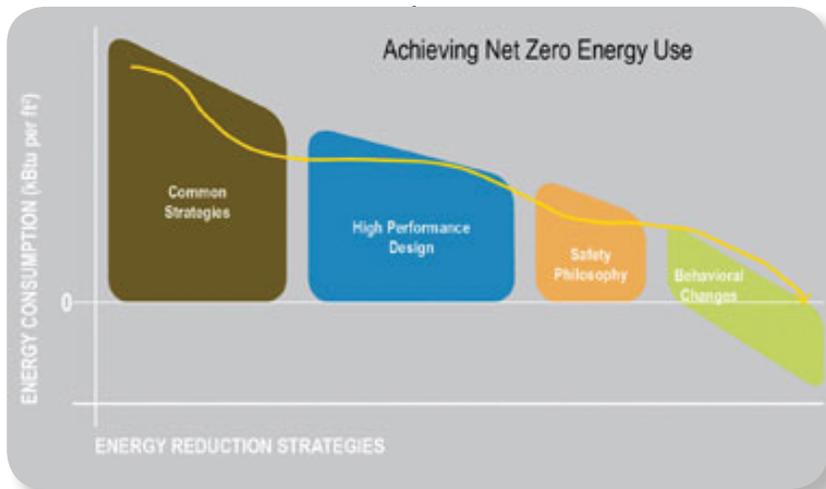
STRATEGY 1

Create and implement a long-range physical plant capital improvement plan to include buildings and vehicles.

The Town should become more proactive about updating its facilities by developing a long-range physical plant capital improvement plan. This will enable the Town to strategically plan to incrementally improve Greenfield’s physical plant by making it more energy efficient, durable, and sustainable, and budget more effectively as it moves forward with critical maintenance and capital improvement projects over the next 10-15 years.

Implementation Actions:

- a. Assess what improvements are needed for all municipal buildings, and when they are needed, with the goal of looking for synergies which could lead to cost savings. The recommendations and priorities identified in the ADA Transition Plan (See Appendix) can be folded into this effort.
- b. Central Maintenance, the Planning and Construction Committee and the Sustainability Advisory Committee work together with the goal of creating sustainable Town-owned buildings and services.
- c. Build all new Town-owned buildings to zero-net-energy ready standards and use “green” materials wherever possible.
- d. Develop and implement procurement policies that support Town sustainability goals.
- e. Ensure all vehicles are fuel efficient, well-maintained, under 20 years old, and that we have cost-effective ambulance services.



Measuring the progress towards achieving net zero energy goals through a variety of energy reducing strategies.

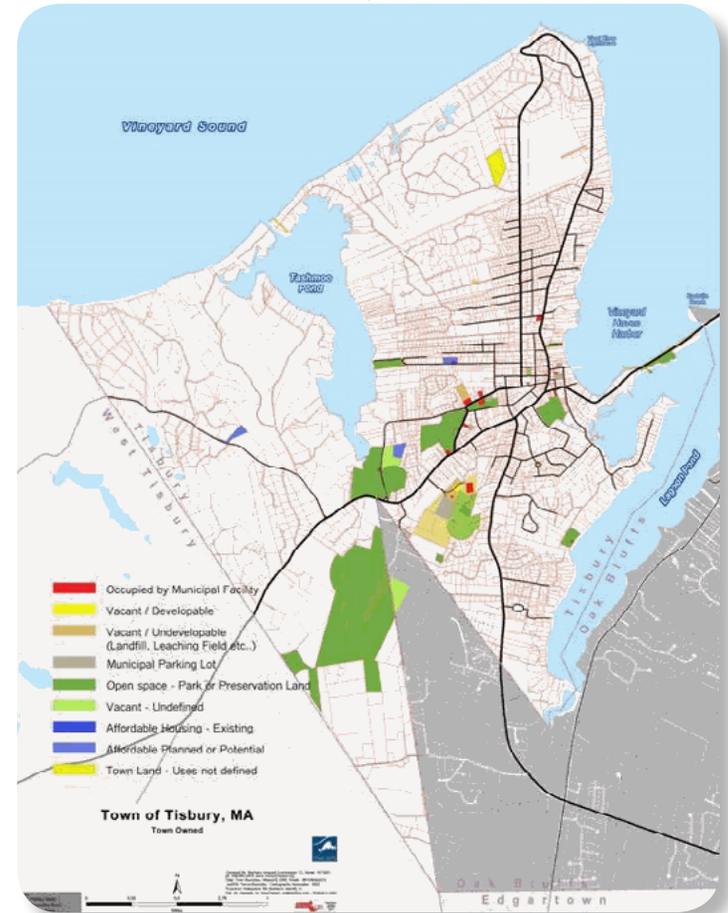
STRATEGY 2

Continue to explore how to meet the space and staffing needs of municipal services.

As Greenfield grows and changes in how it provides municipal services throughout the town, it will need to continue to consider how to meet space and staffing needs of its municipal services. With the Public Safety Complex and planned addition to the Town Hall identified, these two projects will provide for the much needed space for these departments. A continued assessment of similar municipal services and their facilities will enable the Town to plan for where it needs to grow and reduce space and staffing needs.

Implementation Actions:

- a. Continue to examine the feasibility of expanding and improving space for Police, Fire, and Emergency Dispatch and Emergency Management facilities (Continue to explore feasibility of housing them together in a Public Safety Complex).
- b. Create a satellite police station downtown.
- c. Continue to explore the feasibility of an expanded Town Hall, so that staff can more easily communicate and collaborate.
- d. Continue to explore adequate space for Central Maintenance, including parking space.
- e. Address DPW space needs for staffing, equipment and materials.
- f. Create staffing plan to address inadequacies caused by absences.
- g. Ensure that space and staffing needs of the Senior Center, and Recreation Department meet community goals



Tisbury MA Municipal Needs Assessment



goal

2

The Department of Public Works will have an updated budget and capital improvements plan, and sustainable funding to provide the necessary services to the Town of Greenfield.

STRATEGY 3

Review and expand long-range capital improvement plan, budget, funding, and schedule for the Department of Public Works that embraces the principles of sustainability and climate change adaptation.

Similar to Strategy #1, the Department of Public Works will benefit from an expanded long-range capital improvement plan, budget and funding, so they can plan for needed improvements. Core to developing this effort is the need to develop a plan that recognizes the need to consider today's best practices around sustainability and climate change adaptation and implement a philosophy of "strategic incrementalism" toward sustainability.

Implementation Actions:

- a. Includes plan for staffing that balances internal staff with external consultants/contractors to provide effective services.
- b. Work with the Greenfield Tree Committee to create and fund a plan that maintains healthy trees in the urban core that aims to achieve a 40% tree canopy, and complete and keep updated an urban core tree inventory.
- c. Identify additional funding sources for maintenance and capital projects to supplement the Town budget.



Sustainable Asset Management Plan

STRATEGY 4

Reduce solid waste and disposal costs through a comprehensive program that includes recyclable materials, compostable food and yard waste, and reduction of disposable items.

The Town actively looking to reduce waste and the DPW anticipates a household composting program at the Transfer Station in 2014. The next phase of the program aims to have curbside composting pick-up and collection of compost at the schools. By developing a new comprehensive program, the Town will reduce its solid waste and disposal costs. This program will need to consider recyclable materials, compostable food and yard waste, and reduction of disposable items.

Implementation Actions:

- a. Food composting at schools and curb-side pick-up for all.
- b. Reduce cost and amount of sewage sludge disposal.

what goes in the compost bin:

YES!

<p>yard waste leaves, grass clippings plant trimmings</p> <p>paper products wet or food soiled boxboard and paper napkins, facial tissues wax-coated cardboard and boxboard</p>	<p>food waste fruits and vegetables dairy products eggs and egg shells fish and shellfish bones, grease and fat cooked meat small amounts of raw meat (trimmings only) bread, pasta, rice, cereal, flour coffee grounds and filters, tea bags</p>
---	--

only certified compostable bags
can be used to line the compost bin

NO!

<p>plastic tin cans / metal glass tetra-paks aluminum foil rubber products clothing / textiles</p>	<p>dead animals / carcasses cigarette butts and ashes pet feces / cat litter styrofoam bandages</p>
--	---

For more info call 873-6019

ECOLOGY NORTH [Town Crest] COMPOST IN

Composting brochure for residents in Yellowknife, CA



Implementation

goal

3

The library, and senior and youth services have adequate, healthy facilities and expanded staffing and programs, and state, federal, and private services remain in Greenfield.

STRATEGY 5

Improve Greenfield's Public Library facilities to include adequate parking, accessibility, and community gathering space.

This strategy involves finalizing a feasibility study and implementing key steps that will enable the Town to ascertain the exact needs and costs associated with expanding or building a new Library, as well as setting the appropriate levels for staffing.

Implementation Actions:

- a. Finalize feasibility study for a facility that has a minimum of 30,000 square feet.
- b. Seek funding for expanded or new facility that reflects the needs and usage.
- c. Increase staffing as needed.

How Americans Value Public Libraries in Their Communities

54% of Americans have used a public library in the past year, and 72% live in a "library household". Most say libraries are very important to their communities.

Pew Research Center report on the value of libraries in our communities.

STRATEGY 6

Reinstate the Town Youth Commission to enhance services and activities for the Town's youth.

By reinstating the Youth Commission, the town will be able to better advance and enhance services and activities for the Town's youth. This strategy will enable more collaboration between the Recreation Departments and enable key partnerships with the public and private sectors to increase the quality of services.

Implementation Actions:

- a. Collaborate with Town's Recreation Department to explore a new Youth facility by assessing locations, program needs, and existing gaps. Place near the Library if possible.
- b. Leverage quality services offered by YMCA, Community Action Youth, local businesses and more and seek additional public/private partnerships.
- c. Explore the creation of a skateboard park.



Holyoke Youth Commission



Implementation

goal **3** [continued]

The library, and senior and youth services have adequate, healthy facilities and expanded staffing and programs, and state, federal, and private services remain in Greenfield.

STRATEGY 7

Work with Council on Aging to improve Senior Services by moving to a larger/healthier space with adequate staffing and increased programs.

This strategy advances the key steps in the planning of a new senior center facility. In addition, this strategy will assess the growth of the elder population in the coming years, and potential need for increased staffing and volunteer support that is vital to delivering high quality service.

Implementation Actions:

- a. Seek a new senior facility that is healthy, and has adequate space and amenities for expanded activities and staff, and is near the new Community Center/Library.
- b. Increase staffing who can reach out to seniors who are unable to come to the senior center (i.e., home visits), and help them with appropriate applications for assistance.
- c. Increase volunteers to support senior activities and services.



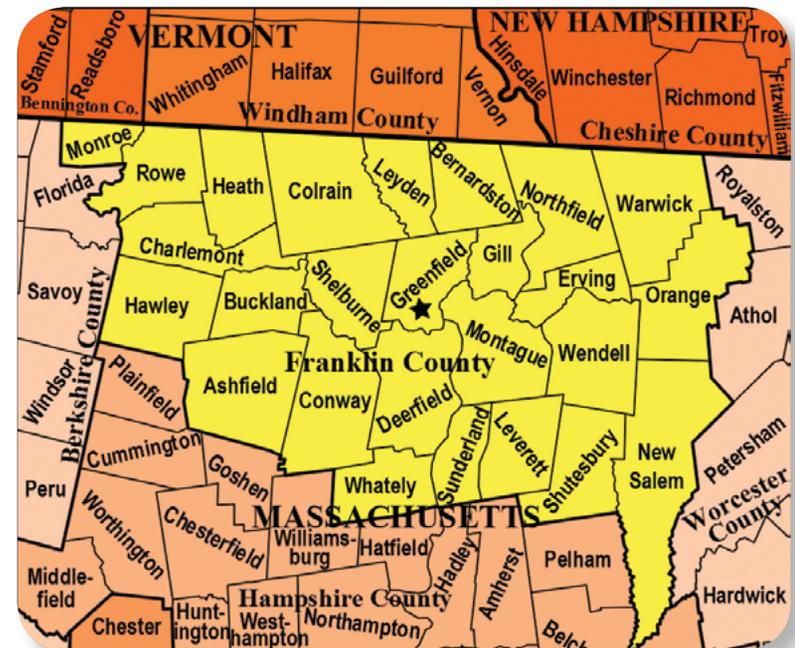
STRATEGY 8

Continue to advocate for keeping regional services that are physically located in Greenfield that serve both residents of Greenfield and greater Franklin County.

Core to this strategy is developing working relationships with state and private agencies to ensure that critical social services are available to Greenfield residents as well as Franklin County residents.

Implementation Actions:

- a. Work with state and private agencies to ensure social services are available to Greenfield residents as well as Franklin County residents.
- b. Continually seek ways to work and collaborate with health-care providers, clinics, and private providers to ensure quality health care, mental health care, and substance abuse treatment is available and appropriate for the population.



Keeping services in Greenfield will help to ensure the Town holds its place as the hub of Franklin County.



goal 4

Green Infrastructure Practices will reduce municipal infrastructure costs, protect public health and safety, and preserve natural areas.

STRATEGY 9

Incorporate cost-effective Green Infrastructure and Low Impact Design (LID) strategies into all municipal projects and work with developers and residents on what they can do.

This strategy will enable the Town to move forward with implementing green infrastructure best practices into projects, and will require the introduction of things like: a Green Stormwater Infrastructure Ordinance, tree ordinances, and educational programs to advance this strategy.

Implementation Actions:

- a. Adopt a Green Stormwater Infrastructure Ordinance that addresses the Town, developers, and residents. Use rain gardens, bioswales, permeable pavement, and green parking lot design when upgrading or permitting all roads, parking lots, sidewalks, and parks.
- b. Develop and implement Strategic Education and Outreach Plan on the benefits of Green Infrastructure through public/private partnerships that include information on water management, building healthy soil (instead of using chemical fertilizers, herbicides etc.), the value of native trees, shrubs, and vegetation that offer shade and support biodiversity in our backyards and our region.
- c. Develop and adopt an Urban Tree Ordinance that aims to maintain a minimum of a 40% tree canopy in the urban area so as to reduce the heat island effect, beautify, and create natural habitat.
- d. Maintain Parks and Open Space that create "healthy human habitats"..

The Value of Green Infrastructure

A Guide to Recognizing Its Economic, Environmental and Social Benefits



The Value of Green Infrastructure provides guidance on how to incorporate green elements into our communities.

goal 5

Greenfield will be a showcase “clean energy city” and be 40% of the way to meeting its 2050 goals adopted in 2009 to reduce CO2 by 80%, and to reduce the money we spend on energy that leaves the region from \$67 million/year (2008) to ZERO.

STRATEGY 10

Greenfield will continue to reduce municipal energy use and its carbon footprint through innovative programs, conservation, energy efficiency, the installation of renewable energy systems.

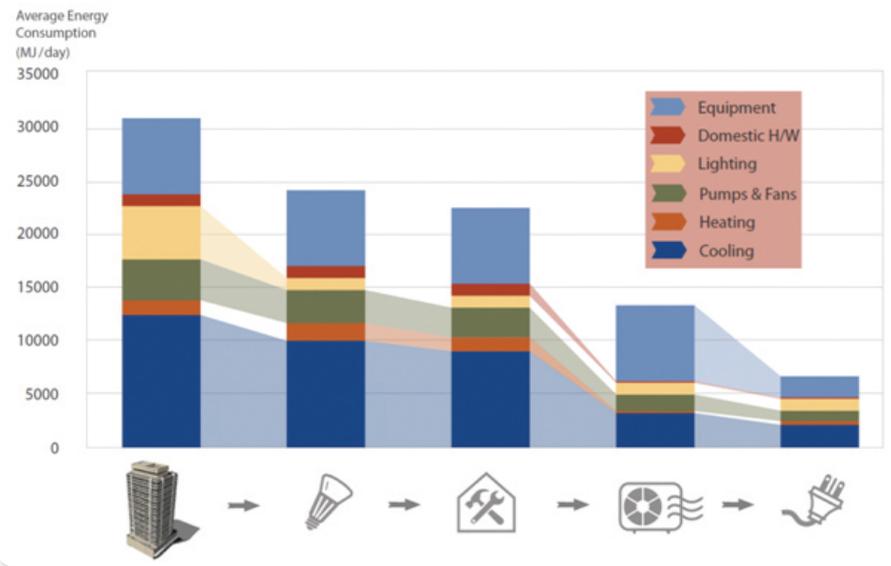
By creating innovative programs, advancing conservation efforts, and installing renewable energy systems, the Town will continue to reduce the cost of municipal energy use, and its carbon footprint. This strategy also advances the continued efforts to develop public and private partnerships to also reduce residential and business energy use.

Implementation Actions:

- a. Continue to implement municipal aggregation (Greenfield Community Light and Power) that offers 100% renewable electricity source to all residents and businesses.
- b. Develop a long-range energy reduction plan for municipal operations.
- c. Develop sustainability principles or guidelines for

Town projects, operations, policies and regulations including new or renovated municipal facilities.

- d. Work with Sustainability Advisory Committee to identify new opportunities and measure and report progress toward the 2050 goals.



Energy ratio chart



Implementation

goal **5** [continued]

Greenfield will be a showcase “clean energy city” and be 40% of the way to meeting its 2050 goals adopted in 2009 to reduce CO2 by 80%, and to reduce the money we spend on energy that leaves the region from \$67 million/year (2008) to ZERO.

STRATEGY 11

Continue public/private partnerships to reduce residential and business energy use and promote installation of renewable energy systems.

By partnering with residents and businesses on energy efficiency and renewable energy projects, and continuing to invest Community Development Block Grant (CDBG) funds in housing rehabilitation, the Town can accelerate their adoption. It is also important to track how many homes receive energy upgrades and how much energy and money is saved because of these efforts; how much renewable energy is installed locally; and to issue progress reports on efforts to reach the Town’s 2050 goals.

Implementation Actions:

- a. Continue to invest CDBG funds in residential building upgrades. Greenfield Solar Challenge and Community-Shared Solar.
- b. Decrease energy use through public education and outreach programs such as the Energy Smart Homes and Energy Smart Businesses. d. Work to improve state and utility energy efficiency programs by working with state agencies, utility companies, non-profits, and the state legislature.
- c. Increase local zero-carbon electricity production through town-wide programs such as e. Measure and report progress toward our 2050 goals.



Greenfield Energy Smart Homes logo

Source of Implementation Illustrations:

- Net Zero Chart - www.wi2sl.org
- Tisbury MA Municipal Needs Assessment - http://tisburyma.gov/Pages/TisburyMA_Planning/MNA/02-mna-findings
- Sustainable Asset Management Plan - <http://www2.erie.gov/dsm/index.php?q=capital-improvement-program-cip>
- What Goes In Compost Bin - www.yellowknife.ca
- Research Center - http://libraries.pewinternet.org/files/legacy-pdf/PIP_Libraries%20in%20communities.pdf
- Holyoke Youth Commission - youthtaskforce.org
- Greenfield Council on Aging - www.townofgreenfield.org
- Franklin County with Greenfield Star - www.mass-doc.com
- Strategy 9 - The Value of Green Infrastructure - hpigreen.com
- Energy ratio chart - Renew Economy: <http://reneweconomy.com.au/wp-content/uploads/2013/08/chart-1-office-savings1.png>
- Greenfield Energy Smart Homes logo - Facebook page



EDUCATION

vision



Greenfield Public Schools will be a group of attractive, well-maintained neighborhood schools with inter-district choice available at the elementary level to Greenfield parents. Each school is a jewel with a focus on preparing children for their next level of education as lifelong learners. School curriculum will not only focus on state requirements which includes core programs and technology, but also will provide ongoing opportunities to develop the skills and behaviors needed for citizenship, scholarship, and leadership. Greenfield's educational programs will be known for the richness of electives and arts, the commitment to acceleration and academic rigor at all levels, and for the commitment to equal opportunities, where economic advantage does not determine participation.

Greenfield Public Schools will offer flexibility and teach students critical thinking skills so they can creatively adapt to environmental, societal, and technological developments. Each school will emphasize community involvement, continuous improvement, innovation, and a respectful culture. The sports fields, playgrounds, meeting rooms, and auditoriums are open to the community when schools are not in use.



Education

Introduction

Good schools, and a positive experience in those schools, benefits the community as a whole by providing students – young and old – the skills and expertise they need to adapt to the changing conditions of the local and regional economy. As we plan for our future, it is also important to consider the infrastructure and administration of these programs – the foundation of Greenfield’s education programs needs to begin with safe and efficient facilities, sustainable staffing, and programming that allows our students to be competitive and contributing members of the community. It is also important to build on the existing relationships with higher education institutions, including Greenfield Community College and University of Massachusetts-Amherst, to continue providing new opportunities for students to expand their knowledge outside the traditional classroom environment. A comprehensive, collaborative sustainable education system in Greenfield will incorporate all of these aspects to accommodate residents of all ages and learning abilities for years to come.



Four Corners Elementary Walk-to-School Day. Photo source: Michael Sustick

This element of the Master Plan is charged with exploring the physical aspects of its K-12 educational system. The curricular aspects are the purview of the School Board and Administration. The following is a description of the existing educational resources within Greenfield, including the public school system, private schools, and continuing education programs, so as to give a context for K-12 schools, which play a critical role in establishing lifelong learning habits (*continued on page 216*)



goals

In Ten Years...

**1**

All schools and administrative buildings and equipment are safe, have adequate space, are attractive, well maintained, have good air quality, and are energy efficient.

**2**

The Greenfield school system is a choice-in system with high-quality, energy-efficient facilities and adequate staffing to offer a broad range of options that provide quality education for 21st Century jobs.

**3**

Facilities, equipment and technology systems for staff and students are up-to-date and connected to Town systems where relevant and allowable.



4

School security is addressed and maintained at all levels, including schools, administration building, and storage facilities.



5

Walking and biking to school is common practice for Greenfield's students, school grounds are secure with arrival areas, including school drop-off/pickup areas, and they are beautiful, welcoming, and safe.



6

The school meals program offers healthy food choices and engages in sustainable practices during preparation and disposal.



7

Facilities for Special Education students in all schools are appropriate to the students' learning needs, and are quiet.



that can foster the development of sustainable competencies in our residents with increased knowledge and understanding of local, regional, national and global issues and potential solutions and resources to address these challenges.

Our Education Driving Forces

Our vision for the education system and its facilities is based on the recognition that a thriving, resilient, and sustainable community and economy is one where people want to live, raise and educate their children. To develop the community and benefit from the advantages of a high quality of life we must have a well-maintained public education infrastructure and competitive educational programs. The citizens of Greenfield have a long history of supporting and funding a viable public education system through their taxes and their volunteerism. Our new high school and existing school structures position Greenfield to be able to offer quality education through high-quality facilities and staffing.

The goals and strategies for education ensure that we continue to address our school buildings with a commitment to proactive and timely maintenance; updated school entrances to embrace 21st century security needs; beautification of grounds; encouragement for safe walking and biking to school; healthy, green learning environments; and long-range innovative thinking about how to use our buildings to accommodate fluctuations in school enrollments. In order to ensure that these goals are met, we need to secure additional funding for innovative programs by hiring a creative, highly-skilled grant writer with a view of interdepartmental grant application opportunities.

School Facilities and Vehicles

Facilities and Programming

Eight schools comprise Greenfield's public school system and provide education for students in pre- kindergarten through 12th grade (see **Table 7-1**). They range in size and curriculum to address the wide variety of students' age and learning needs from pre-kindergarten (such as the Academy of Early Learning) to high school students in need of special attention (Poet Seat Therapeutic Day Program). As of 2013, an overall master plan for the schools did not exist for school facilities; however, the School Department has coordinated facility upgrades and use over the last 5-6 years. The following is a near-term "plan" for building use and grade configuration:

- Three buildings for elementary school students in grades K-3;
- Two buildings are used for middle students in grades 4-7;
- The 8th grade will have its own cluster of rooms in the new high school; and
- Grades 9-12 will also be in the new high school building.

As for student population, it is in a growing trend. In 2010 enrollment began to dramatically increase at the elementary grade level. That wave of additional students was at 3rd grade in 2013, and is likely to move up each year. Additionally, there are unpredictable events, such as homeless families with students being placed in Greenfield, which can bring an influx of up to 100 students over a few weeks, as happened in the fall of 2013.

The following outlines the schools in Greenfield and their program offerings.

Pre-Kindergarten and Elementary Schools

Greenfield operates the community-based Academy of Early Learning at North Parish for pre- kindergarten students. The program has full-day and half-day classroom teachers, as well as special education and student services (such as speech and language pathologists).

Table 7-1: Greenfield Public Schools by Grade and Student Population

SCHOOL	GRADES	# STUDENTS (AS OF NOV 2013)
Academy of Early Learning at North Parish	Pre-K	111
Newton Elementary School	K-3	227
Federal Street Elementary School	K-3	197
Discovery School @ Four Corners	K-3	226
Greenfield Middle School	4-7	410
Math and Science Academy	4-7	93
Greenfield High School	8-12	494
Poet Seat Therapeutic Day program	8-12	6
Total		1,764

Source: Greenfield Public School Department, 2013

For children in grades K, 1, 2, and 3 there are three elementary schools, each having common literacy programs and curriculum but also have special features. Newton Elementary is the largest elementary school in Greenfield, with 227 students (see **Table 7-1**). Since 2006, the school has been part of the Massachusetts Expanded Learning Time (ELT) Initiative. The ELT Initiative provides state resources through the Mass 2020 program to participating schools who are extending school time by at least 300 hours per year to improve student outcomes in core academic subjects, broaden enrichment

opportunities, and improve instruction by adding more planning and professional development time for teachers.¹

Federal Street is located just outside of downtown Greenfield and is the smallest elementary school in Greenfield with just under 200 students. Its location provides a centralized space for meetings and cultural events. The school was just awarded a new grant that offers free afterschool childcare programming until 5:30 p.m.

The Discovery School at Four Corners is an Innovation School with an emphasis on hands-on, theme-based instruction. It strives to bring students outside the classroom to learn about the environment, people, and geography with instruction that reduces the reliance on paper and pencil. Greenfield parents are offered a choice of having their children attend the neighborhood elementary school or one that better suits their needs.



Federal Street Elementary. Photo source: Caitlin von Schmidt.

Middle School

Greenfield Middle School building has two programs—one for grades 4 and 5, and a middle school program for grades 6 and 7. Each program is specifically designed for the particular age group. The Middle School is also participating in the ELT Initiative and has expanded the school day by 90 minutes, which

¹ Mass2020: <http://www.mass2020.org/?q=node/3>



provides many types of enrichment opportunities as well as extra sessions of academic programming.

Similar to the Middle School, the Math and Science Academy has a lower school, for grades 4 and 5, and an upper school, for grades 6 and 7. The Math and Science Academy has an accelerated program in mathematics and science but also teaches all of the other subjects. This special program now has 93 students and is located at the Green River School.²

High School

The existing Greenfield High School, for grades 8 – 12, is being replaced with a new building that is being constructed to “LEED (Leadership in Energy and Environmental Design) for Schools” certification and is designed to accommodate 585 students. The architect for the project is aiming for a Silver level of LEED certification.

This certification, among other things, indicates a high level of energy efficiency (see sidebar for specific information on energy efficient measures in the new school). In addition to being energy efficient, a green roof and solar panels are planned for the new building.

The high school is scheduled to be open for classes by September 2014, although final building completion is projected for August 2015. The new school will cost \$66.3 million total cost, \$44.5 million of which is covered through a state grant.

Greenfield High School offers both traditional learning opportunities as well as extra-curricular programs and events like a Friday Lunch Series called Zoom In, “short course” offerings at University of Massachusetts-Amherst, online

² <http://gpsk12.org/>

Energy Efficiency in the new Greenfield High School

The following outlines the planned energy efficiency elements for the new Greenfield High School building:

- Targeting energy efficiency at 20% above the code-minimum baseline, with a 24% stretch goal. The code baseline is about 50 – 60% more efficient than the existing building and the new building has been preliminarily modeled at 70 – 80% more efficient than the existing building.
- Efficiency measures include digital controls on mechanical systems, higher-than-code wall and roof insulation, controlled ratio of window area to solid wall area, white roof to keep the building cooler, window glass that lets light in and keeps heat out, building massing design that will optimize natural daylight to rooms, efficient artificial lighting that will dim down in the presence of ample natural light, and control of plug loads in the building.

Source: Frequently Asked Questions about Greenfield High School: http://www.townofgreenfield.org/Pages/GreenfieldMA_EmerNews/Frequently%20Asked%20Questions.pdf

enrichment classes at Greenfield Community College, and a Greenfield Schools Film Festival, which has been held every year since 2010.

For students who are struggling with traditional classroom settings, Poet Seat Therapeutic Day Program offers a unique program on the Greenfield High School campus. Located in a separate building, this program serves adolescents in high school who are intellectually capable but their emotional status makes attending a large high school very difficult.³

The mission of Poet Seat is to stabilize students so that they can return to less restrictive educational settings and simultaneously provide a quality high

³ Greenfield School Department website: <http://www.gpsk12.org/poetseat/poetseathome.html>

school education. Students can attend any Greenfield high school course, take a virtual course, or design and complete an independent study course. Students can earn credit through community service or work study. The faculty works individually with each student to design a successful high school program. In 2010-2011, Poet Seat launched an afternoon/evening program as well as the day program.

Virtual Academy

The Massachusetts Virtual Academy at Greenfield Commonwealth Virtual School is the first diploma-granting commonwealth virtual school in Massachusetts. Through a unique partnership, the Academy uses the K¹² online curriculum to provide a new learning experience for Massachusetts students in grades K–12 that doesn't require students to come to a school facility every day. With individualized learning approaches, the Academy and K¹² program offer students a high-quality online education option where 80% of the coursework is completed online, outside of a traditional classroom. The school is free and offers students living within driving distance of Greenfield the ability to work face-to-face with instructors and even participate in extracurricular activities.⁴ In 2013 Greenfield's Virtual Academy was chosen to become the first Massachusetts-run Virtual Academy, and is now run by the state.

Technical School

Franklin County Technical School is a regional vocational school located in Turners Falls. According to the school's principle, Richard Martin, "the foundational philosophy of the Franklin County Technical School is that all students are capable of academic and technical skills. All students can grow intellectually, socially, ethically and physically. Students learn best in a safe,

⁴ Massachusetts Virtual Academy at Greenfield: <http://www.k12.com/mava/who-we-are>

tolerant and disciplined environment."⁵ In order to foster this growth and develop modern-day skills, the school offers a wide variety of programs to get students ready for the workforce. Programs include automotive technology, business technology, carpentry, culinary arts, cosmetology, electrical, health technology, landscaping, plumbing and heating, and welding and metal fabrication.

Vehicles

Large school buses are rented from Kuzmeskis. However, smaller school buses and vans are owned by the town. The School Department works with the Department of Public Works (DPW) to maintain town-owned school vehicles. All vehicles that are not suitable for student transport are reused for other school purposes, such as food services or facilities/ground maintenance.

In 2013, the School Department worked with a consultant to develop a report on the quantity and quality of the school vehicle fleet. An ongoing issue for the school department is when it is or is not sensible to contract transportation vs. having our own vehicles. Most of the School Department's smaller vehicles are used for special education and homeless transportation, which transports a few youth every day. The analyses the School Department has conducted to-date indicates that the benefit of having the flexibility of their own vehicles outweighs using privately-contracted vehicles. As with all town-owned vehicles, the goal is to purchase the most fuel-efficient models possible.

⁵ Franklin County Technical School – Principal's Newsletter: <http://www.fcts.org/principal.html>

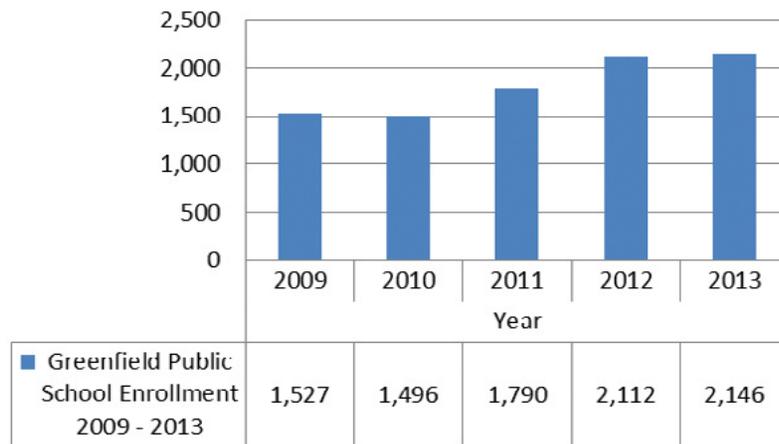


Students and Faculty

Students

Unlike some school districts across the State, Greenfield does not have a stagnant enrollment – the student population is increasing every year. As of the 2012 – 2013 academic years, the Greenfield school system had an enrollment of 2,146 students.⁶ **Figure 7-1** shows the enrollment trends from the last five academic years and **Table 7-1** outlines the enrollment as of November 2013 for each school in Greenfield Public Schools system. Current enrollment at the High School is 494 students and the planned capacity for the new high school is up to 585 students. The second highest enrollment is K-3, with the four combined schools enrolling 761 students. In the next 7-8 years, these students would be at the “new” Greenfield High School. The School Department has a three-fold plan for expansion should these students all continue through the Public School system in Greenfield:

Figure 7-1: Greenfield Public School Enrollment 2009-2013



Source: Greenfield Public School Department, 2013

⁶ This includes the students at the Massachusetts Virtual Academy at Greenfield, which is estimated at about 382 students who are Greenfield residents.

- The current high school enrollment is 483 students. The new high school is being designed for 585 students. There is only one less classroom in the new school than the existing school, so there is considerable “headroom” in the new school before the classrooms fill up to capacity. Also, many of the existing classrooms are smaller than they should be for their enrollment. The new classrooms will all be 850 square feet.
- There are four computer labs/project rooms that are each positioned in the center of their respective floors in the academic wings of the new school. These are planned as computer labs with fixed desktop machines. As the school eventually moves toward laptops and/or mobile devices, as seems to be the trend nationwide, these spaces will be freed up for more flexible project-based learning programs. If the school enrollment cannot be handled in the programmed classrooms, these labs could be used as fully functional classrooms for slightly smaller-sized classes.
- In the future, if the school enrollment still could not be handled by the designed floor plan, an addition would be constructed across the open front of the fore-court, making it into an enclosed four-sided courtyard. Program would be shifted inside to create a new main entrance in this addition, as well as new classroom space above it, and the existing administration area would be renovated into classrooms as well.⁷

Greenfield’s students are diverse in race, ethnicity and income and are dropping out at an average pace, according to the State. According to the Massachusetts Department of Elementary and Secondary Education, while the majority of students in Greenfield Public Schools are White (80%), about 11% are Hispanic and almost 4% are African American (**Table 7-2**). In addition, 6.7% of students do not speak English as a first language in Greenfield. According to the State,

⁷ Frequently Asked Questions about new Greenfield High School: http://www.townofgreenfield.org/Pages/GreenfieldMA_EmerNews/Frequently%20Asked%20Questions.pdf

Greenfield has a 2.8% dropout rate for grades 9-12, as compared to 2.5% in MA, and the district's 63% graduation rate is lower than the MA state average of 86%. However, the district's graduation rate has increased from 57% over five years.⁸

Table 7-2: Greenfield Public Schools: Race, Ethnicity and Enrollment Data

ENROLLMENT BY RACE/ETHNICITY (2012-13)		
RACE	% OF DISTRICT	% OF STATE
African American	3.8	8.6
Asian	2.1	5.9
Hispanic	11.2	16.4
Native American	0.3	0.2
White	80.1	66.0
Native Hawaiian, Pacific Islander	0.0	0.1
Multi-Race, Non-Hispanic	2.5	2.7

Source: <http://profiles.doe.mass.edu/profiles/student.aspx?orgcode=01140000&orgtypecode=5&>

In terms of income, although there is hope that new development dollars will improve local economic conditions, Franklin County as a whole remains depressed. In Greenfield alone, 30% of the Town's residents in 2009 had incomes below the poverty level, compared with 13.4% for the state. These figures are reflected in poverty levels for students in the Greenfield Public Schools. On October 1, 2013, the Greenfield School Department reported that 60% of the student population (about 1,738 students) was eligible for Free and Reduced Lunch, versus 34% for state.⁹

According to the Massachusetts Department of Elementary and Secondary Education, total expenditures for the 2011-2012 school was \$31,687,856, with expenditures per student estimated at \$12,290.¹⁰ This is below the state average of \$16,636 per student. While this is lower, there are some important changes

⁸ http://www.publicschoolreview.com/school_ov/school_id/37776

⁹ http://www.publicschoolreview.com/school_ov/school_id/37776

¹⁰ <http://profiles.doe.mass.edu/profiles/finance.aspx?orgcode=01140000&orgtypecode=5&leftNavID=501&rcode=2012>

that the School Department has identified for continuing to provide high quality education which include enhanced facilities, services, and curriculum. The 2013-2014 Greenfield School Department Budget Information contains enrollment, program, service and facility updates for both the 2013-2014 and 2014- 2015 school years, specifically (please see Appendix for more information):

- Enrollment will continue to increase a minimum of 30-50 students for the next three years through 2015-2016.
- The new high school will generate 3% to 5% enrollment increase.
- A need exists for a small alternative setting for autism and behavior disorder children at the Middle School.
- With increasing enrollment, one additional bus route will be added in FY2014-2015 and 2015- 2016.

Faculty

The Massachusetts Department of Elementary and Secondary Education is introducing new requirements that the School Department is trying to keep up with. There are different ways of looking at staffing, and since so many personnel are not "classroom, core subject" teachers, the State applies another ratio configuration to assess the various programs.

There are currently 147 teachers working for the Greenfield School Department. Thus, the teacher-student ratio was 1 to 14.6 as compared to the statewide average of 1 to 13.5. The School Department tries to keep elementary classroom instruction at a ratio of 1 to 18, with an upper limit of 1 to 22. If the class sizes increase above this limit in the elementary program, there is a concern that families may leave for districts with smaller class sizes. The guidance counselor ratio is typically 1 counselor to 200 students. The School Department is still working on defining other ratios, such as the nurse-student ratio. It is required to have a nurse on location, regardless of school size, even if there are only one



or two children who have ailments.¹¹

The number of custodial and maintenance staff has been gradually increasing each year, to keep up with the increasing number of students and schools in use. The School Department anticipates needing an additional custodian at the new Greenfield High School. The biggest issue with cleaning schools is floors and bathrooms (bathrooms all have to be cleaned every day), and with an increased footprint, there will be a need for another custodian to clean and maintain the building.

The 2013-2014 Greenfield School Department Budget Information contains faculty updates for both the 2013-2014 and 2014-2015 school years, specifically (please see Appendix for more information):

- New classroom teachers will be funded in the first year by school choice and in the second year will be brought into the general fund. New teachers include: a music teacher to be shared among all three elementary schools; a new science teacher and choral/music teacher at the Middle School; and 9th and 10th grader teachers at the High School.
- With extensive new guidelines and compliance requirements, Central Administration has to increase staff.

Technology

Greenfield Public Schools are completely data-driven and technology-based. Every teacher has a classroom computer and interactive white board for instruction, every school has at least one computer lab and several classrooms have student computers to assist with small group instruction. Every student in grades K-12 has computer network access. Administrators, faculty and staff have

computer network access and an email address. Parent logins are common for certain district applications such as PowerSchool (Greenfield School Department's electronic student information database) and Follett Destiny, the district-wide library management system installed for cataloguing and borrowing books at each school.¹²

Greenfield is considering the possibility of making crucial improvements to its information technology and telecommunications capabilities. One project currently in the pipeline would install a fiber backbone to connect all departments and enhance municipal inter-departmental networking and data sharing. Greenfield Public Schools would realize improved intra-district communications if all schools and the Central Administration building were interconnected on a fiber-based Wide Area Network. The Technology Plan 2014-2017 for the Greenfield Public Schools (draft as of December 2013) provides current technology initiatives, a needs assessment, technology goals, and metrics to measure progress in implementing the plan. Please see the Appendix for the Technology Plan.

Private and Charter Schools in and Around Greenfield

Greenfield has three private schools. The oldest is the Stoneleigh-Burnham School, a private boarding school for girls in grades 7 – 12. The Greenfield Center School serves students through eighth grade and is focused on helping children become more skilled, social and emotional beings. The Eagle Mountain School is an independent day school that offers a complete curriculum for children ages 8-14 with learning disabilities. There is currently no religious school in Greenfield since two have closed in the last couple of years.

Other private schools that serve Greenfield students, include: Bement School, a

¹¹ Interview with Dr. Susan Hollins, Superintendent of Greenfield Public Schools

¹² Greenfield Public Schools Technology Plan, 2014-2017 (draft):

private elementary school in Deerfield, MA; Deerfield Academy, an independent co-education boarding school for grades 9 through 12 located in Deerfield, MA, with a student body of 646; Northfield Mount Hermon, non-denominational co-educational boarding and day school for 650 students in grades 9 through 12 as well as a postgraduate year; and Eaglebrook School, a junior boarding school for boys in grades 6 through 9 located in Deerfield, MA with a 254 students.

Four Rivers Charter Public School is another option for students in grades 7-12. Four Rivers is a publicly funded charters school founded in 2003 that is located on the site of a historic farm. It is affiliated with Expeditionary Learning Schools, which encourages active, project-based academic learning, service and character education. According to their mission statement, their central themes are nature, technology and community, which guides their teaching and learning at the school.¹³

Greenfield Community College

One of the Town's major educational assets is Greenfield Community College (GCC), which is also one of its more significant employers. Enrollment in Fall 2013 was 2,238 students, of which 36% were registered as full-time students and 64% part-time. Over the last ten years, enrollment has ranged from between 2,200 to a peak of approximately 2,600 students in the Fall of 2010. Approximately 57% of the 2013 student population is considered to be in the "traditional" age group of 24 years old or younger (the average age is 27). The vast majority of these students are matriculated into associate degree or certificate programs.¹⁴

GCC also maintains a downtown presence where the Office of Community Education is based. This program offers courses to nearly 2000 participants each

year at locations in Franklin and Hampshire counties. Workshops are designed in response to community needs, often in cooperation with other organizations, drawing upon both college and community resources. Instructors are from the community and work as tradespersons, artists, professionals and educators and teach classes and technical skills workshops in a broad range of subjects, including alternative energy, art, business, computers, crafts, dance, finance, and trades. Classes are available throughout the year at various times of day.¹⁵

As of 2013, GCC has a total of 353 employees on staff, including administrative and maintenance, of which 207 are full-time employees. Approximately 61% of the employees live in Franklin County.¹⁶



Greenfield Community College, Permaculture Garden. Photo source: VHB.

¹³ http://www.fourriverscharter.org/docs/school_profile_10-11.pdf

¹⁴ Greenfield Community College Fast Facts, <http://web.gcc.mass.edu/fast-facts/>

¹⁵ <http://web.gcc.mass.edu/creditfree/>

¹⁶ Conversation with Marie Breheny, Director of Assessment, June 2013





Implementation: Goals, Strategies, and Actions

The goals and strategies for education ensure that we continue to address our school buildings with a commitment to proactive and timely maintenance; updated school entrances to embrace 21st Century security needs; beautification of grounds; encouragement for safe walking and biking to school; healthy, green learning environments; and long-range innovative thinking about how to use our buildings to accommodate fluctuations in school enrollments. In order to ensure that these goals are met, we need to secure additional funding for innovative programs by hiring a creative, highly-skilled grant writer with a view of interdepartmental grant application opportunities.



goal 1

All schools and administrative buildings and equipment are safe, have adequate space, are attractive, well maintained, have good air quality, and are energy efficient.

STRATEGY 1

Maintenance is performed regularly, and all maintenance is approached as an opportunity to upgrade facilities to become safer, healthier, more sustainable, energy efficient, and beautiful, and purchasing policies ensure school vehicles are as energy efficient as possible.

Maintenance is essential to providing a healthy, safe learning environment for students. Developing and implementing an operations and maintenance plan will help identify and replace or fix vehicles and equipment before they are broken, increases energy efficiency of vehicles and equipment through routine cleaning and maintenance, and saves the school district money by anticipating capital expenses in advance through careful and regular inspections.

Implementation Actions:

- a. Environmental health inspections are up to date including: air quality, mold and mildew, water quality, and asbestos and chemical monitoring.
- b. Heating Ventilation and Air Conditioning (HVAC), plumbing and electrical systems are repaired with longevity, low maintenance, and sustainability in mind.
- c. Cleaning continues to be done with “green” products. Non-toxic chemicals, including fertilizers, are not used anywhere in school buildings or on the grounds.



National Best Practices Manual for High Performance Schools

goal **2**

The Greenfield school system is a choice-in system with high-quality, energy-efficient facilities and adequate staffing to offer a broad range of options that provide quality education for 21st Century jobs.

STRATEGY 2

Ensure that budgeting and policies provide quality facilities and curriculum with adequate staffing and administration to meet the over-arching student and maintenance needs of our school system.

A financial, programmatic and procedural framework is essential to ensuring that the School Department's buildings, policies, curriculum and staff support and meet the growing, evolving needs of Greenfield's students. This will save the Town time and money and allow the faculty to focus on delivering a high quality education to our future generations.

Implementation Actions:

- a. Ensure that teacher/student ratio does not exceed a ratio of 1:22.
- b. Add a curriculum coordinator or Assistant Superintendent to ensure quality curriculum is available for our students.
- c. Add plumber to maintenance staff rather than waiting for a contractor to fix an immediate problem.
- d. Hire a grant writer that is shared with all town departments to seek innovative opportunities that are interdepartmental.



Shared Curriculum Coordinator at BOCES



goal 3

Facilities, equipment and technology systems for staff and students are up-to-date and connected to Town systems where relevant and allowable.

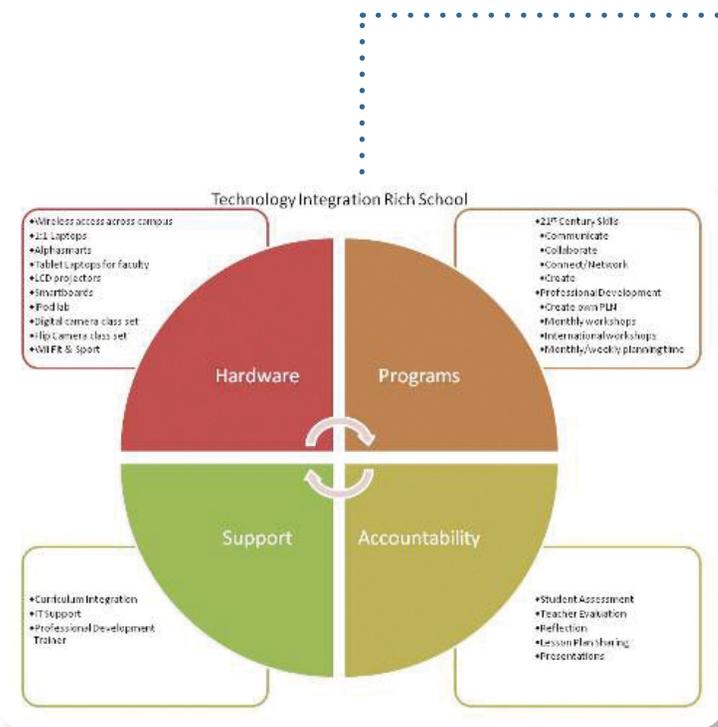
STRATEGY 3

Ensure that all communication systems, such as computers, telephones and wireless Internet access, are current, accessible and meet state and federal regulations.

The world of technology is constantly changing. A forward thinking plan should be created to anticipate and plan to adapt to the evolution of technology and how it can be an asset to both student learning, more efficient coordination between schools, and connection with central school administration and with the Town government as a whole.

Implementation Actions:

- a. Implement the Greenfield Public Schools Technology Plan, 2014-2017
- b. Connect to Town systems where relevant and allowable.
- c. Install Wi-Fi throughout the School Department facilities.
- d. Ensure communication systems, such as telephones and Internet, are up-to-date and attentive to federal and state requirements to schools.



Components of a technology integration rich school

goal 4

School security is addressed and maintained at all levels, including the schools, administration building, and storage facilities.

STRATEGY 4

School building entrances, both exterior and interior, are safe and secure, but welcoming of authorized individuals.

School security and safety is a concern of educators, parents, students and the public at large. When it comes to keeping students safe, there are many issues, including school violence which has been gaining in public awareness. More schools are using safety and security measures to reduce violence on school grounds. However, it is important to remember that our schools are public gathering places and they need to be inviting and accessible to visitors.

Implementation Actions:

- Security systems, as recommended for individual schools, are current and monitored.
- All safety systems and features are inspected regularly such as: entrances and exits, ADA compliance, elevators, fire and fire escapes, elevators, chimneys, playgrounds, kitchens, and paint as needed.



School Gate Guardian



goal 4 [continued]

School security is addressed and maintained at all levels, including the schools, administration building, and storage facilities.

STRATEGY 5

Security policies are in place and regularly maintained to ensure proper vetting of individuals attempting to enter the schools.

A security policy lays out the processes and procedures that must be followed to ensure the safety of the people that it is intended to protect. However, a policy is only effective if it is enforced. Developing and enforcing a successful policy requires collaboration and cooperation among the appropriate stakeholders, including police and facilities managers.

Implementation Actions:

- a. Evaluate all of the security policies across all of the schools and conduct a gap analysis to determine what is missing.
- b. Work with Police and other Emergency Management personnel to craft and uphold all security policies throughout the School Department.



School Security pass

goal 5

Walking and biking to school is common practice for Greenfield’s students, school grounds are secure with arrival areas, including school drop-off/pickup areas, and they are beautiful, welcoming, and safe.

STRATEGY 6

Re-evaluate bus, visitor, delivery, staff, and parental vehicle needs to ensure that drop-off areas are safe and attractive; that air quality (from vehicle emissions) is not compromised; and there is adequate staff and visitor parking.

Entrances and drop-off areas need to be designed, constructed and maintained to ensure they are safe for people of all ages and abilities. This includes signage and policies to prohibit unnecessary vehicle idling. Parking should be adequate enough to accommodate both the school staff and visitors during or after hours.

Implementation Actions:

- a. School grounds are secure, beautiful and welcoming with adequate lighting, signage, paths, benches, bike racks, trees, shrubbery, and flowers.
- b. There is adequate space for deliveries and parking for staff, parents, and visitors.
- c. Create a landscape upgrade and maintenance plan that ensures exterior curbs, steps, rails and trim are in good condition and grounds are regularly mowed and maintained, and that lighting and water management systems are upgraded to greener options whenever possible.
- d. The community has access to school facilities such as sports fields, playgrounds, libraries, meeting spaces and auditoriums as needed after school hours.
- e. Spaces for outdoor classrooms are available and utilized.

BSI Design Workbook (rev. 8.19.10) **8**

SY - Circulation & Fencing

<p>Purpose, Description & Considerations</p> <ul style="list-style-type: none"> • circulation requirements - fire codes, pick-up/drop off areas, exit & entry needs, delivery, bus and car access - all inform the overall design layout of schoolyard areas, play spaces and outdoor classroom location • fencing and bollards - define the circulation plan & SY areas, and provide clear identification of safe places for student use that 	<p>is separated from vehicular traffic & landscape plantings</p> <ul style="list-style-type: none"> • fencing may be added as barrier with abutters (may be green fence, privacy slats or solid wall) • SY design must clarify: entrances & exits for students, staff and visitors; bus pick up and drop off areas; respect handicap access • parking - teacher & staff parking on school property is negotiable and not a requirement 	<ul style="list-style-type: none"> • respect existing desire lines (traditional pathways across the schoolyard) • define best location for dumpster & recycling collection • separate schoolyard areas from waste management functions when possible (for smell, sight and public health concerns) • consider a range of materials - for function; cost; aesthetics; green practices; & sustainability
Design Checklist		
<ul style="list-style-type: none"> <input type="checkbox"/> fencing, gates or bollards between play areas and vehicular traffic <input type="checkbox"/> landscape protection - clear definition between foot traffic and play zones 	<ul style="list-style-type: none"> <input type="checkbox"/> access for deliveries & pick up <input type="checkbox"/> fire & emergency access <input type="checkbox"/> separation of dumpster from play space (lockable fence?) <input type="checkbox"/> student line up areas 	<ul style="list-style-type: none"> <input type="checkbox"/> parent waiting area for pick-up <input type="checkbox"/> fence between SY & neighbors <input type="checkbox"/> green practices: permeable surfaces; on-site run-off water collection & management; use of recycled materials

School yard design - circulation



goal 5 [continued]

Walking and biking to school is common practice for Greenfield’s students, school grounds are secure with arrival areas, including school drop-off/pickup areas, and they are beautiful, welcoming, and safe.

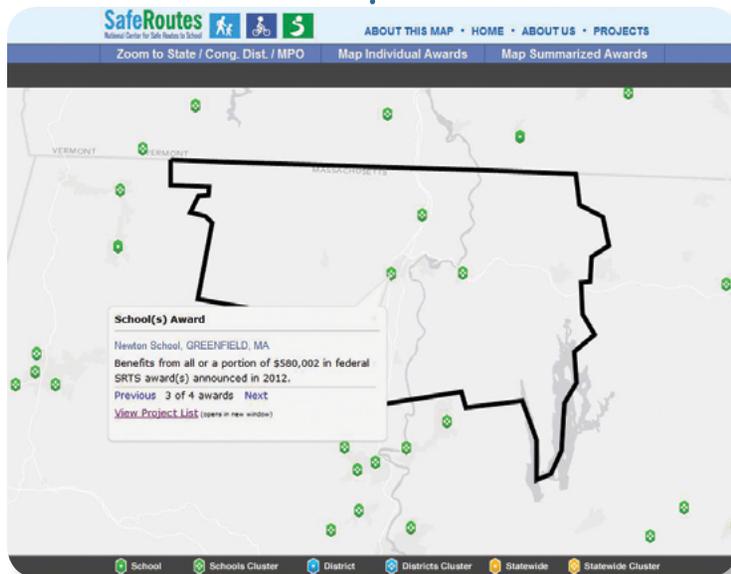
STRATEGY 7

Expand Safe Routes to School program from once a month to weekly, then daily with the goal of increasing health, exercise, and non-motorized ways of traveling around.

Safe Routes to School programs focus on removing the barriers to walking and biking to school, including constructing sidewalks, striping crosswalks and bike lanes, and providing education to students, parents and drivers about how to create a safe environment for students on their journey to and from school.

Implementation Actions:

- a. Work with Greenfield Police Department, Parent-Teacher Organizations, Greenfield Public School teachers and administrators, local businesses and other stakeholders to relaunch the Safe Routes to School program monthly, with a discussion about how to expand it to daily programming.
- b. Determine where the sidewalks and bicycling routes are deficient in Greenfield.
- c. Upgrade crosswalks and investigate other opportunities for “striping” roadways for pedestrian and bicycle safety.



Safe Routes to School Projects in Greenfield

goal 6

The school meals program offers healthy food choices and engages in sustainable practices during preparation and disposal.

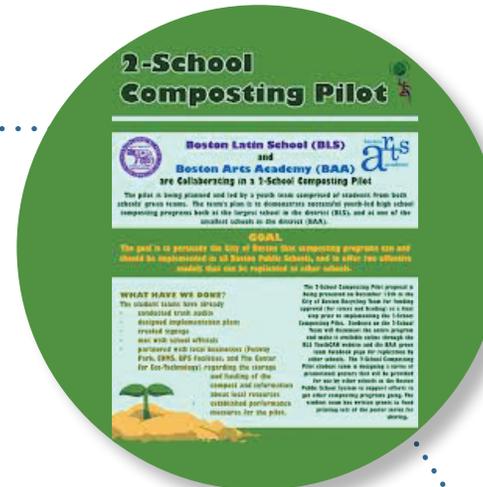
STRATEGY 8

Reduce waste by applying for composting grant and implementing it, while using washable or compostable trays, plates, and flatware.

School waste contains a large percentage of discarded food and potentially biodegradable items (like paper towels and plates). In order to reduce materials going to landfills and instill lifelong habits of reducing our impact on the environment, schools can investigate, develop and implement programs that separate discarded food and biodegradable items from the waste stream and bring them to a facility where they can be turned into compost that supports local and regional agriculture.

Implementation Actions:

- a. Determine the best approach for implementing a compost program, perhaps through a pilot at one or more of the schools.
- b. Investigate grants through local, state and federal foundations and other funding sources to provide seed money for a composting program.



Boston Latin School Compost Pilot



Pack a Waste Free Lunch



goal **6** [continued]

The school meals program offers healthy food choices and engages in sustainable practices during preparation and disposal.

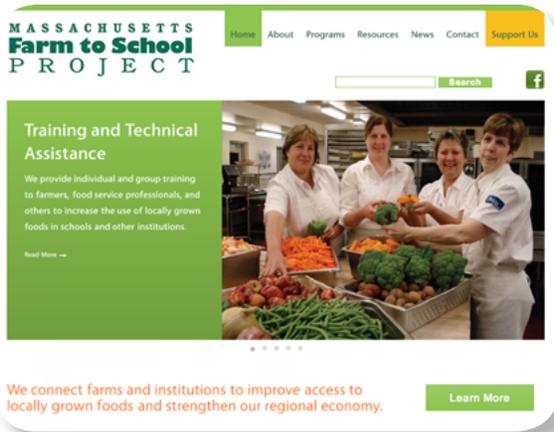
STRATEGY 9

Implement a farm-to-school program by working with local farmers and other farming organizations for access to locally-grown food and farming expertise as well as to support continuing educational options for Greenfield Public School teachers about food and local agriculture.

A farm-to-school program would facilitate purchasing relationships between local schools and local farms and agriculture businesses to increase availability of food in schools that is produced in or around Greenfield. Oftentimes, these programs also provide local food and agriculture education for students and teachers to understand the benefits of locally produced food. Curriculums are created that can be easily integrated into traditional subjects like biology, math, economics and health education.

Implementation Actions:

- a. Identify affordable sources of local food, and create a plan to utilize those local sources.
- b. Investigate funding opportunities through local, state and federal sources to provide grants to jumpstart a new program and help support the purchase of local food.
- c. Work with Just Roots to establish a curriculum for the schools that addresses local food and skills in farming and the agricultural trade.
- d. Implement a certificate program for teachers that prepare them to develop curriculum that teaches students about farming and the importance of local food.



MA Farm to School Program

goal 7

Facilities for Special Education students in all schools are appropriate to the students' learning needs, and are quiet.

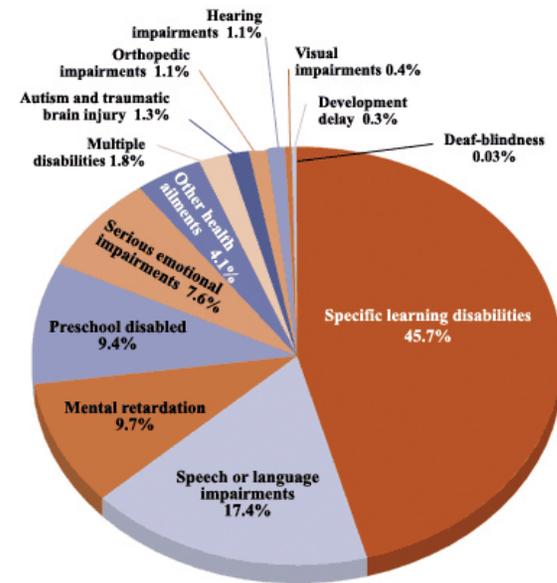
STRATEGY 10

Explore creating on-site and off-site facilities that meet the needs of a variety of special education programs at all age levels.

Students with special needs often require a different learning environment and instruction than their peers. Traditional classrooms do not always provide that environment for the necessary learning styles, which could make it difficult to make progress with the student. Identifying the needs of these students, and finding on- and off-site locations that meet those needs, is important to successfully engaging them throughout their educational career.

Implementation Actions:

- a. Work with Special Education Teachers at the School District to determine what the needs are of special education students, and what types of facilities are necessary to facilitate their learning. Identify the gaps.



Special Education by Category



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Source of Implementation Illustrations:

- National Best Practices Manual for High Performance Schools - <http://apps1.eere.energy.gov/buildings/publications/pdfs/energysmartschools/nationalbestpracticesmanual31545.pdf>
- Shared Curriculum Coordinator at BOCES - <http://www.gstboces.org/#/pages/iss/curriculumdevelopment.cfm>
- Components of a technology integration rich school - <http://langwitches.org/blog/2009/01/10/components-of-a-technology-integration-rich-school/>
- School Gate Guardian - <http://www.schoolgateguardian.com/>
- School Security pass from - <http://www.wsocvtv.com/news/news/local/rock-hill-school-visitor-policy-increases-security/nZ5kx/>
- School yard design - circulation - http://www.schoolyards.org/pdf/circulation_fencing.pdf
- Safe Routes to School Projects in Greenfield - maps.saferoutesinfo.org
- Pack a Waste Free Lunch - compostactivist.com
- Strategy 8 - Boston Latin School Compost Pilot - www.blsyouthcan.org
- MA Farm to School Program - www.sethgregorydesign.com
- Special Education by Category - www.edweek.org

Community



IMPLEMENTATION PLAN



Land Use

Goal	Strategy	Description of Strategy	Implementation Actions
<p>Goal #1: Greenfield has achieved a high level of ecosystem health, recreational opportunities, and biodiversity through conservation, restoration, and stewardship of its open spaces and natural areas.</p>	<p>1. Create a Natural and Open Space Committee, maintain public parks, actively assess and conserve agricultural and other land throughout the community, and establish criteria for prioritizing future acquisitions.</p>	<p>Through the creation of a Natural and Open Space Committee, the Town will be able to assess and prioritize its open spaces and natural resources throughout the town to ensure that there continues to be stewardship, protection, and maintenance of these critical resources. In addition, this committee will be able to develop ways to improve existing parks and potentially create new parks that meet specific needs of the community.</p>	<ul style="list-style-type: none"> • Create a permanent Natural and Open Space Committee to provide leadership and vision for the town. <ul style="list-style-type: none"> - Encourage youth to participate and strive to diversify the membership. • Reassess and update zoning focused on the optimal use of each location based on land type and location, existing land use patterns, and on fostering biodiversity and healthy ecosystems; housing and commercial/industrial needs; transportation, and recreation. • Include land in strategic locations throughout the town with high ecological value, agricultural lands, watershed protection areas, and parcels that provide access to or connections with adjacent open space resources and areas that are badly degraded. • Partner with Native American tribes to preserve strategic Native American sites. • Provide stewardship, protection and access for the Green River. <ul style="list-style-type: none"> - Work with and support Green River Watershed Association and Deerfield River Watershed Association; - Revisit Urban RiverVisons 2 study, and make a doable plan; - Map areas along Green River, prioritize areas for protection, and protect as they become available; - Explore the feasibility of providing a trail along the Green River; - Improve public access to the Green River; - Incentivize property owners along the Green River to eradicate invasive plants and expand and plant riparian buffers. • Maintain and improve existing public parks, and create new parks to meet specific needs and demographics. <ul style="list-style-type: none"> - Develop pocket parks and parklets in the downtown area; - Develop a skate park; - Promote pedestrian access and to contribute to the overall aesthetics of the downtown; - Ensure all Parks are safe and litter is managed. • Provide equitable access to open space and natural areas for all citizens. • Expand biking and walking trails, and promote initiatives that promote walking and biking <ul style="list-style-type: none"> - Support formation of trails committee or walk and bike committee; - Assess trails and determine compatible uses and post signs (e.g. "hiking only" vs. allowing biking and walking). • Develop zoning or ordinances that incentivize redevelopment and discourage the development of outlying lands, forests, and agricultural land.
	<p>2. Develop priority conservation corridors and/or overlay districts for natural and agricultural lands and rivers.</p>	<p>Establishing priority conservation corridors and overlay districts for natural and agricultural lands and rivers with enable the Town to realize the potential to connect these resources together to maximize the benefits to wildlife habitats and migration patterns. Improvements to the natural systems can enhance wildlife and add to the quality of these limited resources.</p>	<ul style="list-style-type: none"> • Partner with land trusts and the state to target these areas for permanent protection and/or regenerative use. • Provide continuous wildlife habitat and migration corridors, and protect watershed resources. <ul style="list-style-type: none"> - Create east-west connection between the ridges that define Greenfield; - Ensure river corridors enhanced, and deleterious uses of flood plains removed; - Remove or retrofit dams along rivers to allow fish passage.
	<p>3. Adopt the Community Preservation Act to provide funding for open space acquisition.</p>	<p>Preservation Act (CPA) enables communities to raise funds to create a local dedicated fund for open space preservation, preservation of historic resources, development of affordable housing, and the acquisition and development of outdoor recreational facilities. The adoption of the CPA will assist Greenfield in achieving some of its goals related to open space acquisitions.</p>	<ul style="list-style-type: none"> • Town Staff should review and identify the steps need to adopt the Community Preservation Act and work with the Town bodies to outline the procedural steps and requirements for adoption of the Act. • Once adopted, build awareness of the Act its provisions through an internal Town Staff meeting and through updating the Towns Website • Outline the short and mid-term goals to advance efforts under the adopted Act.

Acronyms:
 CISA: Community Involved in Supporting Agriculture
 FRCOG: Franklin Regional Council of Governments
 GCC: Greenfield Community College

SAC: Sustainability Advisory Committee
 ZBA: Zoning Board of Appeals

Policy, Program, Plan or Infrastructure Action	Best Practices and Resources	Additional Element(s) this Strategy Addresses	Time to Implement (Short, Mid, Long Term)	Lead Department or Stakeholder	Estimated Cost (\$, \$\$, \$\$\$, \$\$\$\$)	Existing Implementation Funding Available? (Y/N and Description)	New Strategy or Part of Another Plan? (List Plan)
Program	Urban RiverVisions 2 study; Green River Watershed Association and Deerfield River Watershed Association	Natural, Cultural, Historic Resources; Public Facilities, Service and Energy	Short (within a year)	Planning/Recreation/Mayor's Office	\$ (under \$20,000)	N	New Strategy
Plan	Middletown, RI	Natural, Cultural, Historic Resources	Mid (2-5 years)	Planning/Local Land Trusts	\$ (under \$20,000)	N	New Strategy
Policy	Mass.gov Website http://www.mass.gov/ Community Preservation Coalition	Natural, Cultural, Historic Resources; Public Facilities, Service and Energy	Short (within a year)	Mayor's Office	\$ (under \$20,000)		New Strategy



Land Use

Goal	Strategy	Description of Strategy	Implementation Actions
Goal #2: Agricultural land is preserved to ensure a vibrant local food supply, while increasing Greenfield's role as a regional food hub including production, aggregation, processing, and distribution infrastructure.	4. Inventory all agricultural land, including cropland pastures and orchards and its infrastructure, and encourage its preservation.	In order to advance the Town's goal to encourage the potential preservation of agricultural land, an inventory of all agricultural land will assist in determining the value of that land, its suitability for those uses and its associated infrastructure. With this assessment in place, the Town can advance actions to proactively engage the farm community and assess the need and applicability for the Town to supplement or modify tools (such as zoning) to reinforce this strategy.	<ul style="list-style-type: none"> • Inventory to include: protected agricultural land (and how protected), areas with prime agricultural soils, other areas that could become productive agricultural land. • Encourage farmers to take advantage of Agricultural Preservation Restriction (APR) Program and protect their agricultural land in perpetuity. • Work with area land trusts. • Pursue preservation options that include affordable "whole farm" preservation, including the buildings. • Discourage or prohibit the development of prime agricultural land for non-agricultural uses through zoning, and provide zoning that incentives redevelopment. • Match owners of idle farmland, or those trying to identify a successor, with new or existing farms looking for land. • Work with neighborhood groups to ID town-owned land that could be used for additional community food and flower gardens.
	5. Preserve all agricultural land so as to increase Greenfield's food security and health for all, and work toward a more sustainable agricultural system using new innovative practices that enhance soil fertility, carbon sequestration and food production.	With an inventory complete in Strategy 4, the Town can continue to advance efforts to preserve agricultural land and thus work towards a more sustainable agricultural system for Greenfield and the broader community. This strategy focuses on advancing the idea of Greenfield as a food hub and agricultural economic generator. Core to this strategy is the need to development the necessary technological systems to support a more sustainable and robust agricultural system, like food processing, nutrition, and educational and community programs.	<ul style="list-style-type: none"> • Establish Greenfield as a food hub and support the economic growth and job creation potential of food production, distribution, and processing in town. • Review and revise Agricultural Commission's mission to ensure it promotes and advocates for all aspects of Greenfield food security. • Use Greenfield Food Study, and regional food studies such as those published by CISA and FRCOG, to determine food system infrastructure, processing and distribution needs. • Develop new food system infrastructure, processing, and distribution centers based on studies and farmer survey data. • Actively participate in regional food security efforts such as the Franklin County Food Council, CISA, FRCOG, and larger regional and national efforts. • Train individuals for employment in areas of food production, distribution, and processing. • Ensure Farm to School programs embraced, and set minimum quantity standards for purchase of local food. • Ensure understanding of the carbon and water cycles and soil and food systems, as well as hands-on experience with growing food is part of a student's experience in the Greenfield Public Schools. • Incorporate food gardens in schoolyards. • Incorporate nutrition and food education programs in school curricula. • Establish community gardens in areas of dense population, public housing, and high concentrations of rental properties. • Plant edible fruit and nut trees, shrubs and plants in public spaces. • Continue to accept SNAP/EBT at farmers markets. • Offer information/workshops for farmers on how to use SNAP/EBT with their CSAs and at their farm stands. • Support the Mass in Motion Healthy Market initiative, or similar program, to get more healthy foods in local markets and convenience stores. • Provide advocacy for and promotion of innovative agricultural and food security. • Foster Greenfield as a center for new innovative agricultural techniques that increase soil fertility, carbon sequestration, and food production, and workshops on these topics.
	6. Increase productive agricultural land by fostering backyard gardening.	Through fostering back yard gardening, Greenfield will advance efforts to grow foods locally while reducing energy consumption associated with the transportation of goods and services from farm to market. In addition, this strategy will realize the goal to increase of the towns land for food production	<ul style="list-style-type: none"> • Bolster community efforts to protect the viability of farming by emphasizing the importance of, and support for, farming within the Town. • Encourage backyard and community gardens. • Utilize the GCC Greenfield Food Study, and other studies, for implementation ideas. • Partner with GCC's Food Systems and Agriculture program, Just Roots, and others to offer programs and training that foster health and backyard gardening including tool sharing programs, and food processing and storage workshops. • Provide incentives to homeowners to reduce area of hardscapes and lawns and increase areas of productive landscapes such as food gardens, rain gardens and gardens for biodiversity. • Support programs and information and demonstrations of innovative agricultural techniques such as forest gardening, permaculture, and nutrient dense gardening.

Policy, Program, Plan or Infrastructure Action	Best Practices and Resources	Additional Element(s) this Strategy Addresses	Time to Implement (Short, Mid, Long Term)	Lead Department or Stakeholder	Estimated Cost (\$, \$\$, \$\$\$, \$\$\$\$)	Existing Implementation Funding Available? (Y/N and Description)	New Strategy or Part of Another Plan? (List Plan)
Plan	Agricultural Preservation Restriction (APR) Program; Merrimack, NH, Greenfield Food Study	Natural, Cultural, Historic Resources; Public Facilities, Service and Energy	Mid (2-5 years)	Planning/Greenfield Agricultural Commission	\$\$ (\$20,001 - \$100,000)	N	New Strategy
Policy	American Planning Association- Refer to Guide Books and Agricultural; Greenfield Food Study; Mass in Motion Healthy Market initiative	Natural, Cultural, Historic Resources; Public Facilities, Service and Energy	Long (>5 years)	Mayor's Office/GPS Administration/Planning /CISA/FRCOG	\$\$\$\$ (>\$250,000)	N	Greenfield Food Study
Program	GCC Greenfield Food Study	N/A	Mid (2-5 years)	Just Roots/GCC/Greenfield Garden Club/SAC	\$ (under \$20,000)	N	New Strategy



Land Use

Goal	Strategy	Description of Strategy	Implementation Actions
<p>Goal #3: Our adaptable and resilient green infrastructure enhances and promotes compact development and redevelopment and offers ecological and social benefits.</p>	<p>7. Integrate biological systems into the urban fabric of Greenfield to provide ecosystem and infrastructure services.</p>	<p>Greenfield has the opportunity to integrate biological systems into existing and future development patterns thought-out the town that will enhance the ecosystem and towns infrastructure. This can be accomplished by providing incentives to incorporate plants and trees into development projects, and by adopting ordinances that require best practices for stormwater.</p>	<ul style="list-style-type: none"> • Develop and adopt an Urban Forestry Code that includes the following: <ul style="list-style-type: none"> - Conduct a baseline tree inventory, and make a plan that would enable Greenfield to achieve and maintain a 40% tree canopy to reduce the heat island effect, beautify the Town’s roadways, and enhance the Town’s open spaces and natural habitat; - Maintain healthy and diverse urban tree population; - Establish guidelines planting the right tree in the right place, and plant it right; - Provide incentives to homeowners to plant and maintain trees. • Adopt a Green Stormwater Infrastructure Ordinance that includes the following: <ul style="list-style-type: none"> - See Seattle’s code for ideas; - Incorporate storm water regulations and best management practices in all public ways, parking area, parks etc. (using vegetation and soil to manage rainwater) techniques strategies such as rain gardens, bioswales, and permeable pavement.); - Daylight streams and reestablish wetland connectivity to increase storm water storage and processing capacity as well as wildlife habitat; - Require a square footage minimum of tree canopy and vegetated swales in any new or upgraded parking lot; - Provide incentives to homeowners to plant rain gardens. • Prepare Greenfields essential infrastructure to maintain critical functions through challenging weather, energy, and economy, as outlined in the MA Climate Adaptation report (2010). <ul style="list-style-type: none"> - Improve storm water function and minimize stormwater runoff; - Eliminate ground water infiltration into sanitary sewers; - Bury key electric transmission lines; - Ensure the continuity of steams allowing migration/passage of aquatic species while updating road crossings of streams and rivers to accommodate greater volumes of storm water.
<p>Goal #4: Compact residential and commercial development and redevelopment that is focused in and around Greenfield’s historic downtown and other previously developed areas, incorporates increased density, mixed use development, and infrastructure reuse as the norm and supports our green, adaptable, and resilient infrastructure.</p>	<p>8. Update the Zoning Ordinance to include sustainable development practices and controls.</p> <p>9. Revise the Zoning Ordinance to allow development by-right in the downtown area and neighborhood centers that is compatible with Greenfield’s traditional character.</p>	<p>Zoning is a tool that allows a community to regulate land uses, development densities, and built environments in ways that support a town’s goals for preservation and growth. As a result of this Master Plan, Greenfield will need to update applicable sections of its zoning bylaw to allow for uses and land use development patterns that may have not been identified or allowed in the past, as well as other updates that include best practices to encourage and require sustainable development</p> <p>This strategy specifically calls for zoning revisions in the downtown area and neighborhood centers to encourage development that is in character with Greenfields traditional character. In doing so, the zoning updates should consider modifications to ensure that “by right” projects reflect the goals for traditional character (VS) only achieving that goal through “special permitted” development projects.</p>	<ul style="list-style-type: none"> • Calls for a mix of residential, commercial, civic, and open-space areas, allowing residents to live within one-quarter mile or a five-minute walk from these uses. • Zoning that facilitates improved residential and nonresidential uses in town center. • Create area sub-plans and enact zoning incentives for the desired mix of uses and density. • Focus commercial and industrial development in designated areas. • Establish maximum parking standards and to encourage the use of shared parking. • Reduce housing size minimums. • Establish design guidelines for development downtown and along highway corridors. • Incorporate mechanism for citizens to vote on any major proposed development in town. • Assess existing zoning to determine if commercial and industrial development is adequately limited and/or allowed in key areas. <ul style="list-style-type: none"> • Consider incentives to encourage mixed-use where appropriate. • Consider increasing density in the downtown area and appropriate neighborhood centers.

Policy, Program, Plan or Infrastructure Action	Best Practices and Resources	Additional Element(s) this Strategy Addresses	Time to Implement (Short, Mid, Long Term)	Lead Department or Stakeholder	Estimated Cost (\$, \$\$, \$\$\$, \$\$\$\$)	Existing Implementation Funding Available? (Y/N and Description)	New Strategy or Part of Another Plan? (List Plan)
Policy	<p>Mass.gov Website: http://www.mass.gov/ Complete Streets, Smart Growth Took Kit, and Pittsfield ,MA ; Smart Growth America; MA Climate Adaptation report (2010); Green Stormwater Infrastructure Ordinance (See Seattle’s code for ideas)</p>	Transportation; Public Facilities, Service and Energy	Mid (2-5 years)	Planning/DPW/WMECO	\$\$\$ (\$100,001 - \$250,000)	N	New Strategy
Program	<p>Mass.gov Website http://www.mass.gov/ / APA Website; Boston Zoning Code; Office of Energy and Environmental Affairs</p>	Economic Development	Short (within a year)	Planning/Planning Board/ZBA/Town Council	\$ (under \$20,000)	N	New Strategy
Policy	<p>Mass.gov Website: http://www.mass.gov/ Smart Growth Took Kit; Weymouth MA, Andover, MA</p>	Economic Development	Short (within a year)	Planning	\$ (under \$20,000)	N	New Strategy



Land Use

Goal	Strategy	Description of Strategy	Implementation Actions
<p>(continued)</p> <p>Goal #4: Compact residential and commercial development and redevelopment that is focused in and around Greenfield's historic downtown and other previously developed areas, incorporates increased density, mixed use development, and infrastructure reuse as the norm and supports our green, adaptable, and resilient infrastructure.</p>	<p>10. Adopt an infill development ordinance to encourage redevelopment or reuse of vacant or underperforming buildings or parcels.</p>	<p>This strategy calls for the creation of a new zoning ordinance to encourage redevelopment of infill sites or vacant sites within Town. This new ordinance is important, in that, infill or vacant parcels may not currently have the appropriate zoning in place or allow redevelopment patterns that are consistent with its abutting context and uses. For example, the by right zoning for an area may not allow or promote building placement (such as setback and building heights) that is consistent with its abutting context, or allow for any deviation from existing non-confirming lots sizes that may impact the feasibility of redeveloping a vacant site. This strategy recognizes the potential for these types of discrepancies and suggests creating a new ordinance that not only corrects these issues, but does so while striving to achieve the Town goals.</p>	<ul style="list-style-type: none"> • Develop an inventory of, and strategy for, reusing vacant or abandoned properties. <ul style="list-style-type: none"> - Consider using Center for Community Progress - http://www.communityprogress.net/the-help-you-need-pages-7.php; - Code changes, delinquent property tax reform, land banking, reuse strategies; - Pursue the reuse of the Lunt site (or other similar redevelopment opportunity) for elderly housing. • Applies throughout town, including downtown. • Evaluate whether form-based code would help the town achieve its desired goals of infill and redevelopment. • Flexible zoning standards that allow developers to adapt to existing site constraints, density bonuses, mixed uses, and reduced parking standards (or shared parking) are examples of the types of incentives that can be applied to this type of redevelopment. • Work with prospective developers to assess the specific obstacles to expanded reuse and/or redevelopment of historic and other existing properties, and create public/private partnerships to address those obstacles. • Create flexible minimum lot size and frontage requirements to encourage infill development. • Eliminate zoning and permitting obstacles to the redevelopment and parcels in the urban core and at the rotary. • Pursue reuse of vacant industrial and commercial properties that preserve historic elements and incorporates mixed uses appropriate to that neighborhood. • Work with nearby property owners to identify ways to reduce any negative impacts. • Seek funding to upgrade and maintain older properties, and especially seek creative ways to meet requirements for barrier-free access.

Policy, Program, Plan or Infrastructure Action	Best Practices and Resources	Additional Element(s) this Strategy Addresses	Time to Implement (Short, Mid, Long Term)	Lead Department or Stakeholder	Estimated Cost (\$, \$\$, \$\$\$, \$\$\$\$)	Existing Implementation Funding Available? (Y/N and Description)	New Strategy or Part of Another Plan? (List Plan)
Policy	Mass.gov Website: Smart Growth Took Kit; Weymouth MA, Andover, MA; Center for Community Progress - http://www.communityprogress.net/the-help-you-need-pages-7.php Form Based Code Institute http://www.formbasedcodes.org/	Economic Development	Short (within a year)	Planning/FRCOG's Regional Brownfields Program/Inspections Department	\$ (under \$20,000)	N	New Strategy



Transportation

Goal	Strategy	Description of Strategy	Implementation Actions
Goal #1: Greenfield will have welcoming gateways as well as safe, efficient, and attractive travel corridors.	1. Develop a beautification and informational plan, including a unified sign policy.	This strategy is aimed to seek opportunities to use streetscape, hardscape, and/or landscape enhancements to create a sense of place at key nodes throughout the community. Signage should provide guidance to key community features for way-finding purposes. Enforcement and implementation shall be established by existing committees and/or the planning board.	<ul style="list-style-type: none"> • Support welcoming signage, public art, and the promotion of special events at gateways. • Reaffirm Corridor Design Guidelines adopted by the Planning Board in 1993. • Enhance tree canopy along streets, adopting Tree Committee recommendations of June 2013. • Reduce/prioritize roadway signage to improve appearance and effectiveness. • Develop a wayfinding signage program to promote economic development. • Improve signage to inform and encourage a higher usage rate of existing parking off Main Street.
	2. Implement Complete Street initiatives	Complete Street policies shall be incorporated into all intersection or roadway improvement projects regardless of whether it is a public or private partnership. State and Federal guidelines shall be followed to ensure that roadway cross sections (lane and shoulder width, etc.) are met for the roadway's specific functional classification and/or jurisdiction.	<ul style="list-style-type: none"> • Incorporate a Complete Streets Policy as part of the Major Development Review Process. • Establish a standard width of 11 feet for travel lanes, with the option of using 10 feet where conditions allow. • Identify intersection/roadway improvements using multimodal assessment methodologies approved by Greenfield DPW and/or Massachusetts Department of Transportation. • Perform more detailed corridor assessments on Main St., Federal St., and Turners Falls Road, etc. to identify specific improvement needs and construction costs. • Incorporate more detailed traffic impact and access study guidelines into the Major Development Review process. • Explore ways to improve traffic flow issues related to school pick-up/drop-off.
	3. Implement Access Management Techniques.	Access Management Techniques shall be incorporated into any intersection or roadway improvement project regardless of whether it is a public or private partnership; although it may be easier to implement techniques when private developments are reviewed during the Major Development Review process. Access management techniques could include curb cut/driveway consolidations, internal parcel shared access, or adequately spacing driveways based on the classification and observed speed limit for the roadway.	<ul style="list-style-type: none"> • Improve traffic flow along major corridors by reducing vehicle-conflict points; through driveway consolidation and internal shared driveways. • Reduce vehicle-crashes town-wide and on major corridors and at Highway Safety Improvement Program cluster areas identified by MassDOT.
Goal #2: Downtown will be safe for all modes of transportation, with smooth traffic flow and sufficient parking, including a Municipal Parking Garage.	4. Implement a Downtown Transportation Improvement Plan, including parking and traffic flow, for all modes of transportation.	The downtown has been a subject of many conversations to improve and enhance all modes of transportation. On-street parking needs to be reviewed to confirm utilization and turnover ratios so that parking space changes and a new parking garage can be justified. Further study is needed to provide a better assessment of the impacts associated with any improvements in downtown, and to obtain key stakeholders support	<ul style="list-style-type: none"> • Gradually shift Main Street parking from angled to parallel in collaboration with funding a new parking garage. • Include bicycle parking. • Perform an updated downtown parking assessment. • Continue to seek funding for a parking garage on Olive Street to serve visitors, residents, the courthouse, and the Transit Center, incorporating pedestrian access from Transit Center to level of Main Street. • Upgrade all municipal parking lots using Low Impact Development principles, with consideration of the 2012 Conway School of Landscape Design study as a model. • Add bike lanes or shared use markings (sharrows) along Main Street and throughout the downtown area. • Add planted medians or islands to Main Street to slow traffic and make pedestrian crossings safer. • Make it easier to reach downtown safely by non-automotive modes. • Support pedestrian walking areas by providing and maintaining streetscape amenities such as: a quality tree canopy, benches, and outdoor dining. • Encourage transit opportunities with frequent and convenient stops at downtown locations. • Investigate and implement ways to reverse direction on Main Street. • Conduct Road Safety Audits to improve traffic flow/safety at problem areas along Main St, such as at intersections with Colrain St., Hope St. and High St. • Encourage cooperation between the town and businesses to use underutilized areas for access/egress, such as alleys, rear entrances, and parking lots creating welcoming environments (courts, patios, plazas) for everyone.

Acronyms:

CDBG: Community Development Block Grant program
 DPW: Greenfield Department of Public Works
 FRCOG: Franklin Regional Council of Governments
 GBA: Greenfield Business Association

GPS: Greenfield Public Schools
 GRA: Greenfield Redevelopment Authority
 STIP: State Transportation Improvement Program
 SAC: Sustainability Advisory Committee

Policy, Program, Plan or Infrastructure Action	Best Practices and Resources	Additional Element(s) this Strategy Addresses	Time to Implement (Short, Mid, Long Term)	Lead Department or Stakeholder	Estimated Cost (\$, \$\$, \$\$\$, \$\$\$\$)	Existing Implementation Funding Available? (Y/N and Description)	New Strategy or Part of Another Plan? (List Plan)
Plan	Amass Amherst (http://www.umass.edu/sustainability/); MassDOT GreenDOT Initiative (https://www.massdot.state.ma.us/GreenDOT.aspx)	Land Use and Natural, Cultural, Historic Resources	Long (>5 years)	Department of Planning & Development/DPW/Mayor's Office	\$\$\$ (\$100,001 - \$250,000)	N Possibilities: CDBG	New Strategy
Policy	MassDOT Project Development & Design Guide; Boston Complete Streets Initiative (http://bostoncompletestreets.org/); Smart Growth America Complete Street Coalition (http://www.smartgrowthamerica.org/complete-streets/changing-policy/policy-elements)	Public Facilities, Services, and Energy	Long (>5 years)	Department of Planning & Development/DPW/GRA	\$\$ (\$20,001 - \$100,000)	N, but could use CDBG*, STIP*, Chapter 90, MassWorks Grant*	New Strategy
Policy	Transportation Research Board (TRB) Access Management Manual NCHRP 15-43; MassDOT Project Development & Design Guide.	Land Use; Public Facilities, Services, and Energy; Economic Development	Long (>5 years)	DPW, Planning Department and Planning Board, Major Development Review process.	\$\$\$\$ (>\$250,000)	N Possibilities: Private funding, CDBG*, MassWorks Grant*.	New Strategy
Plan	Massachusetts Downtown Initiative (MDI): Town of Beverly, Norwood, Montague, Easton, Reading, Chelmsford, Woburn and Hingham (see: http://www.mass.gov/hed/community/funding/massachusetts-downtown-initiative-mdi.html)	Land Use and Economic Development	Long (>5 years)	Department of Planning & Development/DPW/GRA	\$\$\$\$ (>\$250,000)	N Possibilities: STIP*, CDBG*, Chapter 90, MassWorks Grant*	2003 Downtown Master Plan



Transportation

Goal	Strategy	Description of Strategy	Implementation Actions
<p>Goal #3: Neighborhoods will enjoy an improved quality of life by a reduction in the negative impact of vehicular traffic.</p>	<p>5. Implement Traffic Calming Initiatives.</p>	<p>Traffic calming initiatives can have a significant impact on how drivers travel a roadway. Further studies are needed throughout the community to identify traffic calming techniques, as some techniques may not work well on certain roadways. Traffic calming techniques may include installation of speed humps, raised crosswalks, neck downs and textured pavements.</p>	<ul style="list-style-type: none"> • Work with neighborhoods to identify and implement traffic-calming techniques to improve safety on neighborhood streets, such as: speed monitors, 4-way stop signs, traffic signals, rumble strips, speed humps, roundabouts, one-way street sections, etc. • Work with the police department to enforce speed limits in neighborhoods and publicize this commitment to protecting neighborhood quality of life. • Use information (such as speed monitor data) to adjust enforcement and public education efforts. • Endorse House bill #3391 which would reduce the speed limit to 25 MPH in thickly settled areas (unless otherwise posted). • Develop and promote a catchphrase to capture the spirit of protecting neighborhood quality of life, such as “Be a good neighbor, drive gently.” • Promote and encourage neighborhood block parties and other neighborhood activities.
<p>Goal #4: The entire community will have enhanced walkability.</p>	<p>6. Develop a Town wide Walkability Plan.</p>	<p>The automobile is the primary mode of transportation in Greenfield with approximately 85-percent of resident workers traveling by car. The town shall continue to enhance sidewalks and crosswalks and increase pedestrian connectivity to all residential neighborhoods from major nodes in town or the downtown.</p>	<ul style="list-style-type: none"> • Increase quality and quantity of sidewalks to improve continuity; upgrade existing sidewalks to meet or exceed disability access standards. • Investigate the installation of YIELD TO PEDESTRIAN signs in crosswalks on Main Street, Federal Street and High Street. • Explore additional crosswalk safety methods, such as decorative treatments (paint patterns, asphalt imprints, etc.), LED warning systems, speed monitors, etc. • Identify where additional crosswalks are needed, such as on High St. at the police station and at Smith Street over to the Farmers' Cooperative. • Develop a more stringent infrastructure snow removal program: <ul style="list-style-type: none"> - Improve the consistency of sidewalk snow clearing. - Strengthen, publicize and enforce snow-clearing ordinance. - Organize “Snow Squads” of “environmental athletes” to shovel snow from prioritized locations, including along routes to schools. • Develop neighborhood trails and waterfront walkways with benches, signs, and trail maps/markers/themes at key locations. • Promote the health benefits of walking for all ages by forming public/private/nonprofit partnerships to coordinate education and events. • Make walking more appealing by providing trees, vegetation, and benches; support businesses to create more interesting outdoor spaces to encourage pedestrian traffic. • Require new development to include sidewalks, and to connect to municipal sidewalks where feasible. Incorporate these and other initiatives as part of the Town’s Major Development Review process.
	<p>7. Adopt initiatives from federal and state programs to enhance walkability.</p>	<p>The Town shall maintain communication with MassDOT and the FRCOG to stay informed on new policies and directives that promote walkability and improve pedestrian connectivity to all residential neighborhoods from major nodes in town or the downtown.</p>	<ul style="list-style-type: none"> • Encourage initiatives in the Mass Department of Transportation / Federal Highway Administration’s Complete Streets Programs • Encourage initiatives in MassDOT’s Green DOT Policy • Implement Safe Routes to School (Safe Routes to School is a comprehensive federal program for K-8th graders) and “Walking Bus” initiatives to increase non-automotive travel to and from school.
<p>Goal #5: Our town will be a place where people of all ages can safely use bicycles for transportation and recreation.</p>	<p>8. Create and implement a Greenfield Bikes Initiative Program.</p>	<p>This strategy shall begin with establishing a bike committee that will oversee the development of a bike master plan. As part of this master plan further studies will be needed to develop improvement plans that accommodate bicyclists and are used to build consensus with key stakeholders before implementation.</p>	<ul style="list-style-type: none"> • Develop a town wide bike master plan. • Establish a Bicycle Committee. <ul style="list-style-type: none"> - Inventory and increase the amount of designated bike parking, coordinating public/private resources; especially in the downtown. - Implement Urban River Visions plan for path along Green River. - Support Franklin County’s bike tourism that will: (i.) lobby with Amtrak for bicycle access to trains; (ii.) seek/encourage bike rental/bike share service located at Transit Center; (iii.) promote and market Franklin County Bikeway; and (iv.) explore improved on-/off-road bicycle connection to Old Deerfield. - Seek/encourage pedal-powered services. - Endorse Senate bills #1639 “An Act to Protect Vulnerable Road Users” and #1640 “The Act to Protect Bicyclists in Bicycle Lanes”. • Implement Complete Streets Initiatives and evaluate options to add bike lanes to all major corridors with sufficient width. • Place “Share the Road” signs (and appropriate pavement markings/“sharrows”) on all major corridors that can’t accommodate bike lanes. • Further evaluate 2001 Bikeway Committee recommendation for town Designated Bike Route signage. • Create bicycle boulevards (“streets with low motorized traffic volumes and speeds, designated and designed to give bicycle travel priority” – Urban Bikeway Design Guide); most obvious candidate is Franklin/North Streets, parallel between busy Federal & High Streets and providing a link to the Federal Street & Middle schools. • Endorse and disseminate the “SameRoadsSameRules” driver/cyclist education campaign (created by the Massachusetts Bicycle Coalition in partnership with MassDOT) including outreach to drivers’ education programs and the Registry of Motor Vehicles. • Expand Safe Routes to School implementation to include biking to school. • Encourage the development of a bike-share program; develop a feasibility study to justify and locate areas to implement bike-share program.

Policy, Program, Plan or Infrastructure Action	Best Practices and Resources	Additional Element(s) this Strategy Addresses	Time to Implement (Short, Mid, Long Term)	Lead Department or Stakeholder	Estimated Cost (\$, \$\$, \$\$\$, \$\$\$\$)	Existing Implementation Funding Available? (Y/N and Description)	New Strategy or Part of Another Plan? (List Plan)
Policy	Institute of Transportation Engineers traffic calming library (http://www.ite.org/traffic/); City of Northampton (http://www.northamptonma.gov/1118/Traffic-Calming)	Land Use and Housing	Mid (2-5 years)	Department of Planning & Development/DPW/Mayor's Office/Police Department	\$\$ (\$20,001 - \$100,000)	N Possibilities: Private funding, CDBG*, MassWorks Grant*, STIP*	New Strategy
Plan	Town of Salem, Town of Southborough, MA: walking school bus; FHWA Pedestrian and Bicycle Safety (http://safety.fhwa.dot.gov/ped_bike/ped_cmunity/ped_walkguide/resource3.cfm); Safe Routes to School (http://www.saferoutespartnership.org/)	Land Use; Housing; Economic Development; Public Facilities, Services, and Energy	Long (>5 years)	Planning/DPW/SAC	\$\$\$\$ (>\$250,000)	Y - Sidewalk Replacement Fund. Other possibilities: Private funding, Chapter 90, STIP*, MassWorks Grant*	New Strategy
Policy	Various MassDOT and FHWA programs	Housing	Mid (2-5 years)	Planning/DPW/SAC	\$ (under \$20,000)	N Possibilities: FHWA, Chp 90, STIP*	New Strategy
Program	Boston Bikes (http://www.cityofboston.gov/bikes/); Smith College Bicycle Kitchen (http://sophia.smith.edu/bikekitchen/Bike_Kitchen_Site/index.html)	Land Use and Housing	Long (>5 years)	Planning/Recreation/FRCOG/GPS Administration/SAC	\$\$\$\$ (>\$250,000)	N Possibilities: CDBG*, MassWorks Grant*	New Strategy



Transportation

Goal	Strategy	Description of Strategy	Implementation Actions
<p>Goal #6: There will be dramatically increased ridership of all forms of public transportation, which will offer expanded service and accessibility.</p>	<p>9. Increase collaboration with public transit and improve connections between public transit and other modes of travel.</p>	<p>Collaboration is the key to success for this strategy as public transit services have limited funding available to expand new services and enhancements. This strategy goes hand and hand with other strategies such as improving sidewalk connectivity for residents so that better access to transit can be provided. Also, transportation improvements at intersections are key to keep busses moving and on schedule.</p>	<ul style="list-style-type: none"> • Create a Transit Committee. • Support and participate in marketing campaigns for FRTA and passenger rail services. • Support increase in FRTA amenities (labeled stops, bus shelters, interactive and Wi-Fi technology). • Support increase in frequency of in-town bus route. • Support the resumption of evening and Saturday FRTA service. • Support expansion of FRTA routes to Bernardston/Northfield and Conway/Ashfield. • Explore creating ordinance mandating vehicles yield to buses pulling out into traffic. • Increase opportunities to come and go from Greenfield: <ul style="list-style-type: none"> - Lobby for multiple daily trips on Amtrak's north/south route. - Work toward development of an east/west passenger rail or bus route. - Support increased awareness of and access to commercial bus lines. • Advocate for bicycle access on trains and commercial buses. • Build municipal parking garage as connection to trains/buses.
<p>Goal #7: Fuel use, climate change emissions, and air pollution of vehicles will be reduced.</p>	<p>10. Develop a Transportation Demand Management Program.</p>	<p>The TDM Program is an approach that emphasizes the movement of people and goods rather than vehicles, increasing efficiency by expanding travel options and encouraging a shift from single-occupant vehicles. This can be encouraged through the Major Development Review process when new developments are proposed in Town.</p>	<ul style="list-style-type: none"> • Work with businesses to develop shared parking areas and connections; which could allow developments to increase building or landscape areas with less parking; which would normally make a site non-conforming to zoning. • Lead a public education campaign about the health, economic, and environmental benefits of people-powered transport, public transit, car-pooling and ride-sharing, and using low-emission and fuel-efficient vehicles. • Ensure that non-motorized travel and public transit are addressed in every development and re-development project. • Facilitate car-pooling to reduce single occupancy vehicles (for example, through information about electronic ride-sharing services, creating ride-share lots). • Encourage employers to offer telecommuting to their employees. • Strengthen and enforce anti-idling laws, increase public awareness about the negative impacts of idling. • Improve infrastructure to support low-emission and alternative-fuel vehicles, such as electric vehicles, plug-in hybrids, and those that run on vegetable oil. • Continue to purchase town vehicles that are right-sized for the job, low-emission and/or run on alternative fuels, to meet or exceed Green Community goals (Green Communities is a 2008 Massachusetts law requiring a participating municipality to purchase only fuel-efficient vehicles).
<p>Goal #8: Transportation infrastructure will have minimal environmental impact wherever possible and will be made resilient to our changing environment.</p>	<p>11. Develop a Green Infrastructure Program.</p>	<p>A Green Infrastructure Program presents an alternative approach to improving water quality that integrates "green infrastructure," such as rain gardens and permeable pavements, and planted medians to optimize the existing ecological system.</p>	<ul style="list-style-type: none"> • Reduce impermeable (paved) surfaces for redevelopment projects where design allows which results in less stormwater runoff. <ul style="list-style-type: none"> - Break up large expanses of pavement, exploring shared parking areas, parking maximums as well as minimums for development; - Explore more creative solutions to access and circulation. • Increase the use of "green" infrastructure (planted medians, rain gardens, etc.) to improve water quality. <ul style="list-style-type: none"> - expand existing regulations for stormwater management to encourage more LID (Low Impact Development) design; - lead the way by creative stormwater management in municipal parking lots (see "Streetscape Enhancement and Ecological Parking Lot Design" by the Conway School of Landscape Design, 2012). • Plant and maintain trees to reduce heat-island effect of paved surfaces and to improve the walkability and aesthetics of our developed areas. <ul style="list-style-type: none"> - develop an inventory of street trees (GIS); - create plan for increasing canopy, especially in the downtown area; - fund and plan for tree replacements; - explore feasibility of underground utilities to mitigate impact of trees around wires; - consider revoking blanket no-trees-in-tree belt ordinance. • Upgrade transportation infrastructure to be more resilient during severe storms and weather patterns. • Pursue construction of zero-net-energy buildings and collaboration between users when rebuilding/updating/constructing facilities for greater efficiencies of scale. <ul style="list-style-type: none"> - case in point: FRTA joining Greenfield DPW to construct a joint vehicle maintenance facility which could service vehicles with a variety of fuel sources, minimizing the environmental footprint while maximizing the capacity to use advanced alternative fuel technology.

Policy, Program, Plan or Infrastructure Action	Best Practices and Resources	Additional Element(s) this Strategy Addresses	Time to Implement (Short, Mid, Long Term)	Lead Department or Stakeholder	Estimated Cost (\$, \$\$, \$\$\$, \$\$\$\$)	Existing Implementation Funding Available? (Y/N and Description)	New Strategy or Part of Another Plan? (List Plan)
Plan	Franklin Regional Transit Authority (FRTA), Pioneer Valley Transit Authority (PVTA) and MassDOT Rail and Transit Division (http://www.massdot.state.ma.us/tran-sit/)	Land Use and Economic Development	Long (>5 years)	Planning/DPW/FRTA	\$\$\$\$ (>\$250,000)	N Possibilities: STIP*, MassWorks Grant*	New Strategy
Program	Cambridge, MA: Parking and Transportation Management Ordinance	Land Use	Mid (2-5 years)	Planning/DPW/FRTA/COG/GBA/Mayor's Office	\$\$\$ (\$100,001 - \$250,000)	N	New Strategy
Program	MassDOT GreenDOT Initiative (https://www.massdot.state.ma.us/GreenDOT.aspx)	Land Use and Public Facilities, Services, and Energy	Long (>5 years)	SAC/Planning/DPW/Parks and Recreation	\$\$\$\$ (>\$250,000)	N	New Strategy



Economic Development

Goal	Strategy	Description of Strategy	Implementation Actions
Goal #1: Greenfield is the cultural, shopping, and services center of Franklin County.	1. Market Greenfield as a cultural, tourism, and recreation destination through a town-funded marketing plan.	Greenfield has a number of unique natural, recreational and cultural resources that make it a great place to live and visit. In order to raise its profile as a Pioneer Valley destination, the Town will initiate a coordinated marketing plan that highlights and capitalizes on these assets. Growing in prominence as a center for tourism will help generate and capture associated economic activity and support community vitality.	<ul style="list-style-type: none"> • Hire a marketing professional to develop and oversee implementation of a marketing plan utilizing a small paid staff and, when necessary, a group of volunteer or pro-bono marketing and support staff. • Conduct a needs assessment/study to determine why people leave town or come to town for cultural events, shopping and services, then track demographics of the responders. • Market Greenfield as: <ul style="list-style-type: none"> - The gateway to ecotourism (kayaking, fly fishing, rafting, ziplining, camping, skiing, rock climbing, hiking, etc.); - A center of northeast contra dancing and biking; - As a venue for music, museums, historical sites, and performance arts; - As a local food hub through its farm-to-table initiatives, food processing and distribution, and related ancillary industries. • Develop a comprehensive communication plan to get the word out, using a website, social media, print media, blogs, and viral communication. • Enable Greenfield businesses to access the city marketing resources (funding, talent, social media, databases, organizational assistance, etc.) to develop networking events to reach their targeted markets.
	2. Support local events, markets, and fairs that draw consumers to Greenfield and promote additional shopping in town, and ensure state and federal service offices remain located in Greenfield.	Special events programming can serve as a draw to attract visitors to Greenfield. Attracting additional visitation to Town can, in turn, promote additional patronage of local businesses both during the event, and afterwards as visitors are exposed or reintroduced to the town, have a good experience, and become repeat patrons. Civic and government institutions and services are key community anchors. As the County seat, a Greenfield location is appropriate for these types of uses. In addition, these functions serve as an additional draw to bring visitors to the downtown, provide employment opportunities, and support an expanded customer pool of office workers. Visitors and employees of these facilities are likely to patronize local business and contribute to a sense of activity necessary to energize the downtown environment.	<ul style="list-style-type: none"> • Create a manageable permitting & licensing process for special events, including twice-monthly licensing commission meetings. • Create “entrepreneur” loan fund that provides revolving funds to businesses to host events that draw people to Greenfield to spend money. • Encourage and expand the availability of music events on weekends by developing relationships with local and regional musicians and booking agents. • Create a unified action strategy implemented by Town Government (Executive Office, Town Council, and Department of Planning & Development) to respond to external threats to our State and Federal services. <ul style="list-style-type: none"> - Regain the Social Security Office; - Retain the US Post Office, the Registry of Motor Vehicles, and the Court House.
Goal #2: Greenfield provides living-wage jobs and a resilient, sustainable local economy to support and expand traditional and innovative business development.	3. Nurture existing and new business owners, including creative economy entrepreneurs, to grow their businesses locally and sustainably.	Incubating new ventures, supporting established businesses, and retaining them in Town as they grow, will be vital in providing new employment opportunities, tax rebates, and reinforcing existing and developing industry clusters. New creative ventures that rely on knowledge workers generated by local educational institutions or that are attracted to Greenfield’s lifestyle amenities provide another opportunity to help broaden and diversify the Town’s economic base.	<ul style="list-style-type: none"> • Encourage the creation of a downtown business development center for professional entrepreneurs (e.g., knowledge workers like above McCusker’s Market in Shelburne Falls). • Create a Local Economic Development Investment revolving loan fund from a 1% tax on residential and commercial property tax or from an overall budget allocation (approximately \$400,000). The purpose of the fund is to give valid Greenfield businesses access to money to add new jobs, make capital investments in equipment or infrastructure, and train existing employees for new skills. • Develop a Live/Work ordinance for the zoning ordinance to enable developers and artisans to create living accommodations and studio space in one place.
	4. Continue further development or redevelopment of commercial sites with sufficient supporting infrastructure for businesses compatible with local and regional industry clusters.	Greenfield contains several underutilized or vacant commercial sites and buildings that are served by existing infrastructure and would be attractive for adaptive reuse. Facilitating the return of these resources to productive use can reduce the pressure for conversion of open land, promote efficient land development patterns, reduce the need for costly infrastructure extensions, and provide unique space to support new and expanded business ventures.	<ul style="list-style-type: none"> • Utilize the Greenfield Economic Development office, working with a well-funded business development marketing plan, to target businesses compatible with local and regional industry clusters (small manufacturing, food production and distribution, green technologies, creative/arts-oriented businesses, healthcare, professional services, skill trades and education). • Utilize Greenfield Food Study, August 2013, and other food industry resources/organizations to target and implement food industry development strategies. • Support development of state-of-the-art telecommunications infrastructure to increase broadband access to Greenfield, with special emphasis on our Central Commercial and General Commercial Zones. • Create a Sustainability Resource Center (a staffed organization or a website) to provided businesses with all of the resources and information on funding opportunities to become more sustainable in their business practices and energy use. • Support economic development partners including the CDC, Common Capital, and the Franklin Regional Career Center to provide training and low-interest loans. • Foster locally-made products by working with retailers to help them identify local products relevant to their businesses for sale or use as part of the infrastructure of their stores. • Encourage cooperative ownership to ensure that businesses will stay in our community and that profits remain local. • Implement PILOT (Payment in Lieu of Taxes) or Pay-for-Service agreements between the Town, major institutions, and non-profit organizations. • Create a customer service point of contact within the Department of Planning and Development and annually update all written guides to land development processes. • Support development of state-of-the-art telecommunications infrastructure to increase broadband access in Greenfield with special emphasis on our Central Commercial and General Commercial zones.

Acronyms:

DPW: Greenfield Department of Public Works
 FCCC: Franklin County Chamber of Commerce
 FRTA: Franklin Regional Transit Authority

GBA: Greenfield Business Association
 GPS: Greenfield Public Schools
 SAC: Sustainability Advisory Committee

Policy, Program, Plan or Infrastructure Action	Best Practices and Resources	Additional Element(s) this Strategy Addresses	Time to Implement (Short, Mid, Long Term)	Lead Department or Stakeholder	Estimated Cost (\$, \$\$, \$\$\$, \$\$\$\$)	Existing Implementation Funding Available? (Y/N and Description)	New Strategy or Part of Another Plan? (List Plan)
Plan	Main Street Program -National Main Street Center, Inc.	Natural, Cultural, Historic Resources	Short (within a year)	Mayor's Office/Economic Development/FCC C/GBA	\$\$ (\$20,001 - \$100,000)	N	New Strategy
Policy	National Main Street Center, Inc.; Small Business Saturday	Natural, Cultural, Historic; Public Facilities, Services, and Energy	Short (within a year)	FCCC/GBA/Recreation/Licensing Commission	\$\$ (\$20,001 - \$100,000)	N	New Strategy
Policy	Shelburne Falls - Center above McCusker's Market; Worcester, MA - development and marketing of live/work space for creative economy workers: http://www.worcestermass.org/city-initiatives/the-creative-city-the-worcester-way/creative-live-work-sell-space	Land Use	Mid (2-5 years)	Planning/Economic Development/Mayor's Office/SAC/FCCC	\$\$\$\$ (>\$250,000)	N	Planning for Economic Development in Greenfield (2008)
Policy	Cook County, IL - reduction in real estate taxes for construction, rehabilitation or reoccupancy of industrial buildings that have been vacant for two years.	Land Use	Mid (2-5 years)	Mayor's Office/Economic Development/Planning	\$\$ (\$20,001 - \$100,000)	N	Planning for Economic Development in Greenfield (2008); Sustainable Franklin County; Greenfield 2001 Master Plan



Economic Development

Goal	Strategy	Description of Strategy	Implementation Actions
<p>Goal #3: Greenfield has a vibrant, walkable downtown.</p>	<p>5. Strengthen downtown as a welcoming, attractive, and vibrant mixed-use urban space, with the First National Bank building as a cultural center with flexible performance and event space.</p>	<p>Greenfield's downtown currently lacks the degree of vibrancy desired by its residents and business owners. However, it is blessed with an attractive, traditional downtown development pattern with a range of handsome buildings directly abutting the sidewalk and supporting a variety of restaurants, retailers, offices, and service providers. By building off these physical assets and taking additional actions to make the downtown more attractive, welcoming and active, downtown can be strengthened as the "place to be."</p>	<ul style="list-style-type: none"> • Build civic pride. • Support existing downtown festivals, farmers' market, and events – theatre, video, poetry, etc. -- through the Greenfield Business Association, Chamber of Commerce, Recreation Department, and public/private partnerships. • Expand/improve existing library facilities. • Attract businesses that offer shopping options that meet people's needs. • Encourage reuse of all downtown space through revising the zoning ordinance to support an Adaptive Reuse Overlay District for downtown. • Encourage stores and eateries to spill out onto sidewalks with outdoor eating where sidewalk space allows, and ensure Greenfield licensing policies support such activity. • Foster expanding store shopping hours into the evening (e.g., offer "free" parking for one night a month like Turners Falls' Third Thursdays). • Cultivate downtown market-rate housing. <ul style="list-style-type: none"> - Encourage market-rate downtown housing options by helping building owners utilize upper stories for apartments (will need \$ for elevators -1% tax fund investment idea in Goal 3 to fund this); - Update zoning to enable denser housing within one mile of downtown (See Housing chapter for strategies). • Continue downtown beautification efforts. <ul style="list-style-type: none"> - Town departments and elected officials work with business associations and other citizen groups and schools (such as the Greenfield Rejuvenators, Greenfield Tree Committee, and Greening Greenfield) to create a safer and more welcoming environment that would include but not be limited to: <ul style="list-style-type: none"> - reduced litter - planting and supporting healthy trees and flowers - benches & bike racks - flags - art work (engage arts community and businesses in a partnership which creates murals, sculptures, façades, benches, bike racks, etc. that become a permanent part of the businesses' identities and are paid through grants, revolving loan funds, etc.) - promote building façade upgrades - ensure Low Impact Development techniques used whenever possible to reduce storm water runoff and make our infrastructure greener • Encourage market rate housing in the upper floors of downtown buildings through development and installation of elevators.
	<p>6. Ensure downtown is safe, easy to get to, accessible, and pedestrian/bicycle friendly.</p>	<p>Ensuring that the downtown feels safe and comfortable for all segments of the population (e.g., the elderly, children, residents, visitors, bicyclists) is important in attracting a diversity of users and generating a critical mass of activity across different time periods. This includes maintaining both a comfortable personal security experience, as well as promoting safety and convenience features for non-motorized transportation alternatives.</p>	<ul style="list-style-type: none"> • Redesign key downtown streets to be bike/pedestrian/auto friendly. • Build an atmosphere of safety by creating a permanent downtown police presence. <ul style="list-style-type: none"> - Locate Public Safety Complex in downtown area (existing fire station, Davis Street School property?); - Institute "neighborhood policing" with downtown walking police patrols where the officers build direct relationships with the businesses and where the police are visible but not intrusive; - Possibly have a police kiosk on the Town Common where officers would periodically rest and where people would know that they could find an officer at specific posted times; - Site our local social service support services offices off of Main Street. • Manage parking supply to encourage walking and biking. • Ensure adequate parking. • Support biking. <ul style="list-style-type: none"> - Require new and existing parking areas to provide bicycle parking - Add a downtown bike lane; - Change parking configuration to ensure adequate space for bike lane. - Implement a Bike-Share program. • Explore revising zoning ordinance to utilize parking maximums as well as parking minimums. • Revamp parking policy to complement the community's vision of a pedestrian friendly and environmentally friendly community • Improve public transit. Work with FRTA & GCC to expand the frequency of the downtown bus loop #21. • Build bus stop shelters. They could be "sponsored"/underwritten by local banks and larger employers. • Ensure good snow and ice removal.

Policy, Program, Plan or Infrastructure Action	Best Practices and Resources	Additional Element(s) this Strategy Addresses	Time to Implement (Short, Mid, Long Term)	Lead Department or Stakeholder	Estimated Cost (\$, \$\$, \$\$\$, \$\$\$\$)	Existing Implementation Funding Available? (Y/N and Description)	New Strategy or Part of Another Plan? (List Plan)
Policy	<p>Los Angeles Adaptive Reuse Ordinance</p> <p>http://www.preservationnation.org/information-center/sustainable-communities/green-lab/partnership-building-reuse/Learning-from-LA_draft_for-print_100813_FINAL.pdf</p>	Land Use and Housing	Long (>5 years)	Mayor's Office/Economic Development/Planning/FCCC/Recreation	\$\$\$\$ (>\$250,000)	N	Planning for Economic Development in Greenfield (2008); Franklin County 2035 Regional Plan; Greenfield 2001 Master Plan
Infrastructure	See Transportation Section.	Transportation; Public Facilities, Services, and Energy; Land Use	Long (>5 years)	Planning/DPW/FR TA/Mayor's Office/SAC	\$\$\$\$ (>\$250,000)	N	



Economic Development

Goal	Strategy	Description of Strategy	Implementation Actions
<p>Goal #4: Greenfield is a magnet for 10-15% growth in new residents who support the local economy.</p>	<p>7. Create multiple marketing strategies to attract a diverse population and promote the attributes that make Greenfield a great place to live, including affordable starter homes; outstanding scenic, natural, and recreation opportunities; transportation accessibility; and a culture of sustainability.</p>	<p>Greenfield has a number of enviable attributes including affordable starter homes, outstanding scenic, natural and recreation opportunities, transportation accessibility, and a culture of sustainability, but these advantages may not yet be fully recognized by households in the region. Effectively marketing these features will help Greenfield capture residential growth that can further support local economic activity and fiscal health.</p>	<ul style="list-style-type: none"> • Foster the growth of Greenfield’s creative and telecommuting population through marketing residential real estate and live/work spaces to writers, artists, independent business people, etc. who are able to work out of their homes while gaining the quality of life that Greenfield has to offer. • Encourage recent college graduates to remain in or relocate to Greenfield by providing this population with attractive job opportunities, housing options, and cultural amenities.
<p>Goal #5: Greenfield provides educational and financial resources for sustainable economic development from both private and public entities.</p>	<p>8. Promote partnerships with the Franklin/Hampshire Employment Training Center, Franklin/Hampshire Career Center, local colleges, and social service providers to align education, certification, and training offerings with the labor force needs of local businesses.</p>	<p>There are a wealth of training resources within the area, including the Franklin/Hampshire Employment Training Center, local colleges, and various social service providers. Local manufacturers and businesses have identified a gap in ability to find appropriately skilled labor. Partnerships with these institutions should be deepened to help tailor training programs to match identified local needs.</p>	<ul style="list-style-type: none"> • Support economic development partners including the Franklin County Community Development Corporation, Common Capital, and the Franklin Regional Career Center to provide training and low-interest loans. • Connect business owners with local training organizations in order to help develop training programs that can satisfy their local labor needs.
<p>Goal #6: Greenfield reduces the amount of financial resources leaving our community.</p>	<p>9. Encourage retail options that appeal to all socio-economic groups in Greenfield and surrounding areas and promote buy-local efforts through procurement and sale of local products.</p>	<p>The creation of expanded retail diversity is in some ways a “chicken or the egg” question. In order to have a healthy mix of stores and extended business hours that would encourage customers to spend locally, business owners typically have to see evidence of consumer support to justify these investments. The promotion of a buy-local ethos for both retail customers and larger institutional or governmental entities can help to provide a stable revenue stream for local businesses that will encourage further investment.</p>	<ul style="list-style-type: none"> • Build additional anchor department store. • Research/create incentive programs that give local suppliers and businesses preference in private and municipal purchasing programs. • Support local currencies such as “Greenfield Dollars”.
	<p>10. Conserve energy and build renewable energy capacity to reduce funds (consumer spending dollars) leaving our region for the purchase of energy. Reduction goal: from \$67M to \$0 in accordance with Greenfield’s 2050 goal.</p>	<p>Energy bills can represent a significant, recurring expense for households and businesses. Enhancing energy efficiency creates long-term costs savings for households, expanding the amount of discretionary income that is potentially available to support local merchants and suppliers. On the commercial side, reducing energy usage can reduce operating expenses, allowing for additional investment in business development. In addition, payments to utilities currently represent money leaving the region. Building renewable energy capacity locally will allow these payments to remain and recirculate within the local economy.</p>	<ul style="list-style-type: none"> • Create a plan on how to achieve Greenfield’s 2050 goal noted above. • Continue to actively participate in Green Communities and reduce municipal energy use, and meet energy needs with zero carbon energy sources such as PV. • Continue Energy Smart Business and Energy Smart Homes programs that help businesses and residents find funds to do energy upgrades to their homes and buildings. • Partner with NGOs, FRTA, and for-profit businesses to promote walking, biking, telecommuting, and public transit and using the most fuel efficient vehicle possible. • Support local solar installers and partner with NGOs and for-profit corps to increase residential, business, and municipal investment in solar, and other strategies to produce and use renewable energy. • Offer locally-produced green electricity options through electrical aggregation program. • Track progress toward Greenfield’s 2050 goal.

Policy, Program, Plan or Infrastructure Action	Best Practices and Resources	Additional Element(s) this Strategy Addresses	Time to Implement (Short, Mid, Long Term)	Lead Department or Stakeholder	Estimated Cost (\$, \$\$, \$\$\$, \$\$\$\$)	Existing Implementation Funding Available? (Y/N and Description)	New Strategy or Part of Another Plan? (List Plan)
Program	Global Cleveland marketing efforts. http://www.globalcleveland.org/WhyLiveinCleveland.aspx	Housing	Short (within a year)	Mayor's Office/Economic Development	\$\$ (\$20,001 - \$100,000)	N	New Strategy
Policy	Federal Trade Adjustment Assistance Community College and Career Training program (e.g., Schenectady Community College, UAlbany, and GLOBALFOUNDRIES developing a nanotechnology training program.)	Education	Mid (2-5 years)	GPS Administration/Economic Development/Franklin Hampshire Regional Employment Board	\$ (under \$20,000)	N	Sustainable Franklin County
Program	BerkShares (local currency); Selective Purchasing Policy Guide - Evangelical Lutheran Church in America; Local Purchasing Preferences - various municipalities (e.g., Cedar Rapids, Miami).	Land Use	Short (within a year)	Economic Development/GBA	\$ (under \$20,000)	N	Sustainable Franklin County
Program	CleanPowerSF (community energy choice); Brookhaven, NY property tax abatement for construction meeting green building certification standards.	Public Facilities, Services, and Energy	Long (>5 years)	Planning/FRTA/SAC	\$\$\$\$ (>\$250,000)	N	Greening Greenfield



Housing

Goal	Strategy	Description of Strategy	Implementation Actions
Goal #1: Greenfield’s policies and programs are coordinated to ensure housing units and neighborhoods adapt to meet changing needs.	1. Conduct a comprehensive regional housing needs assessment.	While the baseline assessment for the Master Plan covers much of the needed data, a much more thorough analysis must be done to identify additional gaps in housing in Town. The assessment would include a detailed examination of demographic and economic factors, current housing market conditions, and would determine the market potential for developing additional housing units in Greenfield. It would also include detailed recommendations (number of units and/or lots; unit type and size; price/rent; housing features and amenities, etc.) for the housing types needed in the Town.	<ul style="list-style-type: none"> Assess needs for all stages of life, and a range of household size and income. Consider needs of aging population, and a full range of options for aging in place. Include issues affecting young adults, young families and workforce housing. Understand Greenfield’s regional market niche in providing a diverse range of housing. Incorporate the need for Youth Affordable Housing and student populations.
	2. Audit and update zoning regulations, permitting and other appropriate regulations, to increase density of housing and population through adaptation and infill.	In order to meet the changing needs of both young and elderly citizens in Greenfield, housing units need to be updated and/or constructed differently. Adding accessory dwellings, allowing for smaller homes, co-housing, and encouraging housing units above retail are very important issues that need to be addressed through the Town's current zoning regulations to make sure they are allowed and supported downtown and near critical services and amenities.	<ul style="list-style-type: none"> Adopt accessory dwelling unit (ADU) ordinance so residents can adapt homes to changing needs. Adopt a Neighborhood Pedestrian Zone to allow for more housing units on smaller lot size such as Cottage Housing. Amend ordinances to allow formal and informal co-housing. Remove limit on unrelated adults co-housed, use special permit process with clear performance standards regarding cars, noise, trash etc., and enhance enforcement. Work with local Cooperative Development Institute to foster new ownership models such as senior housing cooperatives and mixed-income co-housing. Encourage upper story apartments on and near Main Street and in other mixed-use neighborhoods.
Goal #2: Household energy consumption from utilities, maintenance and automobile reliance are reduced, thereby reducing Greenfield’s overall contribution to greenhouse gases and increasing our community’s energy independence.	3. Enhance and expand options to live in walkable neighborhoods, and reduce automobile reliance for work, services and recreation.	The Town should continue to coordinate housing and transportation planning to offer affordable housing for all ages (young and old) that allows them to walk and bike to work, school, shopping, and recreational spaces. This may require a more thorough plan to identify where additional land uses can also be supported (i.e., corner stores, bike trails, and restaurants).	<ul style="list-style-type: none"> Continue with mixed-use Transit Oriented Development to build on the new transportation center and Greenfield's role as county seat and crossroads. <ul style="list-style-type: none"> Increase housing density within a mile of downtown through zoning and fast-track permitting for selected sites; Coordinate housing with transportation planning to support existing housing clusters, particularly where aging, low-income and car-free residents are concentrated. Create a town-wide plan to add density in certain mixed-use neighborhood nodes to create more self-sufficient neighborhoods, with easy walking and biking and connections with public transportation.
	4. Replace and renew homes to move all of our housing stock towards energy efficiency.	Greenhouse gas (GHG) emissions from residential heat and electricity equaled about 33% of the total community’s overall GHG emissions, and cost the community over \$28 million in 2008. In order to reduce those emissions, and to reduce utility costs, there must change the way we build new homes, and we need to do energy upgrades to existing homes to make them more energy efficient. As they become more efficient, homes should also be installing renewable energy systems to continue reducing GHG emissions, and utility costs.	<ul style="list-style-type: none"> Incentivize rehabilitating unused and underutilized buildings and large homes into energy efficient, market-rate housing with multiple units, perhaps creating new incentives for adaptive reuse and renovation. Encourage new residential construction to be built to zero-net-energy-ready standards and exceed the state’s “Stretch Code.” Consider adopting a Sustainable Building Code for the town. Adjust ordinances to encourage high quality, energy efficient pre-fab housing as a cost-effective alternative to custom-built single-site construction. Continue to invest federal CDBG funds in housing upgrades. Create flexibility within building codes to allow smaller homes and apartments. Incentivize landlords to do energy upgrades their buildings. Encourage and incentivize renewable energy for new and existing homes, including: <ul style="list-style-type: none"> Commercial Property Assessed Clean Energy (PACE) financing that can be used for 5-unit buildings and above; Encourage building owners to install solar electric (aka PV - photovoltaic) and solar hot water systems on their homes and/or in their yards Encourage investment in a Community-Shared Solar project; Encourage residents to choose a green electricity provider. Measure progress toward our energy reduction goals. See 2008 statistics below: <ul style="list-style-type: none"> Energy use for residential heat and electricity was 33% of total community energy use and cost \$28,332,681. Of that \$20,742,974 left the community; Continue to track average household energy use for electricity and natural gas. (FYI-oil use numbers are likely not useful due to ability for users to purchase oil from various vendors within one heating season).

Acronyms:

DPW: Greenfield Department of Public Works
 FCRHA: Franklin County Regional Housing Authority
 FRCOG: Franklin Regional Council of Governments

GHA: Greenfield Housing Authority
 SAC: Sustainability Advisory Committee

Policy, Program, Plan or Infrastructure Action	Best Practices and Resources	Additional Element(s) this Strategy Addresses	Time to Implement (Short, Mid, Long Term)	Lead Department or Stakeholder	Estimated Cost (\$, \$\$, \$\$\$, \$\$\$\$)	Existing Implementation Funding Available? (Y/N and Description)	New Strategy or Part of Another Plan? (List Plan)
Plan	Welcome Home Massachusetts, Creating a Housing Needs Assessment Guide: http://www.housingpolicy.org/toolbox/strategy/policies/housing_needs_MA.html	Economic Development	Short (within a year)	Planning/GHA/FRCOG	\$\$ (\$20,001 - \$100,000)	N	Follow up to Housing Production Plan
Policy	Neighborhood Pedestrian Zone - Community That Works: http://community-that-works.org	Land Use and Transportation	Mid (2-5 years)	Planning	\$ (under \$20,000)	N	Sustainable Franklin County
Program	- See Smartgrowth.gov for case studies, MassDevelopment financing and EPA financing to support within and TOD projects	Land Use; Economic Development; and Transportation	Mid (2-5 years)	Planning/DPW/SAC	\$\$ (\$20,001 - \$100,000)	N	Part of existing TOD development and coordination with FRCOG
Program	Going Beyond Code Guide - A Guide to Creating Green Building Programs for Energy Efficient and Sustainable Communities: http://www.energycodes.gov/sites/default/files/documents/GoingBeyondCode.pdf "Tiny Homes", clusters with shared sanitary facilities - http://www.cottagecompany.com/consulting/planners.aspx	Land Use; and Public Facilities, Service and Energy	Long (>5 years)	Planning/Building Department/Mayor's Office/SAC	\$\$\$\$ (>\$250,000)	N	Sustainable Franklin County



Housing

Goal	Strategy	Description of Strategy	Implementation Actions
<p>Goal #3: A wide variety of affordable, attractive, sustainable housing options are available in Greenfield promoting high quality-of-life and self-sufficiency for all households.</p>	<p>5. Create a staffed resource center to provide homeowners, tenants and landlords with education and resources on home purchase, energy use and upgrades, renovation, and financing.</p>	<p>Knowledge is power. Many homeowners and renters are not aware that there are numerous resources available to reduce their energy costs and have a more efficient home. An Energy Resource Center can provide owners, landlords and renters with information and support on how to utilize these programs and incentives to be more energy efficient.</p>	<ul style="list-style-type: none"> • Continue to support public education about financial incentives (utility and other) for residential energy upgrades, such as Energy Smart Homes. • Adopt mandatory Energy Disclosure for rental units (green labeling program). • Offer programming and serve as clearing house for other local, state and national resources. • Advocate for expansion of utility programs that cover pre-weatherization costs. • Continue and augment Greenfield’s sustainability programs for new and existing housing, (like the Energy Smart Homes, outreach, education and financial assistance to homeowners, landlords and tenants to help them reduce the utility costs). • Develop local financing tools for home-buyers, and homeowners for housing rehabilitation • Use local revenue from electrical aggregation, Community Redevelopment Act (CRA) funds, and Community Preservation Act (CPA), to fund resource center and programs.
	<p>6. Increase housing choice, expand and update housing stock to reflect changing preferences and population.</p>	<p>Housing demand shifts over time. In the last century housing was created to keep up with the formation of families. Now, factors like a growing demand for walkable neighborhoods, an aging population, and more single-person households than ever is causing significant shifts in the nature of housing demand. Greenfield needs to add units, and to upgrade existing underutilized buildings to meet community goals like helping residents to age in place or start out in life. There needs to be specific focus on mobility, affordability, energy efficiency, access to services, schools and amenities.</p>	<ul style="list-style-type: none"> • Increase the number of available rental properties. <ul style="list-style-type: none"> - Prepackage sites/projects, recruit developers to build desired type and location; - Incentivize developers to upgrade underutilized buildings; - Encourage rehabilitation of unused buildings and/or large homes into energy efficient market-rate housing. • Incentivize development of starter homes and workforce housing. <ul style="list-style-type: none"> - Through District Improvement Financing or density bonuses; - Reward builders for energy efficiency to offset higher building costs. • Expand options for residents to age in place. <ul style="list-style-type: none"> - Adaptation to stay in homes; - Options to relocate within town (condominiums, independent living, see Goal 1). • Create quality housing – safe, durable, energy efficient, sustainable, and human-oriented. <ul style="list-style-type: none"> - Adjust zoning and permitting to prevent low quality or incompatible structures in historic neighborhoods (i.e., homes with front entrance through garage on a street with homes featuring front-porches), make it easy to replicate historic design and important site features. Consider tax breaks to incentivize stretch code or other measures that lead to housing stock with longer-term value to occupants; - Ensure lower-cost, high-quality options like energy-efficient pre-fab is not at a disadvantage in permitting or zoning processes (consider pre-approving certain designs for infill and refill sites to facilitate replacement of obsolete homes, partner with national leaders for model infill program).
<p>Goal #4: Greenfield supplies quality, permanent affordable housing and creative transitional and supportive housing programs that include the special challenges of homeless and carless households in a rural context.</p>	<p>7. Continue to provide a full range of quality alternative housing options to serve diverse populations and needs, including the homeless, and those transitioning to and from independence.</p>	<p>Affordable housing is important at all stages of life: for students, for the single parent or "thirty-something", and for older adults. In addition to preserving the units on the Subsidized Housing Inventory, units must also be available for households that are low to moderate income, such as our school teachers, municipal staff, and entry-level employees of local businesses.</p>	<ul style="list-style-type: none"> • Improve quality: Continue to support replacement of aging affordable housing units. <ul style="list-style-type: none"> - Upgrade and replace units that are part of the 13.8% affordable housing “subsidized housing inventory” (SHI); - Encourage continued upgrade and creation of affordable units (priced appropriately to households low to moderate income) offered through the private market. • Adopt inclusionary zoning to ensure ongoing replacement of low-income housing units. • Ensure a full range of alternative housing options continue to be developed to serve diverse populations and needs for whom typical homes and apartments are inappropriate: <ul style="list-style-type: none"> - Dial-Self young adult housing; - Halfway houses, SROs, homeless shelters; - For seniors: accessible apartments for empty-nesters, independent and assisted living, boarding homes and co-housing, nursing homes; - Identify agency to lead facilitating senior co-housing options. For example, identify potential sites and pursue site-preparation for development, i.e., through an 'active adult overlay' and securing state/fed infrastructure funding; - Senior housing models that preserve equity (work with Senior Cooperative Housing non-profit to create adaptive reuse apartments like Catholic school); - Housing that supports access to higher education (Greenfield Community College and Hallmark students, student-appropriate housing near transit nodes to Amherst, Springfield, Holyoke).
	<p>8. Address Housing Demand.</p>	<p>After a full Housing Needs Assessment (see Strategy #1) is conducted, the Town must use the results to hone in on how to address the housing demand locally and throughout the region. This can be done by coordinating with regional stakeholders, like the Franklin Regional Housing and Redevelopment Authority, to ensure that while housing demand is being met, it is not displacing any residents due to cost or location.</p>	<ul style="list-style-type: none"> • Coordinate with regional stakeholders to ensure municipalities achieve 10% Affordable Housing throughout the region. - Work with the Franklin Regional Housing and Redevelopment Authority and the Franklin Regional Council of Governments. • Augment housing options to reduce pressure on rental supply and to reduce displacement due to gentrification.

Policy, Program, Plan or Infrastructure Action	Best Practices and Resources	Additional Element(s) this Strategy Addresses	Time to Implement (Short, Mid, Long Term)	Lead Department or Stakeholder	Estimated Cost (\$, \$\$, \$\$\$, \$\$\$\$)	Existing Implementation Funding Available? (Y/N and Description)	New Strategy or Part of Another Plan? (List Plan)
Program	<p>PACE financing: http://www.ase.org/resources/property-assessed-clean-energy-financing-pace</p>	Public Facilities, Service and Energy	Mid (2-5 years)	Planning/Mayor's Office/SAC/Greening Greenfield	\$\$\$\$ (>\$250,000)	N	New Strategy
Program	<p>AARP Public Policy Institute: Strategies to Meet the Housing Needs of Older Adults: www.housingpolicy.org</p>	Land Use and Economic Development	Long (>5 years)	Planning/GHA/FCRHA	\$\$\$\$ (>\$250,000)	N	Through Franklin Regional Housing and Redevelopment Authority
Program	<p>Aspen Affordable Housing Credit Program: http://www.aspendailynews.com/section/home/156108 STARS (Sustainability Tracking, Assessment and Rating System), created by the Association for the Advancement of Sustainability in Higher Education: https://stars.aashe.org/</p>	Land Use and Economic Development	Long (>5 years)	Planning/GHA/FCRHA	\$\$\$\$ (>\$250,000)	N	Sustainable Franklin County
Program	<p>HUD's Home Investment Partnership Program, Consortia Program: http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/affordablehousing/programs/home/cohortia</p>	Economic Development	Mid (2-5 years)	Planning/FCRHA/FCOG	\$\$\$ (\$100,001 - \$250,000)	N	Sustainable Franklin County



Housing

Goal	Strategy	Description of Strategy	Implementation Actions
Goal #5: Community resilience and individual enjoyment of our abundant natural resources is enhanced through residential development practices that preserve local agriculture, water quality, biodiversity, and the visual integrity of the landscape.	9. Ensure future residential development promotes watershed protection, land conservation and farm preservation goals by focusing activity in areas with existing infrastructure.	Residential development (retrofit of existing and construction of new) needs to consider the landscape and natural resources surrounding it so as not to adversely affect water supplies, waterways, habitat or reduce agricultural land. The Town should create an inventory of its natural, cultural and aesthetic resources, layer that with the location of existing infrastructure, and use this to prioritize where new housing will be located.	<ul style="list-style-type: none"> • Protect Greenfield's high quality drinking water, continue to find ways to reduce residential impact on waterways, and to restore ecological and recreational value. • Rapidly adjust the zoning ordinances to reflect identification of key agricultural, watershed, wildlife or other natural resources. • Document the town's natural assets that have aesthetic and cultural value, such as riverways and rural roads, fields and forests and incorporate their protection into plans and zoning (i.e., to protect historic landscape features like pastoral views and stone walls, to preserve access to green river swimming for area residents. • Improve conservation and cluster development ordinances by adding density bonuses and flexible conservation area percentages to preserve ecologically important areas and incentivize their use by developers, which makes Greenfield more attractive for development while protecting natural resources; • Create an incentive bank for developers to choose from, including: parking, riparian buffer, trail connections, etc.
	10. Reduce negative impacts of new or existing residential neighborhoods on natural systems while enhancing beneficial access to nature.	New and existing homes and their properties can be constructed so there is a respect and appreciation for natural resources. Low Impact Development and stormwater management, reduced impervious surfaces, connections to walking and biking trails, and support of community and backyard gardens and farming protect our resources while fostering an appreciate for, and access to, nature and how it improves our quality of life.	<ul style="list-style-type: none"> • Phase in Low Impact Development, maximum parking/impervious surface standards, performance standards to avoid/reduce stormwater runoff through municipal practices and incentives for developers (i.e. more lot coverage and density possible with LID) • Develop a plan for trail and bike connections, serving all neighborhoods, to natural areas (coordinate with the Open Space and Recreation Plan and Land Use recommendation for an Open Space Committee). • Support agriculture and access to food through community gardens and back-yard farming. • Educate residents about yard practices that support biodiversity and resiliency, and contribute to environmental health; minimizing pesticide, water, and energy use, increasing soil fertility, using native plants, installing rain gardens and on-site water management.
Goal #6: Greenfield is a thriving, vibrant, regional urban center with livable, mixed income, well-situated neighborhoods within easy reach of everyday needs.	11. Identify key neighborhood services, amenities and facilities and enhance connections through upgraded sidewalks, bikeways and streets.	Neighborhood-based planning is a fine-grained analysis of what and where neighborhood amenities are, where the gaps in the desired amenities might be, and what changes need to be made to meet the needs for the existing and future population in Greenfield. Amenities can include: walkability, neighborhood stores, bus stops, parks, and community gardens contribute to quality of life in a neighborhood.	<ul style="list-style-type: none"> • A sidewalk program to ensure all urban areas are safely traveled by people of all abilities. • Initiate neighborhood-based planning and update zoning to address town-wide needs (add mixed-use, housing mix, traffic issues, increase population density to support transit nodes). This can be done by dividing the town into neighborhoods to assess existing and desired local amenities - easy walk to school, neighborhood stores, bus stop, park, community garden, highway access. • Consider a walkability-score, transit connectivity score, or some other tool for ongoing assessment of neighborhood functionality and connectivity. • Integrate neighborhood plans with town-wide multi-modal transit planning. • Work with DPW to identify the town's role in maintaining quality neighborhoods – streets, sidewalks, trees, trash pick-up – and potential funding (public health grants, DOT). • Develop funding tools so public improvements keep pace with private investment in homes and neighborhoods: for example Tax Increment Financing Districts and "Betterments" program.
	12. Protect historic character of neighborhoods while facilitating improvement of housing stock.	Historic preservation is important to maintain the character of a community. Greenfield is blessed with historic homes and buildings which are still able to support housing. In addition to protecting their character, the Town could incorporate other housing strategies like providing affordable housing units, diversify the housing units available to allow live-work units to be constructed and consider aging in place needs.	<ul style="list-style-type: none"> • Document, enhance and protect the unique character of Greenfield's neighborhoods without impeding upgrade and adaptation. • Continue to support creation of live-work spaces to attract and support creative economy workers, telecommuters, semi-retired and startup. • Make it easier to build/rehab a variety of high-quality units by right. • Historic Preservation - document the architecture reflecting our layered history to improve awareness and preservation (Implementation: state historic inventory of historic districts). • Create process for town and residents to identify this character (i.e. neighborhood plans - see previous strategy). • Add to zoning design guidelines, or form-based code style easy to understand visuals. • Enhance the Health Department's capacity to pro-actively solve housing based public health issues (i.e., hoarding, failing sewers, deferred maintenance). • Improve procedures to return abandoned or tax title, or foreclosure properties into use.

Policy, Program, Plan or Infrastructure Action	Best Practices and Resources	Additional Element(s) this Strategy Addresses	Time to Implement (Short, Mid, Long Term)	Lead Department or Stakeholder	Estimated Cost (\$, \$\$, \$\$\$, \$\$\$\$)	Existing Implementation Funding Available? (Y/N and Description)	New Strategy or Part of Another Plan? (List Plan)
Policy	Davidson Greenprint (Natural Asset Inventory): http://www.ci.davidson.nc.us/index.aspx?NID=344	Land Use; and Natural, Cultural, Historic Resources	Mid (2-5 years)	Planning	\$ (under \$20,000)	N	New Strategy
Program	Low Impact Development - Modeled After Nature (solutions for developers and homeowners): http://www.lowimpactdev.com/	Land Use; and Natural, Cultural, Historic Resources	Mid (2-5 years)	Planning/DPW/Recreation	\$\$ (\$20,001 - \$100,000)	N	New Strategy
Plan	Community Healthy Needs Assessment: http://assessment.communitycommons.org/CHNA/	Land Use and Transportation	Mid (2-5 years)	Planning/DPW/Economic Development/SAC	\$\$ (\$20,001 - \$100,000)	Y (Sidewalk Replacement Fund)	New Strategy
Policy	Slavic Village Revitalization Project: http://www.nationaljournal.com/features/restoration-calls/how-a-community-demolished-its-way-out-of-a-crisis-20121210 and Bridge Street District Plan: http://communityplan.dublinohiousa.gov/bridge-street-district/overview-and-purpose-2/	Economic Development; and Natural, Cultural, Historic Resources	Mid (2-5 years)	Planning/Historical Commission	\$\$ (\$20,001 - \$100,000)	N	New Strategy



Natural, Historic, and Cultural Resources

Goal	Strategy	Description of Strategy	Implementation Actions
<p>Goal #1: Greenfield's natural, cultural and historic resources will be an integral part of the Town's identity with wider recognition and use.</p>	<p>1. Establish a marketing plan for natural, historic, and cultural resources.</p>	<p>The purpose of the marketing plan would be to identify and promote Greenfield's natural, historic, and cultural resources to maximize the appreciation of and use of these resources by local residents and tourists. The plan will include strategies related to institutional support, individual property maintenance and/or protection, and consolidated marketing techniques that will increase recognition of and respect for these resources.</p>	<ul style="list-style-type: none"> • Re-establish a Visitor's Center. • Develop a public arts program to foster lively and attractive streetscapes through public/private partnerships. • Install information kiosks on Town Common and throughout Greenfield. • Create partnerships between the Town and its many museums through collaboration on town-wide events and/or creation of way-finding signs. • Complete and publish an inventory of natural, historic, and cultural areas and make information readily available to the public. • Create an educational campaign and marketing strategy for Greenfield's conservation and tourism resources. <ul style="list-style-type: none"> - Emphasize and promote public pride and awareness; - Create tours of natural, historic, and cultural areas with appropriate signage; - Emphasize hidden assets such as Greenfield Village, Museum of Industrial Heritage, etc.; - Promote historic areas such as North Meadows, Mohawk Trail view, Pumping Station, Rocky Mountain Range, etc.; - Employ technology to promote Greenfield; <ul style="list-style-type: none"> - install full-color event digital marquee - install rotating billboard(s) - enhance social media, digital marketing, and website - create town-maintained calendar for both Town and privately-organized public events - develop QR Codes for various tour subjects such as buildings, trees, dinosaurs, destinations, etc. - Create welcoming & consistent signage of our historic heritage; - Cross-promotion of public and private events through Chamber marketing materials.
<p>Goal #2: Residents and visitors of all ages in Greenfield will enjoy various recreational opportunities as a vital contribution to their health and wellbeing.</p>	<p>2. Identify existing and create new year-round recreational facilities that are accessible to all generations in Greenfield.</p>	<p>Identify and maintain existing recreational facilities in Greenfield. Create new recreational opportunities to meet unfulfilled needs. Make sure existing and new recreational resources provide year-round and diversified usage. Make sure these resources are universally accessible and capable of satisfying recreational needs of all generations in Greenfield.</p>	<ul style="list-style-type: none"> • Create a permanent Open Space Committee. • Provide more recreational opportunities for teen and elderly populations. • Provide better maintenance for existing facilities, especially preventative. • Develop new events and activities while continuing to support existing events through strengthened Recreation Dept. and public/private partnerships. <ul style="list-style-type: none"> - Support cultural events organized by the Recreation Department; - Develop a marketing strategy for Recreation department; - Increase Recreation Department Operating Budget & staff; - Hire a consultant to develop a Recreation Department Master Plan; - Strengthen and promote the Friends of Recreation, 501 c3, as an independent fundraising source for the Recreation Department; - Reinstitute bike committee/commission; - Foster marathon & bike events and create linkages with private organizations such as hospitals, YMCA, and health clubs; - Recognize the value of the private-sector health clubs and activities such as contra-dancing, martial arts, yoga, hiking, biking, walking, skiing etc.; - Develop a historic trail system highlighting the city's important cultural and historic assets to dovetail with the cultural walking tours. • Implement the 2012 Open Space and Recreation Plan. • Explore the potential of combining parks and recreation into one department.
<p>Goal #3: Our natural world and the scenic, rural, and agricultural landscapes will be protected, preserved, and improved to support biodiversity and healthy living in Greenfield.</p>	<p>3. Identify, celebrate, and preserve open space; continuous wildlife habitat and migration corridors; significant view corridors; heritage landscapes, watersheds, wetlands, and rivers; and agricultural land.</p>	<p>Maintain an up-to-date inventory of all natural resources in Greenfield, including open space, wildlife habitat, view corridors, heritage landscape, water resources, and agricultural land. Prioritize the preservation of these resources in all decision-making processes. Foster a culture of celebrating and self-identifying with these valuable resources in Greenfield.</p>	<ul style="list-style-type: none"> • Ensure the rural and scenic character of Greenfield. • Coordinate with local communities and regional organizations. • Celebrate our agricultural history, explore community agriculture, and foster a balanced food supply in Greenfield. • Enhance storm water management and promote land preservation along rivers to ensure high water quality of our rivers and drinking water.
	<p>4. Review, update, and enforce the Town's Zoning Ordinances and environmental regulations to protect all of the above.</p>	<p>Review the current Zoning Ordinances and existing environmental regulations of Greenfield to make sure they are geared towards protecting the Town's valuable natural resources. Update these regulations in a changing context to address outstanding and emerging preservation issues and meet the Town's long term preservation needs. Strengthen code and law enforcement for successful implementation of preservation actions.</p>	<ul style="list-style-type: none"> • Protect our remaining and precious agricultural land in Town through the Agricultural Protection Restriction (APR) and Chapter 61A programs. • Explore ordinances to reduce noise and light pollution.

Acronyms:

FCCC: Franklin County Chamber of Commerce

GBA: Greenfield Business Association

FRCOG: Franklin Regional Council of Governments

SAC: Sustainability Advisory Committee

Policy, Program, Plan or Infrastructure Action	Best Practices and Resources	Additional Element(s) this Strategy Addresses	Time to Implement (Short, Mid, Long Term)	Lead Department or Stakeholder	Estimated Cost (\$, \$\$, \$\$\$, \$\$\$\$)	Existing Implementation Funding Available? (Y/N and Description)	New Strategy or Part of Another Plan? (List Plan)
Policy	<p>Parks, Recreation & Culture Department, Windsor, CO</p> <p>The Windsor PRCD oversees the provision of services related to recreation and cultural opportunities for the entire community through quality program, facilities, service, and management of natural resources.</p> <p>The PRCD consists of three divisions:</p> <ol style="list-style-type: none"> 1. Art & Heritage: provides services related to music, history, art, and culture. This division oversees cultural events, concert series, museum, art or visitor center, exhibits, public art plan, etc. 2. Parks and Open Space: responsible for parks, trails, rights of way, and open space within the town. This division evaluates development plans to ensure that parks, recreational and cultural needs are addressed. The town also partners with other agencies to effectively provide services and amenities beyond their scope or boundaries, such as creating a regional bike plan. 3. Recreation: provides a wide variety of activities, community programs, and special events, including youth and adult athletics, instructional programs, drop-in activities, fitness classes, and ground excursions. 	Economic Development	Short (within a year)	Mayor's Office/Economic Development/FCCC	\$\$ (\$20,001 - \$100,000)	N	New strategy
Infrastructure	ASLA 2010 Student Awards - Integration Parks: www.asla.org/2010studentawards/367.html	Public Facilities, Services, and Energy	Mid (2-5 years)	Recreation/Mayor's Office/Planning	\$\$\$\$ (>\$250,000)	N	2012 Open Space and Recreation Plan
Program	UCDavis Natural Resources Projects Inventory: http://ice.ucdavis.edu/project/nrpi	Land Use	Long (>5 years)	Planning/Local Land Trusts/FRCOG	\$\$\$\$ (>\$250,000)	N	2012 Open Space and Recreation Plan
Policy	<p>Massachusetts Smart Growth/Smart Energy Toolkit</p> <p>http://www.mass.gov/envir/smart_growth_toolkit/index.html</p> <p>Example Modules: Agricultural Preservation, Brownfields, Low Impact Development, Open Space Design/Natural Resource Protection Zoning, Transfer of Development Rights, Water Resource Management, Zoning Decisions</p>	Land Use	Mid (2-5 years)	Planning	\$\$\$ (\$100,001 - \$250,000)	N	2012 Open Space and Recreation Plan



Natural, Historic, and Cultural Resources

Goal	Strategy	Description of Strategy	Implementation Actions
Goal #4: Greenfield's cultural life will be encouraged, expanded, and better promoted, with more established town-wide events.	5. Create a downtown Cultural Center at the First National Bank to supporting existing activities and create new town-wide events and programs.	A downtown cultural center would provide gathering space for existing and potentially new cultural groups/institutions, performance spaces, and galleries. Locating the center at the First National Bank would ensure the continued use and preservation of a historic property, while bringing more residents and tourists into the downtown area.	<ul style="list-style-type: none"> • Include flexible performance and exhibition space.
	6. Support existing and create new town-wide cultural events through public/private partnerships.	The Town could enhance its cultural attractions through its own investments along with leveraging the capital and other resources of a private entity. This would provide greater public benefit with fewer public funds. The Town could encourage mutually beneficial relationships with private entities through efficient administration and open, transparent communication.	<ul style="list-style-type: none"> • Streamline permits, licensing, and zoning processes for creative enterprises. • Encourage café style outdoor seating. • Encourage the presence of food trucks downtown.
	7. Apply for Cultural District designation from the Mass Cultural Council.	The Cultural Districts Initiative is a program of the Massachusetts Cultural Council that was launched in April 2011. There are currently 17 Designated Cultural Districts in Massachusetts, none of which are located in the Town. Designation can foster local cultural development by attracting artists and cultural enterprises, tourists, and private investment into a specific geographic area with an existing concentration of cultural facilities. Added benefits of the program may include the preservation and reuse of historic buildings and the enhancement of property values.	<ul style="list-style-type: none"> • Expand museum offerings and exhibitions. • Foster the creation of a Children's Museum. • Celebrate Greenfield's History.
Goal#5: The historic resources in Greenfield (historic buildings/areas, archaeological sites, and heritage landscapes) will be preserved and protected.	8. Develop and implement a plan for historic preservation that includes creative reuse of historic buildings, the creation of local historic districts, and the nomination of additional National Register historic districts and individual properties.	A formal historic preservation plan would enable the Town to define an overall vision for the protection of its historic resources. This plan would identify the needs and proposed solutions of existing efforts as well as provide the policy direction for Town-led preservation efforts in the long-term.	<ul style="list-style-type: none"> • Ensure the Historical Commission's recommendations regarding protection and preservation ordinances are enacted and carried out. • Revitalize the Historic Commission with better marketing materials both online and in print, and develop an independent website including digital historic building inventory to increase citizens' knowledge and interest. • Explore increasing demolition delay time. • Create and/or promote financial incentive programs to preserve historic facades. • Institute residential and commercial historic plaque program. • Foster linkage between the Town and its many historic museums and organizations. • Identify and preserve historic landscapes and view corridors. • Research designation as a Main Street Community or incorporate National Main Street Center principles (National Main Street Center: www.preservationnation.org).
	9. Support the passage of the Community Preservation Act.	The Massachusetts Legislature passed the Community Preservation Act (CPA) in 2000. Local adoption of the CPA would enable the Town to create a dedicated fund for the preservation of historic resources and open spaces, the purchase and creation of new outdoor recreational facilities, and the development of affordable housing. Funding for these activities typically includes a voter-authorized surcharge on local property tax bills of up to 3 percent and annual distributions from the state's Community Preservation Trust Fund.	

Policy, Program, Plan or Infrastructure Action	Best Practices and Resources	Additional Element(s) this Strategy Addresses	Time to Implement (Short, Mid, Long Term)	Lead Department or Stakeholder	Estimated Cost (\$, \$\$, \$\$\$, \$\$\$\$)	Existing Implementation Funding Available? (Y/N and Description)	New Strategy or Part of Another Plan? (List Plan)
Infrastructure	Cultural Center of Cape Cod The Cultural Center of Cape Cod, a 501(c)3 non-profit organization, adaptively reused the Bass River Savings Bank in South Yarmouth, Massachusetts to provide space for local cultural activities related to exhibition, education, and entertainment.	Public Facilities, Services, and Energy; Economic Development; Education	Long (>5 years)	Economic Development/GBA	\$\$\$\$ (>\$250,000)	N	New Strategy
Program	Worcester Cultural Coalition (WCC) and the WOO Card The WCC is a public/private partnership between the City of Worcester and cultural organizations in Greater Worcester. The WCC promotes all member organizations and advocates for funding to support cultural events and educational programs. The WCC founded the WOO Card, a program that provides loyalty points and discounts to users who visit cultural institutions, restaurants, and retailers.	Economic Development; Education	Mid (2-5 years)	Economic Development/GBA	\$\$ (\$20,001 - \$100,000)	N	New Strategy
Program	Cottage Street Cultural District - Easthampton, MA The Cottage Street Cultural District is an area within the City of Easthampton that contains diverse shops, galleries, and night-life activities amongst a vibrant art scene. The District hosts year-round events that include the Art Walk and the Easthampton Paint Out! at the Nash Gallery.	Economic Development	Short (within a year)	Mayor's Office; Economic Development/Historical Commission	\$ (under \$20,000)	N	New Strategy
Plan	City of Clinton Façade Improvements schematic: www.cityofclintonnc.com Portland, Maine Façade Improvements Program: http://www.portlandmaine.gov/citymanagers/facade.asp	Economic Development	Mid (2-5 years)	Planning/Historical Commission	\$\$\$ (\$100,001 - \$250,000)	N	New Strategy
Policy		Housing	Short (within a year)	Mayor's Office/Town Council/SAC	\$ (under \$20,000)	N	New Strategy



Public Facilities, Services and Energy

Goal	Strategy	Description of Strategy	Implementation Actions
Goal #1: Municipal buildings, equipment, and operations meet the Town’s needs and are accessible, efficient, resilient, well-staffed, and well-maintained.	1. Create and implement a long-range Capital Improvement Plan that incorporates sustainability principles for plants, buildings and vehicles.	The Town should become more proactive about updating its facilities by developing a long-range physical plant capital improvement plan. This will enable the Town to plan for and budget more effectively as it moves forward with critical maintenance and capital improvement projects over the next 10-15 years.	<ul style="list-style-type: none"> Assess what improvements are needed for all municipal buildings, and when they are needed, with the goal of looking for synergies which could lead to cost savings. This will help the Town prioritize the improvements, budget for the work, and seek supplemental sources of funding such as grant money. The recommendations and priorities identified in the ADA Transition Plan can be folded into this effort. Central Maintenance, the Planning and Construction Committee and the Sustainability Advisory Committee work together with the goal of making Town-owned buildings as “sustainable as possible” in that they are state-of-the art, incorporate shared spaces, use the least amount of fossil fuel energy as possible, and materials used are as durable and recyclable as possible. Build all new Town-owned buildings to zero-net-energy ready standards and use “green” materials wherever possible. Explore purchasing and use of building maintenance software, similar to that presently used by the Sewage Treatment plant. Update fire and emergency services equipment so no equipment is older than 20 years. Ensure that we have quality, cost-effective ambulance services. When replacing equipment and vehicles, purchase the most environmentally-friendly products possible. Develop and implement procurement policies that support Town’s sustainability goals
	2. Develop a plan for how to meet the space and staffing needs of Municipal Services	As Greenfield grows and changes in how it provides municipal services throughout the town, it will need to continue to consider how to meet space and staffing needs of its municipal services. With the Public Safety Complex and planned addition to the Town Hall identified, these two projects will provide for the much needed space for these two facilities. A continued assessment of similar municipal services and their facilities will enable the Town to plan for where it needs to grow and reduce space and staffing needs.	<ul style="list-style-type: none"> 10 year plan Continue to examine the feasibility of expanding and improving space for Police, Fire, and Emergency Dispatch and Emergency Management facilities (Continue to explore resistibility of housing them together in a Public Safety Complex). Create a satellite police station downtown. Continue to explore the feasibility of an expanded Town Hall, so that staff can more easily communicate and collaborate. Continue to explore adequate space for Central Maintenance, including parking space. Address DPW space needs for staffing, equipment and materials. Create staffing plan to address inadequacies caused by absences.
Goal #2: The Department of Public Works will have an updated budget and capital improvements plan, and sustainable funding to provide the necessary services to the Town of Greenfield.	3. Review and expand long-range capital improvement plan, budget, funding, and schedule for the Department of Public Works that embraces the principles of sustainability and climate change adaptation.	Similar to Strategy #1, the Department of Public Works will benefit from an expand long-range capital improvement plan, budget, funding, so they can plan for needed improvements. Core to developing this effort is the need to develop a plan that recognizes the need to consider today’s best practices around sustainability and climate change adaptation.	<ul style="list-style-type: none"> Includes plan for staffing that balances internal staff with external consultants/contractors to provide effective services. Work with the Greenfield Tree Committee to create and fund a plan that maintains healthy trees in the urban core that aims to achieve a 40% tree canopy, and complete and keep updated an urban core tree inventory. Identify additional funding sources for maintenance and capital projects to supplement the Town budget. <ul style="list-style-type: none"> Reduce capital expenses by using timely, strategic, and innovative approaches to maintenance. Continue to work with Franklin County Transportation Planning Organization (TPO) on state Transportation Improvement Plan (TIP) funding requests. Continue to advocate for state funding of our infrastructure. Seek additional funds for special projects that especially make infrastructure “greener.”
	4. Reduce solid waste and disposal costs through a comprehensive program that includes recyclable materials, compostable food waste, and yard waste, and reduction of disposable items.	By developing a new comprehensive program, the Town will reduce its solid waste and disposal costs. This program will need to consider recyclable materials, compostable food waste, and yard waste, and reduction of disposable items.	<ul style="list-style-type: none"> Food composting at schools and curb-side pick-up for all Reduce cost and amount of sewage sludge.

Acronyms:

COA: Council on Aging

DPW: Greenfield Department of Public Works

FRCOG: Franklin Regional Council of Governments

GPS: Greenfield Public Schools

SAC: Sustainability Advisory Committee

IMPLEMENTATION PLAN

Policy, Program, Plan or Infrastructure Action	Best Practices and Resources	Additional Element(s) this Strategy Addresses	Time to Implement (Short, Mid, Long Term)	Lead Department or Stakeholder	Estimated Cost (\$, \$\$, \$\$\$, \$\$\$\$)	Existing Implementation Funding Available? (Y/N and Description)	New Strategy or Part of Another Plan? (List Plan)
Plan		Transportation; Natural, Cultural, and Historic Resources, Education	Long (>5 years)	Central Maintenance/GPS Administration/SAC/Planning & Construction Committee	\$\$\$\$ (>\$250,000)	N	Part of up-dating a Capital Improvement Plan
Plan	Tisbury, MA Municipal Needs Assessment: http://tisburyma.gov/Pages/TisburyMA_Planning/MNA/00-mna-index	Transportation, Natural, Cultural, and Historic Resources, Education	Mid (2-5 years)	Mayor's Office/DPW/Central Maintenance/Police Department/Fire Department	\$ (under \$20,000)	Massachusetts Emergency Management Agency (for Public Safety Complex)	Part of Plan to build a new Public Safety Complex
Plan	Erie, PA Capital Improvements Plan: Sustainable Asset Management Plan - http://www2.erie.gov/dsm/index.php?q=capital-improvement-program-cip	Transportation, Natural, Cultural, and Historic Resources, Education	Mid (2-5 years)	Mayor's Office/DPW/SAC/FCOG/Tree Committee	\$\$\$\$ (>\$250,000)	State Transportation Improvement Funds	New Strategy
Program	Yellowknife, CA Composting Program: http://www.yellowknife.ca/City_Hall/Departments/Public_Works_Engineering/Composting/YellowknifeCentralizedCompostingProgram.html		Mid (2-5 years)	GPS Administration/DPW/SAC	\$\$\$\$ (>\$250,000)	N	New Strategy



Goal	Strategy	Description of Strategy	Implementation Actions
<p>Goal #3: The library, and senior and youth services have adequate, healthy facilities and expanded staffing and programs, and state, federal, and private services remain in Greenfield.</p>	<p>5. Improve and enhance the Library facilities to include a Community Center and adequate parking.</p>	<p>This strategy involves finalizing a feasibility study and implementing key steps that will enable the Town to ascertain the exact needs and costs associated with expanding or building a new Library, as well as setting the appropriate levels for staffing.</p>	<ul style="list-style-type: none"> • Finalize feasibility study that for a facility that has a minimum of 30,000 square feet • Seek funding for expanded or new facility • Increase staffing as needed • Explore funding to reflect usage (i.e. 50% of usage is non-Greenfield residents)
	<p>6. Reinstate the Greenfield Youth Commission to enhance services and activities for the Town's youth.</p>	<p>By reinstating the Youth Commission, the town will be able to better advance and enhance services and activities for the Town's youth. This strategy will enable more collaboration between the Recreation departments and enable key partnerships with the public and private sectors to increase the quality of services.</p>	<ul style="list-style-type: none"> • Assess needs, identify gaps, work with the Town's Recreation Department • Leverage quality services offered by YMCA, Community Action Youth, Game store and more and seek additional public/private partnerships. • Explore the creation of a skateboard park. • If Youth facility secured, place near the new Community Center/Library.
	<p>7. Work with Council on Aging to improve senior services by moving to a larger, healthier space with adequate staffing and increased programs.</p>	<p>This strategy advances the key steps in the planning of a new senior center facility. In addition, this strategy will assess the potential to increase staffing and volunteer support that is vital to delivering a high quality facility and its programs.</p>	<ul style="list-style-type: none"> • Seek new facility that is healthy, and has adequate space for expanded senior activities and staff, and as near the new Community Center/Library as possible to take advantage of shareable facilities. • Increase staffing who can reach out to seniors who are unable to come to the senior center (i.e., home visits), and help them with appropriate applications for assistance. • Increase volunteers to support senior activities and services. • If new senior facility is secured, place it near to the new Community Center/Library.
	<p>8. Continue to advocate for keeping regional services that are physically located in Greenfield that serve both residents of Greenfield and greater Franklin County.</p>	<p>Core to this strategy is developing working relationships with state and private agencies to ensure that critical social services are available to Greenfield residents as well as Franklin County Residents.</p>	<ul style="list-style-type: none"> • Work with state and private agencies to ensure social services available to Greenfield residents as well as Franklin County Residents • Continually seek ways to work with and collaborate with health-care providers, clinics, and private providers to ensure quality health care, mental health care, and substance abuse treatment is available and appropriate for the population.

Policy, Program, Plan or Infrastructure Action	Best Practices and Resources	Additional Element(s) this Strategy Addresses	Time to Implement (Short, Mid, Long Term)	Lead Department or Stakeholder	Estimated Cost (\$, \$\$, \$\$\$, \$\$\$\$)	Existing Implementation Funding Available? (Y/N and Description)	New Strategy or Part of Another Plan? (List Plan)
Plan	American Library Association: http://www.ala.org/tools/guidelines/standardsguidelines#Planning Pew Research Center - How Americans Value Public Libraries in their Community: http://libraries.pewinternet.org/files/legacy-pdf/PIP_Libraries%20in%20communities.pdf	Natural, Cultural, and Historic Resources, Education	Mid (2-5 years)	Library/Library Board of Trustees	\$\$\$\$ (>\$250,000)	N	New Strategy
Policy	Holyoke Youth Commission: youthtaskforce.org		Short (within a year)	Mayor's Office/Recreation	\$\$\$ (\$100,001 - \$250,000)	N	New Strategy
Plan	http://www.ncoa.org/assets/files/pdf/nisc/2012-NISC-Programs-of-Excellence-Awards-Winners-Only.pdf		Mid (2-5 years)	Mayor's Office/COA	\$\$\$\$ (>\$250,000)	N	New Strategy
Program			Short (within a year)	Mayor's Office/Health	\$\$ (\$20,001 - \$100,000)	N	New Strategy



Public Facilities, Services and Energy

Goal	Strategy	Description of Strategy	Implementation Actions
<p>Goal #4: Green Infrastructure Practices will reduce municipal infrastructure costs, protect public health and safety, and preserve natural areas.</p>	<p>9. Incorporate cost-effective Green Infrastructure and Low Impact Design (LID) strategies into all municipal projects & work with developers and residents on what they can do.</p>	<p>This strategy will enable the Town to move forward with implementing green infrastructure best practices into projects, and will require the introduction of things like: a Green Stormwater Infrastructure Ordinance, tree ordinances, and educational programs to advance this strategy.</p>	<ul style="list-style-type: none"> • Reduce storm water runoff. <ul style="list-style-type: none"> - Adopt a Green Stormwater Infrastructure Ordinance that addresses the Town, developers, and residents. - Use Rain gardens, bioswales, permeable pavement, and green parking lot design when upgrading or permitting all roads, parking lots, sidewalks, and parks. • Continue to offer financial incentives to homeowners to disconnect downspouts and sump pumps. • Develop and implement Strategic Education and Outreach Plan on the benefits of Green Infrastructure through public/private partnerships that include information on water management, building healthy soil (instead of using chemical fertilizers, herbicides etc.), the value of native trees, shrubs, and vegetation that offer shade and support biodiversity in our backyards and our region. • Develop and adopt an urban Tree Ordinance that aims to maintain a minimum of a 40% tree canopy in the urban area so as to reduce the heat island effect, beautify, and create natural habitat. • Maintain Parks and Open Space that create “healthy human habitats.” • Search for funding and technical assistance to implement these. • Continue to minimize Town’s use of chemical fertilizers and pesticides on Town properties.
<p>Goal #5: Greenfield will be a showcase “solar city” and be 40% of the way to meeting its 2050 goals adopted in 2009 to Reduce CO2 by 80%, and to reduce the money we spend on energy that leaves the region from \$67 million/year (2008) to ZERO.</p>	<p>10. Greenfield will continue to reduce municipal energy use and its carbon footprint through innovative programs, conservation, energy efficiency, and the installation of renewable energy systems.</p>	<p>By creating innovative programs, advancing conservation efforts, and installing renewable energy systems, the Town will continue to reduce its municipal energy use and its carbon footprint. This strategy also advances the continued efforts to develop public and private partnerships to also reduce residential and business energy use.</p>	<ul style="list-style-type: none"> • Continue to implement municipal aggregation (Greenfield Community Light and Power) that offers 100% renewably-produced electricity to all residents and businesses. • Develop a long-range energy reduction plan for municipal operations. <ul style="list-style-type: none"> - Establish a list of prioritized projects and capital improvement plan for energy efficiency projects in municipal buildings, lighting, and solid waste management. - Create a Green Fleets Policy to include a plan for maintaining existing and “right-sizing” the fleet with more fuel efficient vehicles for Town departments. • Develop sustainability principles or guidelines for Town projects, operations, policies and regulations including new or renovated municipal facilities. <ul style="list-style-type: none"> - These principles should include net-zero energy standards for new construction, energy and water conservation, the use of green building materials, and waste minimization. They can also be incorporated into Town operations such as requests for proposals, area plans, and maintenance contracts. • Work with Sustainability Advisory Committee to identify new opportunities.
	<p>11. Continue public/private partnerships to reduce residential and business energy use and promote installation of renewable energy systems.</p>	<p>By partnering with residents and businesses on energy efficiency and renewable energy projects, and continuing to invest Community Development Block Grant (CDBG) funds in housing rehabilitation, the Town can accelerate their adoption. It is also important to track how many homes receive energy upgrades and how much energy and money is saved because of these efforts; how much renewable energy is installed locally; and to issue progress reports on efforts to reach the Town’s 2050 goals.</p>	<ul style="list-style-type: none"> • Continue to invest CDBG funds in residential building upgrades. • Decrease energy use through public education and outreach programs such as the Energy Smart Homes, and Energy Smart Businesses programs. • Increase local zero-carbon electricity production through town-wide programs such as Solarize Mass and Community-Shared Solar. • Work to improve state and utility energy efficiency programs by working with state agencies, utility companies, non-profits, and the state legislature. • Measure and report progress toward our 2050 goals.

Policy, Program, Plan or Infrastructure Action	Best Practices and Resources	Additional Element(s) this Strategy Addresses	Time to Implement (Short, Mid, Long Term)	Lead Department or Stakeholder	Estimated Cost (\$, \$\$, \$\$\$, \$\$\$\$)	Existing Implementation Funding Available? (Y/N and Description)	New Strategy or Part of Another Plan? (List Plan)
Policy	Seattle's Green Stormwater Infrastructure Ordinance: http://www.seattle.gov/util/EnvironmentConservation/Projects/DrainageSystem/GreenStormwaterInfrastructure/index.htm and The Value of Green Infrastructure: www.hpigreen.com	Transportation, Education, Housing	Long (>5 years)	Planning/DPW/SAC	\$\$\$\$ (>\$250,000)	N	New Strategy
Program		Transportation, Education, Housing	Long (>5 years)	Planning/DPW/SAC/Greening Greenfield	\$\$\$\$ (>\$250,000)	N	Builds on the work done by Greening Greenfield
Program		Transportation, Education, Housing	Long (>5 years)	Mayor's Office/Planning/Local Utilities/SAC/Greening Greenfield	\$\$\$\$ (>\$250,000)	Community Development Block Grant	Builds on the work done by Greening Greenfield



Goal	Strategy	Description of Strategy	Implementation Actions
<p>Goal #1: All schools and administrative buildings and equipment are safe, have adequate space, are attractive, well maintained, have good air quality, and are energy efficient.</p>	<p>1. Maintenance is performed regularly, and is approached as an opportunity to make facilities safer, healthier, more sustainable, energy efficient, and beautiful, and purchasing policies ensure school vehicles are as fuel efficient as possible.</p>	<p>Maintenance is essential to providing a healthy, safe learning environment for students. Developing and implementing an operations and maintenance plan will help identify and replace or fix vehicles and equipment before they are broken, increases energy efficiency of vehicles and equipment through routine cleaning and maintenance, and saves the school district money by anticipating capital expenses in advance through careful and regular inspections.</p>	<ul style="list-style-type: none"> • Environmental health inspections are up to date including: air quality, mold and mildew, water quality, and asbestos and chemical monitoring. • HVAC, plumbing and electrical systems are repaired with longevity, low maintenance, and sustainability in mind. • Cleaning continues to be done with “green” products and no toxic chemicals, including chemical fertilizers are not used anywhere in school buildings or on the grounds. • Storage for the school system and individual schools is abundant, well lit, and accessible. • There is a plan to replace school vehicles, including buses, in a timely fashion and ensure they are as energy efficient as possible.
<p>Goal #2: The Greenfield school system is a choice-in system with high-quality, energy-efficient facilities and adequate staffing to offer a broad range of options that provide quality education for 21st Century jobs.</p>	<p>2. Ensure that budgeting and policies provide quality facilities and curriculum with adequate staffing and administration to meet the over-arching student and maintenance needs of our school system.</p>	<p>A financial, programmatic and procedural framework is essential to ensuring that the School Department’s buildings, policies, curriculum and staff support meet the growing, evolving needs of Greenfield’s students. This will save the Town time and money and allow the faculty to focus on delivering a high quality education to our future generations.</p>	<ul style="list-style-type: none"> • Ensure that teacher/student ratio does not go exceed a ratio of 1:22. • Add a curriculum coordinator or Assistant Superintendent to ensure quality curriculum is available for our students. • Increase salaries for substitute teachers. • Add plumber to maintenance staff rather than waiting for a contractor to fix an immediate problem. • Hire a grant writer that is shared with all town departments to seek innovative opportunities that are interdepartmental. For example, a grant that would benefit the schools and further the economic development or health goals of the town.
<p>Goal #3: Facilities, equipment and technology systems for staff and students are up to date and connected to Town systems where relevant and allowable.</p>	<p>3. Ensure that all communication systems, such as computers, telephones and wireless Internet access, are current, accessible and meet state and federal regulations.</p>	<p>The world of technology is constantly changing. A forward thinking plan should be created to anticipate and plan to adapt to the evolution of technology and how it can be an asset to both student learning and more efficient coordination between schools and with the Town government as a whole.</p>	<ul style="list-style-type: none"> • Implement the Greenfield Public Schools Technology Plan, 2014-2017 • Connect to Town systems where relevant and allowable. • Install Wi-Fi throughout the School Department facilities. • Ensure communication systems, such as telephones and Internet, are up-to-date and attentive to federal and state requirements to schools.

Acronyms:
 GPS: Greenfield Public Schools
 SAC: Sustainability Advisory Committee

Policy, Program, Plan or Infrastructure Action	Best Practices and Resources	Additional Element(s) this Strategy Addresses	Time to Implement (Short, Mid, Long Term)	Lead Department or Stakeholder	Estimated Cost (\$, \$\$, \$\$\$, \$\$\$)	Existing Implementation Funding Available? (Y/N and Description)	New Strategy or Part of Another Plan? (List Plan)
Program	<p>PK-12 Public Educational Facilities Master Plan Evaluation Guide: http://www.21csf.org/csf-home/Documents/21CSFMFPEvaluationChecklistAugust2011.pdf</p> <p>National Best Practices Manual for High Performance Schools: http://apps1.eere.energy.gov/buildings/publications/pdfs/energysmartschools/nationalbestpracticesmanual31545.pdf</p> <p>City of Woburn School District Fuel Efficient Vehicle Policy: http://www.mass.gov/eea/docs/doer/green-communities/grant-program/woburn-fuel-efficient-veh-pol.pdf</p>	Transportation; Public Facilities, Services, and Energy	Short (within a year)	GPS Administration/Central Maintenance/Health	\$\$\$ (\$100,001 - \$250,000)		New Strategy
Policy	<p>Shared Curriculum Development Coordinator at Greater Southern Tier BOCES: http://www.gstboces.org/#/pages/iss/curriculumdevelopment.cfm</p>	Economic Development; Public Facilities, Services, and Energy	Mid (2-5 years)	GPS Administration	\$\$\$ (>\$250,000)		Annual budgeting process
Infrastructure	<p>Greenfield School Department Technology Plan 2014-2017: http://www.gpsk12.org/technology/gpstechplanhome.html</p>	Public Facilities, Services, and Energy	Mid (2-5 years)	GPS Administration	\$\$\$ (>\$250,000)		Draft Technology Plan 2014-2017 in progress



Goal	Strategy	Description of Strategy	Implementation Actions
Goal #4: School security is addressed and maintained at all levels (schools, administration building, storage facilities, etc.).	4. School building entrances, both exterior and interior, are secure, but welcoming of authorized individuals.	School security and safety is a concern of educators, parents, students and the public at large. When it comes to keeping students safe, there are many issues, including school violence which has been gaining in public awareness. More schools are using safety and security measures to reduce violence on school grounds. However, it is important to remember that our schools are public gathering places and they need to be inviting and accessible to visitors.	<ul style="list-style-type: none"> • Security systems, as recommended for individual schools, are current and monitored. • All safety systems and features are inspected regularly such as: entrances and exits, ADA compliance, elevators, fire and fire escapes, elevators, chimneys, playgrounds, kitchens, and paint as needed.
	5. Security policies are in place and regularly maintained to ensure proper vetting of individuals attempting to enter the schools.	A security policy lays out the processes and procedures that must be followed to ensure the safety of the people that it is intended to protect. However, a policy is only effective if it is enforced. Developing and enforcing a successful policy requires collaboration and cooperation among the appropriate stakeholders, including police and facilities managers.	<ul style="list-style-type: none"> • Evaluate all of the security policies across all of the schools and conduct a gap analysis to determine what is missing. • Work with Police and other Emergency Management personnel to craft and uphold all security policies throughout the School Department.
Goal #5: Walking and biking to school is common practice for Greenfield's students, school grounds are secure with arrival areas, including school drop-off/pickup areas, that are beautiful, welcoming, and safe.	6. Re-evaluate bus, visitor, delivery, staff, and parental vehicle needs to ensure that drop-off areas are safe and attractive; that air quality from vehicle emissions is not compromised; and there is adequate staff and visitor parking.	Entrances and drop-off areas need to be designed, constructed and maintained to ensure they are safe for people of all ages and abilities. This includes signage and policies to prohibit unnecessary vehicle idling. Parking should be adequate enough to accommodate both the school staff and visitors during or after hours.	<ul style="list-style-type: none"> • School grounds are secure, beautiful and welcoming with signage, paths, benches, bike racks, trees, shrubbery, and flowers. • There is adequate space for deliveries and parking for staff, parents, and visitors. • Create a landscape maintenance plan that ensures exterior curbs, steps, rails and trim are in good condition and grounds are regularly mowed and maintained. • Replace outdated lighting and storm water systems with energy efficient lighting and vegetated swales to address storm water runoff from buildings and other impermeable surfaces. • The community has access to school facilities such as sports fields, playgrounds, libraries, meeting spaces and auditoriums as needed after school hours. • All exterior play, sports, and gathering places have secure perimeter fencing. • Spaces for outdoor classrooms are available and utilized during good weather.
	7. Expand Safe Routes to School program from once a month to weekly, then daily with the goal of increasing health, exercise, and not-motorized ways of traveling around.	Safe Routes to School programs focus on removing the barriers to walking and biking to school, including constructing sidewalks, striping crosswalks and bike lanes, and providing education to students, parents and drivers about how to create a safe environment for students on their journey to and from school.	<ul style="list-style-type: none"> • Work with Greenfield Police Department, Parent-Teacher Organizations, Greenfield Public School teachers and administrators, local businesses and other stakeholders to relaunch the Safe Routes to School program monthly, with a discussion about how to expand it to daily programming. • Determine where the sidewalks and bicycling routes are deficient in Greenfield. • Upgrade crosswalks and investigate other opportunities for "striping" roadways for pedestrian and bicycle safety.

Policy, Program, Plan or Infrastructure Action	Best Practices and Resources	Additional Element(s) this Strategy Addresses	Time to Implement (Short, Mid, Long Term)	Lead Department or Stakeholder	Estimated Cost (\$, \$\$, \$\$\$, \$\$\$)	Existing Implementation Funding Available? (Y/N and Description)	New Strategy or Part of Another Plan? (List Plan)
Infrastructure	National Clearinghouse for Educational Facilities: http://www.ncef.org/rl/safety_security.cfm	Public Facilities, Services, and Energy	Short (within a year)	GPS Administration/Central Maintenance	\$\$\$ (\$100,001 - \$250,000)		New Strategy
Program	National Clearinghouse for Educational Facilities: http://www.ncef.org/rl/safety_security.cfm	Public Facilities, Services, and Energy	Short (within a year)	GPS Administration	\$ (under \$20,000)		Build off of existing security policies
Infrastructure	Boston Schoolyard Design: http://www.schoolyards.org/design.schoolyard.html and National Clearinghouse for Educational Facilities: http://www.ncef.org/rl/landscape.cfm	Public Facilities, Services, and Energy	Mid (2-5 years)	GPS Administration	\$\$ (\$20,001 - \$100,000)		New Strategy
Program	National Safe Routes to School Program: http://www.saferoutesinfo.org/	Transportation; Public Facilities, Services, and Energy	Short (within a year)	GPS Administration	\$\$ (\$20,001 - \$100,000)		Existing Safe Routes to School Program



Goal	Strategy	Description of Strategy	Implementation Actions
<p>Goal #6: The school meals program offers healthy food choices and engages in sustainable practices during preparation and disposal.</p>	<p>8. Reduce waste by applying for composting grant and implementing it, while using washable or compostable trays, plates, and flatware.</p>	<p>School waste contains a large percentage of discarded food and potentially biodegradable items (like paper towels). In order to reduce these waste, schools can investigate, develop and implement programs that separate discarded food and biodegradable items from the waste stream and bring them to a facility where they can be turned into compost that supports local and regional agriculture.</p>	<ul style="list-style-type: none"> • Determine the best approach for implementing a compost program, perhaps through a pilot at one or more of the schools. • Investigate grants through local, state and federal foundations and other funding sources to provide seed money for a composting program.
	<p>9. Implement a farm-to-school program by working with local farmers and other farming organizations (such as Just Roots) for access to locally-grown food and farming expertise as well as to support continuing educational options for Greenfield Public School teachers about food and local agriculture.</p>	<p>A farm-to-school program would facilitate purchasing relationships between local schools and local farms and agriculture businesses to increase availability of food in schools that is produced in or around Greenfield. Oftentimes, these programs also provide local food and agriculture education for students and teachers to understand the benefits of locally produced food. Curriculums are created that can be easily integrated into traditional subjects like biology, math, economics and health education.</p>	<ul style="list-style-type: none"> • Investigate options for local food suppliers to provide food to the Public Schools. • Work with Just Roots to establish a curriculum for the schools that addresses local food and skills in farming and the agricultural trade. • Investigate funding opportunities through local, state and federal sources to provide grants to jumpstart a new program or supplement existing work. • Implement a certificate program for teachers that prepare them to develop curriculum that teaches students about farming and the importance of local food.
<p>Goal #7: Facilities for Special Education students in all schools are appropriate to the students' learning needs, and are quiet.</p>	<p>10. Explore creating on- and off-site facilities that meet the needs of a variety of special education programs at all age levels.</p>	<p>Students with special needs often require a different learning environment and instruction than their peers. Traditional classrooms do not always provide that environment for the necessary learning styles, which could make it difficult to make progress with the student. Identifying the needs of these students, and finding on- and off-site locations that meet those needs, is important to successfully engaging them throughout their educational career.</p>	<ul style="list-style-type: none"> • Work with Special Education Teachers at the School District to determine what the needs are of the special education students, and what type of facilities are necessary to facilitate their learning. Identify the gaps.

Policy, Program, Plan or Infrastructure Action	Best Practices and Resources	Additional Element(s) this Strategy Addresses	Time to Implement (Short, Mid, Long Term)	Lead Department or Stakeholder	Estimated Cost (\$, \$\$, \$\$\$, \$\$\$\$)	Existing Implementation Funding Available? (Y/N and Description)	New Strategy or Part of Another Plan? (List Plan)
Program	<p>Boston Latin School Compost Pilot: http://www.blsyouthcan.org/BLS_Youth_C.A.N./Composting.html and EPA's Tools to Reduce Waste in Schools: http://www.epa.gov/osw/education/pdfs/toolkit/tools.pdf Children's Food Trust: http://www.childrensfoodtrust.org.uk/</p>	Land Use; Natural, Cultural, and Historic Resources	Mid (2-5 years)	GPS Administration/SAC	\$\$ (\$20,001 - \$100,000)		<p>Just Roots Greenfield Food Study 2013 GPS Wellness Policy (Food Services)</p>
Program	<p>School Food Waste Curriculum: http://cwmi.css.cornell.edu/TrashGoesToSchool/School.html National Farm to School Network: http://www.farmtoschool.org/ Massachusetts Farm to School Project: http://www.massfarmtoschool.org/</p>	Land Use; Natural, Cultural, and Historic Resources	Mid (2-5 years)	GPS Administration/Just Roots/SAC	\$\$ (\$20,001 - \$100,000)		<p>Just Roots Greenfield Food Study 2013 GPS Wellness Policy (Food Services)</p>
Program	<p>Special Education Resources for Massachusetts Communities: http://www.massresources.org/special-education-description.html Federation for Children with Special Needs: http://fcsn.org/index.php</p>	Public Facilities, Services, and Energy	Long (>5 years)	GPS Administration	\$\$\$\$ (>\$250,000)		<p>Greenfield Special Education Parent Advisory Council</p>



Comprehensive Strategies

IMPLEMENTATION PLAN

Strategy	Description of Strategy	Implementation Measures	Best Practices and Resources	Timeframe	Lead Government/Firm/Entity
1. Create a Sustainable Greenfield Implementation Committee	In order to achieve the goals of Sustainable Greenfield and ensure it is a living process, a champion needs to be identified. This champion could be the Sustainable Greenfield Implementation Committee. An Implementation Committee comprised of existing MPAC members and new stakeholders should be appointed to work with the entities that are leading the implementation of each strategy, continue promoting the Master Plan to the community, and track and report the progress of achieving the strategies.	<ol style="list-style-type: none"> 1. Identify existing and new stakeholders to participate based on the recommended entities leading each strategy and other key partners 2. Appoint members to the Committee 3. Communicate the creation of the Committee to the community 4. Establish charge and role of the Committee and its members 5. Have the municipality provide a small budget to the Implementation Committee so they can attend trainings/workshops or hire consultant services as needed. 5. Committee members should be willing to attend meetings of other committees (Housing Partnership, Open Space Committee, Energy Committee, etc.) to get to know the decision makers and find out what projects they intend to move forward on. 6. Create a workplan that outlines the short, mid- and long-term projects based on the Town's priorities which could include: funding available to implement, resources that can be leveraged, existing efforts already in place, and how it scored on the Sustainability Strategies Evaluation 	Easthampton, MA (see Appendix for MPIC guidance and members description)	Early 2014	Planning Department/Planning Board/Mayor/Sustainability Committee
2. Promote the results of Sustainable Greenfield monthly	Sustainable Greenfield is just beginning. The Committee can be the vehicle for continuing to communicate the recommendations in the plan, solicit feedback and new ideas, and hold the Town accountable for implementing the strategies in the Plan.	<ol style="list-style-type: none"> 1. Rebrand the Greenfield Sustainable Master Plan Facebook Page to reflect Sustainable Greenfield name 2. Transfer the project website to the Town's page to house and promote the Plan 3. Create a media strategy for posting regularly to keep momentum and interest going 	PlanBTV - Burlington, VT: http://www.burlingtonvt.gov/ParksMasterPlan/Events/	Early 2014 and monthly	Sustainable Greenfield Implementation Committee/Sustainability Committee
3. Use the Sustainable Master Plan as the 'Go-To' reference for all projects in the Town	Many of the strategies in the Plan reference projects and other programs that the Town needs to implement to achieve sustainability. However, there needs to be a full-scale campaign to ensure the key stakeholders are aware of and are using the Plan to guide and inform their decisions.	<ol style="list-style-type: none"> 1. Ask the Mayor to draft a letter to all department heads about the completion of the Plan, encouraging them to use it to guide and inform present and future programs and projects 2. Create an icon that indicates which Planning Board agenda items are consistent with the Plan 3. Modify the Planning Board agenda to follow the implementation of and consistency with the Sustainable Master Plan 		Early 2014	Mayor/Planning Department/Planning Board
4. Tracking, measure and report progress of implementing the Sustainable Greenfield strategies	Constant tracking, measuring and reporting are essential to assessing the progress of achieving a Sustainable Greenfield. This keeps the Town accountable and also allows the community to gain insight into, and even play a role in, realizing the Town's goals.	<ol style="list-style-type: none"> 1. Using the Implementation Plan spreadsheet as a tool, track the progress of implementing the strategies. The spreadsheet can be filtered according to the priorities established by the Implementation Committee in their workplan 2. Provide progress regular reports to the Town Council on implementation of the Plan. 	Existing Implementation Spreadsheet Delaware Valley Regional Planning Commission Tracking: http://www.dvrpc.org/LongRangePlan/RegionallIndicators/	Early-Mid 2014	Sustainable Greenfield Implementation Committee
5. Identify and incorporate additional stakeholders into the implementation stage	While not everyone can or should be on a Committee, there are stakeholders who can be essential roles in implementing the strategies. They may be short-term stakeholders (i.e., part of developing the Comprehensive Housing Needs Assessment Plan) or long-term (i.e., funders).	<ol style="list-style-type: none"> 1. Contact the stakeholders in the Implementation Plan based on which projects/programs the Town is pursuing 2. Ask "is there anyone missing"? This may seem like an obvious thing, but we don't often stop to ask this at the beginning and THROUGHOUT the process. 3. Identify ways to recognize stakeholders and thank them for their contribution 	PlanBTV - Burlington, VT: http://www.burlingtonvt.gov/ParksMasterPlan/Events/	Throughout 2014	Sustainable Greenfield Implementation Committee



SUSTAINABLE STRATEGIES EVALUATION



Overview

The following evaluation criteria have been developed as a synthesis of some of the best practices for “sustaining places” principles identified in the American Planning Association’s Planning Advisory Service Report Number 567, *Sustaining Places: The Role of the Comprehensive Plan*. By using these Sustainability Principles as evaluation criteria, Greenfield determined which strategies addressed the largest number of principles. The strategies that addressed the most Sustainability Principles can then be considered priorities for implementation.

Evaluation Process

Nine Sustainability Principles were used as criteria to determine how sustainable each strategy was within *Sustainable Greenfield*. The more principles each strategy addresses, the greater the benefits to the community when it is implemented. A strategy was given one point if it aligned with the principle (or criterion), for a total of 9 possible points. For instance, Strategy 4 in the Transportation Element (*Implement a Downtown Transportation Improvement Plan*), scored 8 points because it addressed 8 of the Sustainability Principles. Within each Element, the Town can also determine which of the Sustainability Principles were addressed the most. For example, in the Transportation Element, the Transportation strategies significantly addressed three of the Sustainability Principles by scoring 11 points for each the following: Health and Well-Being, Energy Reduction, and Climate Change Mitigation.

The following are the nine Sustainability Principles that were used for this exercise and the definition that was used to evaluate each of the strategies in *Sustainable Greenfield*.

1. Create or promote the use of multimodal travel systems. (Multimodal systems)

Including creation of, improvement to, or promotion of bicycle, pedestrian, public transit infrastructure.

2. Improve health and well-being of community members and visitors. (Health and well-being)

Through improved access to health services, improved air quality, improved water quality, improved walkability or bike-ability, improved safety features. Improvements to schools and/or arts and cultural resources.

3. Reduce fossil fuel-based energy consumption. (Energy reduction)

Through energy conservation (buildings, vehicles, equipment), energy efficiency, renewables. This also includes policies or financing mechanisms that have the intent of energy reduction even when reduction is not guaranteed.

4. Result in more equitable access to or distribution of resources. (Equity)

Including affordable housing options, access to services, infrastructure improvements in low-income/vulnerable neighborhoods, access to jobs training, access to healthy food.

5. Improve the resilience of the community, its infrastructure, and its services to impacts of climate change and/or other man-made or natural disasters. (Resilience)

Includes infrastructure improvements, zoning/building code changes that plan for potential hazards, strategies that account for and respond to

vulnerabilities, energy and other utility security, emergency response systems.

6. Be consistent with and enhance coordination on efforts with the surrounding region. (Responsible regionalism)

Consistency of goals/targets; coordination with regional entities, linking local and regional services/activity centers; sharing/pooling fiscal and other resources.

7. Improve the economic vitality and economic resilience of the community. (Economic vitality)

Foster business growth, depend on local resources, plan for physical capacity to accommodate economic growth and a healthy land use mix, create or promote green industries and jobs, establish diverse range of long-term competitive jobs.

8. Reduce the community's contribution of climate-changing greenhouse gas emissions. (Climate change mitigation)

Includes fossil-fuel reduction, but also landfilled waste reduction and any fugitive/process emissions.

9. Protect or restore natural resources. (Natural resource protection)

Includes minimizing impacts to land, habitats, watersheds, water bodies, air quality. Maintaining/conserving open space. Restoring habitat. Minimizing use of water and/or raw materials. Improving stormwater management.



Goal	Strategy	Implementation Actions
<p>Goal #1: Greenfield has achieved a high level of ecosystem health, recreational opportunities, and biodiversity through conservation, restoration, and stewardship of its open spaces and natural areas.</p>	<p>1. Create a Natural and Open Space Committee, maintain public parks, actively assess and conserve agricultural and other land throughout the community, and establish criteria for prioritizing future acquisitions.</p>	<ul style="list-style-type: none"> • Create a permanent Natural and Open Space Committee to provide leadership and vision for the town. • Reassess and update zoning focused on the optimal use of each location based on land type and location, existing land use patterns, and on fostering biodiversity and healthy ecosystems; housing and commercial/industrial needs; transportation, and recreation. • Include land in strategic locations throughout the town with high ecological value, agricultural lands, watershed protection areas, and parcels that provide access to or connections with adjacent open space resources and areas that are badly degraded. • Partner with Native American tribes to preserve strategic Native American sites. • Provide stewardship, protection and access for the Green River. • Maintain and improve existing public parks, and create new parks to meet specific needs and demographics. • Provide equitable access to open space and natural areas for all citizens. • Expand biking and walking trails, and promote initiatives that promote walking and biking • Develop zoning or ordinances that incentivize redevelopment and discourage the development of outlying lands, forests, and agricultural land.
	<p>2. Develop priority conservation corridors and/or overlay districts for natural and agricultural lands and rivers.</p>	<ul style="list-style-type: none"> • Partner with land trusts and the state to target these areas for permanent protection and/or regenerative use. • Provide continuous wildlife habitat and migration corridors, and protect watershed resources.
	<p>3. Adopt the Community Preservation Act to provide funding for open space acquisition.</p>	<ul style="list-style-type: none"> • Town Staff should review and identify the steps need to adopt the Community Preservation Act and work with the Town bodies to outline the procedural steps and requirements for adoption of the Act. • Once adopted, build awareness of the Act its provisions through an internal Town Staff meeting and through updating the Towns Website • Outline the short and mid-term goals to advance efforts under the adopted Act.

Multimodal Systems	Health and Well-being	Energy Reduction	Equity	Resilience	Responsible Regionalism	Economic Vitality	Climate Change Mitigation	Natural Resource Protection	TOTAL
1	1	1	1	1	1		1	1	8
	1			1	1			1	4
	1				1	1		1	4



Land Use

Goal	Strategy	Implementation Actions
<p>Goal #2: Agricultural land is preserved to ensure a vibrant local food supply, while increasing Greenfield's role as a regional food hub including production, aggregation, processing, and distribution infrastructure.</p>	<p>4. Inventory all agricultural land, including cropland pastures and orchards and its infrastructure, and encourage its preservation.</p>	<ul style="list-style-type: none"> • Inventory to include: protected agricultural land (and how protected), areas with prime agricultural soils, other areas that could become productive agricultural land. • Encourage farmers to take advantage of Agricultural Preservation Restriction (APR) Program and protect their agricultural land in perpetuity. • Work with area land trusts. • Pursue preservation options that include affordable "whole farm" preservation, including the buildings. • Discourage or prohibit the development of prime agricultural land for non-agricultural uses through zoning, and provide zoning that incentives redevelopment. • Match owners of idle farmland, or those trying to identify a successor, with new or existing farms looking for land. • Work with neighborhood groups to ID town-owned land that could be used for additional community food and flower gardens.
	<p>5. Preserve all agricultural land so as to increase Greenfield's food security and health for all, and work toward a more sustainable agricultural system using new innovative practices that enhance soil fertility, carbon sequestration and food production.</p>	<ul style="list-style-type: none"> • Establish Greenfield as a food hub and support the economic growth and job creation potential of food production, distribution, and processing in town. • Review and revise Agricultural Commission's mission to ensure it promotes and advocates for all aspects of Greenfield food security. • Use Greenfield Food Study, and regional food studies such as those published by CISA and FRCOG, to determine food system infrastructure, processing and distribution needs. • Develop new food system infrastructure, processing, and distribution centers based on studies and farmer survey data. • Actively participate in regional food security efforts such as the Franklin County Food Council, CISA, FRCOG, and larger regional and national efforts. • Train individuals for employment in areas of food production, distribution, and processing. • Ensure Farm to School programs embraced, and set minimum quantity standards for purchase of local food. • Ensure understanding of the carbon and water cycles and soil and food systems, as well as hands-on experience with growing food is part of a student's experience in the Greenfield Public Schools. • Incorporate food gardens in schoolyards. • Incorporate nutrition and food education programs in school curricula. • Establish community gardens in areas of dense population, public housing, and high concentrations of rental properties. • Plant edible fruit and nut trees, shrubs and plants in public spaces. • Continue to accept SNAP/EBT at farmers markets. • Offer information/workshops for farmers on how to use SNAP/EBT with their CSAs and at their farm stands. • Support the Mass in Motion Healthy Market initiative, or similar program, to get more healthy foods in local markets and convenience stores. • Provide advocacy for and promotion of innovative agricultural and food security. • Foster Greenfield as a center for new innovative agricultural techniques that increase soil fertility, carbon sequestration, and food production, and workshops on these topics.
	<p>6. Increase productive agricultural land by fostering backyard gardening.</p>	<ul style="list-style-type: none"> • Bolster community efforts to protect the viability of farming by emphasizing the importance of, and support for, farming within the Town. • Encourage backyard and community gardens. • Utilize the GCC Greenfield Food Study, and other studies, for implementation ideas. • Partner with GCC's Food Systems and Agriculture program, Just Roots, and others to offer programs and training that foster health and backyard gardening including tool sharing programs, and food processing and storage workshops. • Provide incentives to homeowners to reduce area of hardscapes and lawns and increase areas of productive landscapes such as food gardens, rain gardens and gardens for biodiversity. • Support programs and information and demonstrations of innovative agricultural techniques such as forest gardening, permaculture, and nutrient dense gardening.

Multimodal Systems	Health and Well-being	Energy Reduction	Equity	Resilience	Responsible Regionalism	Economic Vitality	Climate Change Mitigation	Natural Resource Protection	TOTAL
					1	1		1	3
	1		1	1	1	1	1	1	7
	1			1		1		1	4



Land Use

Goal	Strategy	Implementation Actions
<p>Goal #3: Our adaptable and resilient green infrastructure enhances and promotes compact development and redevelopment and offers ecological and social benefits.</p>	<p>7. Integrate biological systems into the urban fabric of Greenfield to provide ecosystem and infrastructure services.</p>	<ul style="list-style-type: none"> • Develop and adopt an Urban Forestry Code that includes the following: • Adopt a Green Stormwater Infrastructure Ordinance that includes the following: • Prepare Greenfields essential infrastructure to maintain critical functions through challenging weather, energy, and economy, as outlined in the MA Climate Adaptation report (2010).
<p>Goal #4: Compact residential and commercial development and redevelopment that is focused in and around Greenfield's historic downtown and other previously developed areas, incorporates increased density, mixed use development, and infrastructure reuse as the norm and supports our green, adaptable, and resilient infrastructure.</p>	<p>8. Update the Zoning Ordinance to include sustainable development practices and controls.</p>	<ul style="list-style-type: none"> • Calls for a mix of residential, commercial, civic, and open-space areas, allowing residents to live within one-quarter mile or a five-minute walk from these uses. • Ensure scale and mixes of use of development or redevelopment are compatible with Greenfield's look and feel. • Zoning that facilitates improved residential and nonresidential uses in town center. • Create area sub-plans and enact zoning incentives for the desired mix of uses and density. • Focus commercial and industrial development in designated areas. • Establish maximum parking standards and to encourage the use of shared parking. • Reduce housing size minimums. • Establish "appropriateness criteria" and design guidelines for development downtown and along highway corridors. • Assess existing zoning to determine if commercial and industrial development is adequately limited and/or allowed in key areas.
	<p>9. Revise the Zoning Ordinance to allow development by-right in the downtown area and neighborhood centers that is compatible with Greenfield's traditional character.</p>	<ul style="list-style-type: none"> • Consider incentives such as expedited permitting to encourage mixed-use where appropriate. • Consider increasing density in the downtown area and appropriate neighborhood centers.
	<p>10. Adopt an infill development ordinance to encourage redevelopment or reuse of vacant or underperforming buildings or parcels.</p>	<ul style="list-style-type: none"> • Develop an inventory of, and strategy for, reusing vacant or abandoned properties. <ul style="list-style-type: none"> - Consider using Center for Community Progress - http://www.communityprogress.net/the-help-you-need-pages-7.php; - Code changes, delinquent property tax reform, land banking, reuse strategies; - Pursue the reuse of the Lunt site (or other similar redevelopment opportunity) for elderly housing. • Applies throughout town, including downtown. • Evaluate whether form-based code would help the town achieve its desired goals of infill and redevelopment. • Flexible zoning standards that allow developers to adapt to existing site constraints, density bonuses, mixed uses, and reduced parking standards (or shared parking) are examples of the types of incentives that can be applied to this type of redevelopment. • Work with prospective developers to assess the specific obstacles to expanded reuse and/or redevelopment of historic and other existing properties, and create public/private partnerships to address those obstacles. • Create flexible minimum lot size and frontage requirements to encourage infill development. • Eliminate zoning and permitting obstacles to the redevelopment and parcels in the urban core and at the rotary. • Pursue reuse of vacant industrial and commercial properties that preserve historic elements and incorporates mixed uses appropriate to that neighborhood. • Work with nearby property owners to identify ways to reduce any negative impacts. • Seek funding to upgrade and maintain older properties, and especially seek creative ways to meet requirements for barrier-free access.

LAND USE TOTALS

Multimodal Systems	Health and Well-being	Energy Reduction	Equity	Resilience	Responsible Regionalism	Economic Vitality	Climate Change Mitigation	Natural Resource Protection	TOTAL
	1	1		1	1		1	1	6
1	1	1	1			1	1		6
	1	1				1	1		4
1	1	1				1	1	1	6
3	9	5	3	5	6	7	6	8	52



Transportation

Goal	Strategy	Implementation Actions
<p>Goal #1: Greenfield will have welcoming gateways as well as safe, efficient, and attractive travel corridors.</p>	<p>1. Develop a beautification and informational plan, including a unified sign policy.</p>	<ul style="list-style-type: none"> • Support welcoming signage, public art, and the promotion of special events at gateways. • Reaffirm Corridor Design Guidelines adopted by the Planning Board in 1993. • Enhance tree canopy along streets, adopting Tree Committee recommendations of June 2013. • Reduce/prioritize roadway signage to improve appearance and effectiveness. • Develop a wayfinding signage program to promote economic development. • Improve signage to inform and encourage a higher usage rate of existing parking off Main Street.
	<p>2. Implement Complete Street initiatives</p>	<ul style="list-style-type: none"> • Incorporate a Complete Streets Policy as part of the Major Development Review Process. • Establish a standard width of 11 feet for travel lanes, with the option of using 10 feet where conditions allow. • Identify intersection/roadway improvements using multimodal assessment methodologies approved by Greenfield DPW and/or Massachusetts Department of Transportation. • Perform more detailed corridor assessments on Main St., Federal St., and Turners Falls Road, etc. to identify specific improvement needs and construction costs. • Incorporate more detailed traffic impact and access study guidelines into the Major Development Review process. • Explore ways to improve traffic flow issues related to school pick-up/drop-off.
<p>Goal #2: Downtown will be safe for all modes of transportation, with smooth traffic flow and sufficient parking, including a Municipal Parking Garage.</p>	<p>3. Implement Access Management Techniques.</p>	<ul style="list-style-type: none"> • Improve traffic flow along major corridors by reducing vehicle-conflict points; through driveway consolidation and internal shared driveways. • Reduce vehicle-crashes town-wide and on major corridors and at Highway Safety Improvement Program cluster areas identified by MassDOT.
<p>Goal #3: Neighborhoods will enjoy an improved quality of life by a reduction in the negative impact of vehicular traffic.</p>	<p>4. Implement a Downtown Transportation Improvement Plan, including parking and traffic flow, for all modes of transportation.</p>	<ul style="list-style-type: none"> • Gradually shift Main Street parking from angled to parallel in collaboration with funding a new parking garage. • Include bicycle parking. • Perform an updated downtown parking assessment. • Continue to seek funding for a parking garage on Olive Street to serve visitors, residents, the courthouse, and the Transit Center, incorporating pedestrian access from Transit Center to level of Main Street. • Upgrade all municipal parking lots using Low Impact Development principles, with consideration of the 2012 Conway School of Landscape Design study as a model. • Add bike lanes or shared use markings (sharrows) along Main Street and throughout the downtown area. • Add planted medians or islands to Main Street to slow traffic and make pedestrian crossings safer. • Make it easier to reach downtown safely by non-automotive modes. • Support pedestrian walking areas by providing and maintaining streetscape amenities such as: a quality tree canopy, benches, and outdoor dining. • Encourage transit opportunities with frequent and convenient stops at downtown locations. • Investigate and implement ways to reverse direction on Main Street. • Conduct Road Safety Audits to improve traffic flow/safety at problem areas along Main St, such as at intersections with Colrain St., Hope St. and High St. • Encourage cooperation between the town and businesses to use underutilized areas for access/egress, such as alleys, rear entrances, and parking lots creating welcoming environments (courts, patios, plazas) for everyone.

Multimodal Systems	Health and Well-being	Energy Reduction	Equity	Resilience	Responsible Regionalism	Economic Vitality	Climate Change Mitigation	Natural Resource Protection	TOTAL
	1	1		1	1	1	1		6
1	1	1				1	1		5
	1	1					1		3
1	1	1		1	1	1	1	1	8



Transportation

Goal	Strategy	Implementation Actions
<p>Goal #4: The entire community will have enhanced walkability.</p>	<p>5. Implement Traffic Calming Initiatives.</p>	<ul style="list-style-type: none"> • Work with neighborhoods to identify and implement traffic-calming techniques to improve safety on neighborhood streets, such as: speed monitors, 4-way stop signs, traffic signals, rumble strips, speed humps, roundabouts, one-way street sections, etc. • Work with the police department to enforce speed limits in neighborhoods and publicize this commitment to protecting neighborhood quality of life. • Use information (such as speed monitor data) to adjust enforcement and public education efforts. • Endorse House bill #3391 which would reduce the speed limit to 25 MPH in thickly settled areas (unless otherwise posted). • Develop and promote a catchphrase to capture the spirit of protecting neighborhood quality of life, such as “Be a good neighbor, drive gently.” • Promote and encourage neighborhood block parties and other neighborhood activities.
	<p>6. Develop a Town wide Walkability Plan.</p>	<ul style="list-style-type: none"> • Increase quality and quantity of sidewalks to improve continuity; upgrade existing sidewalks to meet or exceed disability access standards. • Investigate the installation of YIELD TO PEDESTRIAN signs in crosswalks on Main Street, Federal Street and High Street. • Explore additional crosswalk safety methods, such as decorative treatments (paint patterns, asphalt imprints, etc.), LED warning systems, speed monitors, etc. • Identify where additional crosswalks are needed, such as on High St. at the police station and at Smith Street over to the Farmers' Cooperative. • Develop a more stringent infrastructure snow removal program: <ul style="list-style-type: none"> - Improve the consistency of sidewalk snow clearing. - Strengthen, publicize and enforce snow-clearing ordinance. - Organize “Snow Squads” of “environmental athletes” to shovel snow from prioritized locations, including along routes to schools. • Develop neighborhood trails and waterfront walkways with benches, signs, and trail maps/markers/themes at key locations. • Promote the health benefits of walking for all ages by forming public/private/nonprofit partnerships to coordinate education and events. • Make walking more appealing by providing trees, vegetation, and benches; support businesses to create more interesting outdoor spaces to encourage pedestrian traffic. • Require new development to include sidewalks, and to connect to municipal sidewalks where feasible. Incorporate these and other initiatives as part of the Town’s Major Development Review process.
<p>Goal #5: Our town will be a place where people of all ages can safely use bicycles for transportation and recreation.</p>	<p>7. Adopt initiatives from federal and state programs to enhance walkability.</p>	<ul style="list-style-type: none"> • Encourage initiatives in the Mass Department of Transportation / Federal Highway Administration’s Complete Streets Programs • Encourage initiatives in MassDOT’s Green DOT Policy • Implement Safe Routes to School (Safe Routes to School is a comprehensive federal program for K-8th graders) and “Walking Bus” initiatives to increase non-automotive travel to and from school.
<p>Goal #6: There will be dramatically increased ridership of all forms of public transportation, which will offer expanded service and accessibility.</p>	<p>8. Create and implement a Greenfield Bikes Initiative Program.</p>	<ul style="list-style-type: none"> • Develop a town wide bike master plan. • Establish a Bicycle Committee. <ul style="list-style-type: none"> - Inventory and increase the amount of designated bike parking, coordinating public/private resources; especially in the downtown. - Implement Urban River Visions plan for path along Green River. - Support Franklin County’s bike tourism that will: (i.) lobby with Amtrak for bicycle access to trains; (ii.) seek/encourage bike rental/bike share service located at Transit Center; (iii.) promote and market Franklin County Bikeway; and (iv.) explore improved on-/off-road bicycle connection to Old Deerfield. - Seek/encourage pedal-powered services. - Endorse Senate bills #1639 “An Act to Protect Vulnerable Road Users” and #1640 “The Act to Protect Bicyclists in Bicycle Lanes”. • Implement Complete Streets Initiatives and evaluate options to add bike lanes to all major corridors with sufficient width. • Place “Share the Road” signs (and appropriate pavement markings/“sharrows”) on all major corridors that can’t accommodate bike lanes. • Further evaluate 2001 Bikeway Committee recommendation for town Designated Bike Route signage. • Create bicycle boulevards (“streets with low motorized traffic volumes and speeds, designated and designed to give bicycle travel priority” – Urban Bikeway Design Guide); most obvious candidate is Franklin/North Streets, parallel between busy Federal & High Streets and providing a link to the Federal Street & Middle schools. • Endorse and disseminate the “SameRoadsSameRules” driver/cyclist education campaign (created by the Massachusetts Bicycle Coalition in partnership with MassDOT) including outreach to drivers’ education programs and the Registry of Motor Vehicles. • Expand Safe Routes to School implementation to include biking to school. • Encourage the development of a bike-share program; develop a feasibility study to justify and locate areas to implement bike-share program.

Multimodal Systems	Health and Well-being	Energy Reduction	Equity	Resilience	Responsible Regionalism	Economic Vitality	Climate Change Mitigation	Natural Resource Protection	TOTAL
	1	1	1				1		4
1	1	1	1			1	1	1	7
1	1	1	1		1		1	1	7
1	1	1			1	1	1	1	7



Transportation

Goal	Strategy	Implementation Actions
<p>Goal #7: Fuel use, climate change emissions, and air pollution of vehicles will be reduced.</p>	<p>9. Increase collaboration with public transit and improve connections between public transit and other modes of travel.</p>	<ul style="list-style-type: none"> • Create a Transit Committee. • Support and participate in marketing campaigns for FRTA and passenger rail services. • Support increase in FRTA amenities (labeled stops, bus shelters, interactive and Wi-Fi technology). • Support increase in frequency of in-town bus route. • Support the resumption of evening and Saturday FRTA service. • Support expansion of FRTA routes to Bernardston/Northfield and Conway/Ashfield. • Explore creating ordinance mandating vehicles yield to buses pulling out into traffic. • Increase opportunities to come and go from Greenfield: <ul style="list-style-type: none"> - Lobby for multiple daily trips on Amtrak's north/south route. - Work toward development of an east/west passenger rail or bus route. - Support increased awareness of and access to commercial bus lines. • Advocate for bicycle access on trains and commercial buses. • Build municipal parking garage as connection to trains/buses.
<p>Goal #8: Transportation infrastructure will have minimal environmental impact wherever possible and will be made resilient to our changing environment.</p>	<p>10. Develop a Transportation Demand Management Program (an approach that emphasizes the movement of people and goods rather than vehicles, increasing efficiency by expanding travel options and encouraging a shift from single-occupant vehicles).</p>	<ul style="list-style-type: none"> • Work with businesses to develop shared parking areas and connections; which could allow developments to increase building or landscape areas with less parking; which would normally make a site non-conforming to zoning. • Lead a public education campaign about the health, economic, and environmental benefits of people-powered transport, public transit, car-pooling and ride-sharing, and using low-emission and fuel-efficient vehicles. • Ensure that non-motorized travel and public transit are addressed in every development and re-development project. • Facilitate car-pooling to reduce single occupancy vehicles (for example, through information about electronic ride-sharing services, creating ride-share lots). • Encourage employers to offer telecommuting to their employees. • Strengthen and enforce anti-idling laws, increase public awareness about the negative impacts of idling. • Improve infrastructure to support low-emission and alternative-fuel vehicles, such as electric vehicles, plug-in hybrids, and those that run on vegetable oil. • Continue to purchase town vehicles that are right-sized for the job, low-emission and/or run on alternative fuels, to meet or exceed Green Community goals (Green Communities is a 2008 Massachusetts law requiring a participating municipality to purchase only fuel-efficient vehicles).
	<p>11. Develop a Green Infrastructure Program.</p>	<ul style="list-style-type: none"> • Reduce impermeable (paved) surfaces for redevelopment projects where design allows which results in less stormwater runoff. <ul style="list-style-type: none"> - Break up large expanses of pavement, exploring shared parking areas, parking maximums as well as minimums for development; - Explore more creative solutions to access and circulation. • Increase the use of "green" infrastructure (planted medians, rain gardens, etc.) to improve water quality. <ul style="list-style-type: none"> - expand existing regulations for stormwater management to encourage more LID (Low Impact Development) design; - lead the way by creative stormwater management in municipal parking lots (see "Streetscape Enhancement and Ecological Parking Lot Design" by the Conway School of Landscape Design, 2012). • Plant and maintain trees to reduce heat-island effect of paved surfaces and to improve the walkability and aesthetics of our developed areas. <ul style="list-style-type: none"> - develop an inventory of street trees (GIS); - create plan for increasing canopy, especially in the downtown area; - fund and plan for tree replacements; - explore feasibility of underground utilities to mitigate impact of trees around wires; - consider revoking blanket no-trees-in-tree belt ordinance. • Upgrade transportation infrastructure to be more resilient during severe storms and weather patterns. • Pursue construction of zero-net-energy buildings and collaboration between users when rebuilding/updating/constructing facilities for greater efficiencies of scale. <ul style="list-style-type: none"> - case in point: FRTA joining Greenfield DPW to construct a joint vehicle maintenance facility which could service vehicles with a variety of fuel sources, minimizing the environmental footprint while maximizing the capacity to use advanced alternative fuel technology.

TRANSPORTATION TOTALS

Multimodal Systems	Health and Well-being	Energy Reduction	Equity	Resilience	Responsible Regionalism	Economic Vitality	Climate Change Mitigation	Natural Resource Protection	TOTAL
1	1	1	1		1	1	1	1	8
1	1	1				1	1	1	6
	1	1		1	1	1	1	1	7
7	11	11	4	3	6	8	11	7	68



Economic Development

Goal	Strategy	Implementation Actions
<p>Goal #1: Greenfield is the cultural, shopping, and services center of Franklin County.</p>	<p>1. Market Greenfield as a cultural, tourism, and recreation destination through a town-funded marketing plan.</p>	<ul style="list-style-type: none"> • Hire a marketing professional to develop and oversee implementation of a marketing plan utilizing a small paid staff and, when necessary, a group of volunteer or pro-bono marketing and support staff. • Conduct a needs assessment/study to determine why people leave town or come to town for cultural events, shopping and services, then track demographics of the responders. • Market Greenfield as: <ul style="list-style-type: none"> - The gateway to ecotourism (kayaking, fly fishing, rafting, ziplining, camping, skiing, rock climbing, hiking, etc.); - A center of northeast contra dancing and biking; - As a venue for music, museums, historical sites, and performance arts; - As a local food hub through its farm-to-table initiatives, food processing and distribution, and related ancillary industries. • Develop a comprehensive communication plan to get the word out, using a website, social media, print media, blogs, and viral communication. • Enable Greenfield businesses to access the city marketing resources (funding, talent, social media, databases, organizational assistance, etc.) to develop networking events to reach their targeted markets.
	<p>2. Support local events, markets, and fairs that draw consumers to Greenfield and promote additional shopping in town, and ensure state and federal service offices remain located in Greenfield.</p>	<ul style="list-style-type: none"> • Create a manageable permitting & licensing process for special events, including twice-monthly licensing commission meetings. • Create “entrepreneur” loan fund that provides revolving funds to businesses to host events that draw people to Greenfield to spend money. • Encourage and expand the availability of music events on weekends by developing relationships with local and regional musicians and booking agents. • Create a unified action strategy implemented by Town Government (Executive Office, Town Council, and Department of Planning & Development) to respond to external threats to our State and Federal services. <ul style="list-style-type: none"> - Regain the Social Security Office; - Retain the US Post Office, the Registry of Motor Vehicles, and the Court House.
<p>Goal #2: Greenfield has a vibrant, walkable downtown.</p>	<p>3. Strengthen downtown as a welcoming, attractive, and vibrant mixed-use urban space, with the First National Bank building as a cultural center with flexible performance and event space.</p>	<ul style="list-style-type: none"> • Build civic pride. • Support existing downtown festivals, farmers’ market, and events – theatre, video, poetry, etc. -- through the Greenfield Business Association, Chamber of Commerce, Recreation Department, and public/private partnerships. • Expand/improve existing library facilities. • Attract businesses that offer shopping options that meet people’s needs. • Encourage reuse of all downtown space through revising the zoning ordinance to support an Adaptive Reuse Overlay District for downtown. • Encourage stores and eateries to spill out onto sidewalks with outdoor eating where sidewalk space allows, and ensure Greenfield licensing policies support such activity. • Foster expanding store shopping hours into the evening (e.g., offer “free” parking for one night a month like Turners Falls’ Third Thursdays). • Cultivate downtown market-rate housing. <ul style="list-style-type: none"> - Encourage market-rate downtown housing options by helping building owners utilize upper stories for apartments (will need \$ for elevators - 1% tax fund investment idea in Goal 3 to fund this); - Update zoning to enable denser housing within one mile of downtown (See Housing chapter for strategies). • Continue downtown beautification efforts. <ul style="list-style-type: none"> - Town departments and elected officials work with business associations and other citizen groups and schools (such as the Greenfield Rejuvenators, Greenfield Tree Committee, and Greening Greenfield) to create a safer and more welcoming environment that would include but not be limited to: <ul style="list-style-type: none"> - reduced litter - planting and supporting healthy trees and flowers - benches & bike racks - flags - art work (engage arts community and businesses in a partnership which creates murals, sculptures, façades, benches, bike racks, etc. that become a permanent part of the businesses’ identities and are paid through grants, revolving loan funds, etc.) - promote building façade upgrades - ensure Low Impact Development techniques used whenever possible to reduce storm water runoff and make our infrastructure greener • Encourage market rate housing in the upper floors of downtown buildings through development and installation of elevators.

Multimodal Systems	Health and Well-being	Energy Reduction	Equity	Resilience	Responsible Regionalism	Economic Vitality	Climate Change Mitigation	Natural Resource Protection	TOTAL
	1				1	1			3
	1				1	1			3
	1		1		1	1			4



Economic Development

Goal	Strategy	Implementation Actions
<p>(continued) Goal #2: Greenfield has a vibrant, walkable downtown.</p>	<p>4. Ensure downtown is safe, easy to get to, accessible, and pedestrian/bicycle friendly.</p>	<ul style="list-style-type: none"> • Redesign key downtown streets to be bike/pedestrian/auto friendly. • Build an atmosphere of safety by creating a permanent downtown police presence. <ul style="list-style-type: none"> - Locate Public Safety Complex in downtown area (existing fire station, Davis Street School property?); - Institute “neighborhood policing” with downtown walking police patrols where the officers build direct relationships with the businesses and where the police are visible but not intrusive; - Possibly have a police kiosk on the Town Common where officers would periodically rest and where people would know that they could find an officer at specific posted times; - Site our local social service support services offices off of Main Street. • Manage parking supply to encourage walking and biking. • Ensure adequate parking. • Support biking. <ul style="list-style-type: none"> - Require new and existing parking areas to provide bicycle parking - Add a downtown bike lane; - Change parking configuration to ensure adequate space for bike lane. - Implement a Bike-Share program. • Explore revising zoning ordinance to utilize parking maximums as well as parking minimums. • Revamp parking policy to complement the community’s vision of a pedestrian friendly and environmentally friendly community • Improve public transit. Work with FRTA & GCC to expand the frequency of the downtown bus loop #21. • Build bus stop shelters. They could be “sponsored”/underwritten by local banks and larger employers. • Ensure good snow and ice removal.
<p>Goal #3: Greenfield provides living-wage jobs and a resilient, sustainable local economy to support and expand traditional and innovative business development.</p>	<p>5. Nurture existing and new business owners, including creative economy entrepreneurs, to grow their businesses locally and sustainably.</p> <p>6. Continue further development or redevelopment of commercial sites with sufficient supporting infrastructure for businesses compatible with local and regional industry clusters.</p>	<ul style="list-style-type: none"> • Encourage the creation of a downtown business development center for professional entrepreneurs (e.g., knowledge workers like above McCusker’s Market in Shelburne Falls). • Create a Local Economic Development Investment revolving loan fund from a 1% tax on residential and commercial property tax or from an overall budget allocation (approximately \$400,000). The purpose of the fund is to give valid Greenfield businesses access to money to add new jobs, make capital investments in equipment or infrastructure, and train existing employees for new skills. • Develop a Live/Work ordinance for the zoning ordinance to enable developers and artisans to create living accommodations and studio space in one place. <ul style="list-style-type: none"> • Utilize the Greenfield Economic Development office, working with a well-funded business development marketing plan, to target businesses compatible with local and regional industry clusters (small manufacturing, food production and distribution, green technologies, creative/arts-oriented businesses, healthcare, professional services, skill trades and education). • Utilize Greenfield Food Study, August 2013, and other food industry resources/organizations to target and implement food industry development strategies. • Support development of state-of-the-art telecommunications infrastructure to increase broadband access to Greenfield, with special emphasis on our Central Commercial and General Commercial Zones. • Create a Sustainability Resource Center (a staffed organization or a website) to provided businesses with all of the resources and information on funding opportunities to become more sustainable in their business practices and energy use. • Support economic development partners including the CDC, Common Capital, and the Franklin Regional Career Center to provide training and low-interest loans. • Foster locally-made products by working with retailers to help them identify local products relevant to their businesses for sale or use as part of the infrastructure of their stores. • Encourage cooperative ownership to ensure that businesses will stay in our community and that profits remain local. • Implement PILOT (Payment in Lieu of Taxes) or Pay-for-Service agreements between the Town, major institutions, and non-profit organizations. • Create a customer service point of contact within the Department of Planning and Development and annually update all written guides to land development processes. • Support development of state-of-the-art telecommunications infrastructure to increase broadband access in Greenfield with special emphasis on our Central Commercial and General Commercial zones.

Multimodal Systems	Health and Well-being	Energy Reduction	Equity	Resilience	Responsible Regionalism	Economic Vitality	Climate Change Mitigation	Natural Resource Protection	TOTAL
1	1	1	1		1	1	1	1	8
			1			1			2
		1	1		1	1	1		5



Economic Development

Goal	Strategy	Implementation Actions
<p>Goal #4: Greenfield is a magnet for 10-15% growth in new residents who support the local economy.</p>	<p>7. Create multiple marketing strategies to attract a diverse population and promote the attributes that make Greenfield a great place to live, including affordable starter homes; outstanding scenic, natural, and recreation opportunities; transportation accessibility; and a culture of sustainability.</p>	<ul style="list-style-type: none"> • Foster the growth of Greenfield’s creative and telecommuting population through marketing residential real estate and live/work spaces to writers, artists, independent business people, etc. who are able to work out of their homes while gaining the quality of live that Greenfield has to offer. • Encourage recent college graduates to remain in or relocate to Greenfield by providing this population with attractive job opportunities, housing options, and cultural amenities.
<p>Goal #5: Greenfield provides educational and financial resources for sustainable economic development from both private and public entities.</p>	<p>8. Promote partnerships with the Franklin/Hampshire Employment Training Center, Franklin/Hampshire Career Center, local colleges, and social service providers to align education, certification, and training offerings with the labor force needs of local businesses.</p>	<ul style="list-style-type: none"> • Support economic development partners including the Franklin County Community Development Corporation, Common Capital, and the Franklin Regional Career Center to provide training and low-interest loans. • Connect business owners with local training organizations in order to help develop training programs that can satisfy their local labor needs.
	<p>9. Encourage retail options that appeal to all socio-economic groups in Greenfield and surrounding areas and promote buy-local efforts through procurement and sale of local products.</p>	<ul style="list-style-type: none"> • Build additional anchor department store. • Research/create incentive programs that give local suppliers and businesses preference in private and municipal purchasing programs. • Support local currencies such as “Greenfield Dollars”.
<p>Goal #6: Greenfield reduces the amount of financial resources leaving our community.</p>	<p>10. Conserve energy and build renewable energy capacity to reduce funds (consumer spending dollars) leaving our region for the purchase of energy. Reduction goal: from \$67M to \$0 in accordance with Greenfield’s 2050 goal.</p>	<ul style="list-style-type: none"> • Create a plan on how to achieve Greenfield’s 2050 goal noted above. • Continue to actively participate in Green Communities and reduce municipal energy use, and meet energy needs with zero carbon energy sources such as PV. • Continue Energy Smart Business and Energy Smart Homes programs that help businesses and residents find funds to do energy upgrades to their homes and buildings. • Partner with NGOs, FRTA, and for-profit businesses to promote walking, biking, telecommuting, and public transit and using the most fuel efficient vehicle possible. • Support local solar installers and partner with NGOs and for-profit corps to increase residential, business, and municipal investment in solar, and other strategies to produce and use renewable energy. • Offer locally-produced green electricity options through electrical aggregation program. • Track progress toward Greenfield’s 2050 goal.

ECONOMIC DEVELOPMENT TOTALS

Multimodal Systems	Health and Well-being	Energy Reduction	Equity	Resilience	Responsible Regionalism	Economic Vitality	Climate Change Mitigation	Natural Resource Protection	TOTAL
	1	1	1			1	1		5
			1		1	1			3
			1		1	1			3
1	1	1	1	1	1	1	1	1	9
2	6	4	8	1	8	10	4	2	45



Housing

Goal	Strategy	Implementation Actions
<p>Goal #1: Greenfield's policies and programs are coordinated to ensure housing units and neighborhoods adapt to meet changing needs.</p>	<p>1. Conduct a comprehensive regional housing needs assessment.</p>	<ul style="list-style-type: none"> • Assess needs for all stages of life, and a range of household size and income. • Consider needs of aging population, and a full range of options for aging in place. • Include issues affecting young adults, young families and workforce housing. • Understand Greenfield's regional market niche in providing a diverse range of housing. • Incorporate the need for Youth Affordable Housing and student populations.
	<p>2. Audit and update zoning regulations, permitting and other appropriate regulations, to increase density of housing and population through adaptation and infill.</p>	<ul style="list-style-type: none"> • Adopt accessory dwelling unit (ADU) ordinance so residents can adapt homes to changing needs. • Adopt a Neighborhood Pedestrian Zone to allow for more housing units on smaller lot size such as Cottage Housing - http://community-that-works.org. • Amend ordinances to allow formal and informal co-housing. • Remove limit on unrelated adults co-housed, use special permit process with clear performance standards regarding cars, noise, trash etc., and enhance enforcement. • Work with local Cooperative Development Institute to foster new ownership models such as senior housing cooperatives and mixed-income co-housing. • Encourage upper story apartments on and near Main Street and in other mixed-use neighborhoods.
<p>Goal #2: Household energy consumption from utilities, maintenance and automobile reliance are reduced, thereby reducing Greenfield's overall contribution to greenhouse gases and increasing our community's energy independence.</p>	<p>3. Enhance and expand options to live in walkable neighborhoods, and reduce automobile reliance for work, services and recreation.</p>	<ul style="list-style-type: none"> • Continue with mixed-use Transit Oriented Development to build on the new transportation center and Greenfield's role as county seat and crossroads. <ul style="list-style-type: none"> - Increase housing density within a mile of downtown through zoning and fast-track permitting for selected sites; - See Smartgrowth.gov for case studies, MassDevelopment financing and EPA financing to support within and TOD projects). • Coordinate housing with transportation planning to support existing housing clusters, particularly where aging, low-income and car-free residents are concentrated. • Create a town-wide plan to add density in certain mixed-use neighborhood nodes to create more self-sufficient neighborhoods, with easy walking and biking and connections with public transportation.
	<p>4. Replace and renew homes to move all of our housing stock towards energy efficiency.</p>	<ul style="list-style-type: none"> • Incentivize rehabilitating unused and underutilized buildings and large homes into energy efficient, market-rate housing with multiple units, perhaps creating new incentives for adaptive reuse and renovation. • Encourage new residential construction to be built to zero-net-energy-ready standards and exceed the state's "Stretch Code." • Consider adopting a Sustainable Building Code for the town. • Adjust ordinances to encourage high quality, energy efficient pre-fab housing as a cost-effective alternative to custom-built single-site construction. • Continue to support public education about financial incentives (utility and other) for residential energy upgrades, such as Energy Smart Homes. • Continue to invest federal CDBG funds in housing upgrades. • Adopt mandatory Energy Disclosure for rental units (green labeling program). • Advocate for expansion of utility programs that cover pre-weatherization costs. • Create flexibility within building codes to allow smaller homes and apartments. (SROs, and "Tiny Homes", clusters with shared sanitary facilities) - http://www.cottagecompany.com/consulting/planners.aspx. • Adopt Commercial PACE financing for upgrades (energy and other) to 5+ unit buildings. • Incentivize landlords to do energy upgrades their buildings. • Encourage and incentivize renewable energy for new and existing homes <ul style="list-style-type: none"> - Encourage building owners to install solar electric (aka PV - photovoltaic) and solar hot water systems on their homes and/or in their yards; - Encourage investment in a Community-Shared Solar project; - Encourage residents to choose a green electricity provider. • Measure progress toward our energy reduction goals. See 2008 statistics below: <ul style="list-style-type: none"> - Energy use for residential heat and electricity was 33% of total community energy use and cost \$28,332,681. Of that \$20,742,974 left the community; - Climate change (CC) emissions from residential heat and electricity was 57% of total community CC emissions or 100,437 tons of CO₂e (CO₂ equivalent); - Continue to track average household energy use for electricity and natural gas. (FYI-oil use numbers are likely not useful due to ability for users to purchase oil from various vendors within one heating season).

Multimodal Systems	Health and Well-being	Energy Reduction	Equity	Resilience	Responsible Regionalism	Economic Vitality	Climate Change Mitigation	Natural Resource Protection	TOTAL
			1		1	1			3
1	1	1	1				1	1	6
1	1	1	1		1	1	1	1	8
		1	1	1	1	1	1	1	7



Housing

Goal	Strategy	Implementation Actions
<p>Goal #3: A wide variety of affordable, attractive, sustainable housing options are available in Greenfield promoting high quality-of-life and self-sufficiency for all households.</p>	<p>5. Create a staffed resource center to assist homeowners, tenants and landlords with education and resources on home purchase, energy use and upgrades, renovation, and financing.</p>	<ul style="list-style-type: none"> • See suggestions in Goal #2, Strategy #4 for more specific ideas. • Offer programming and serve as clearing house for other local, state and national resources. • Continue and augment Greenfield’s sustainability programs for new and existing housing, (like the Energy Smart Homes, outreach, education and financial assistance to homeowners, landlords and tenants to help them reduce the utility costs). • Develop local financing tools for home-buyers (like the Springfield program), and homeowners for housing rehabilitation (PACE financing possible for energy value loans to repair older homes may qualify for large-scale financing http://www.ase.org/resources/property-assessed-clean-energy-financing-pace). • Use local revenue from electrical aggregation, Community Redevelopment Act (CRA) funds, and Community Preservation Act (CPA), to fund resource center and programs.
	<p>6. Increase housing choice, expand and update housing stock to reflect changing preferences and population.</p>	<ul style="list-style-type: none"> • Increase the number of available rental properties. <ul style="list-style-type: none"> - Prepackage sites/projects, recruit developers to build desired type and location; - Commercial PACE financing that can be used for 5-unit buildings and above; - Incentivize developers to upgrade underutilized buildings; - Encourage rehabilitation of unused buildings and/or large homes into energy efficient market-rate housing. • Incentivize development of starter homes and workforce housing. <ul style="list-style-type: none"> - Through District Improvement Financing or density bonuses; - Reward builders for energy efficiency to offset higher building costs. • Expand options for residents to age in place. <ul style="list-style-type: none"> - Adaptation to stay in homes (see Goal 1); - Options to relocate within town (condominiums, independent living, see Goal 1). • Create quality housing – safe, durable, energy efficient, sustainable, and human-oriented. <ul style="list-style-type: none"> - Adjust zoning and permitting to prevent low quality or incompatible structures in historic neighborhoods (i.e., homes with front entrance through garage on a street with homes featuring front-porches), make it easy to replicate historic design and important site features. Consider tax breaks to incentivize stretch code or other measures that lead to housing stock with longer-term value to occupants; - Ensure lower-cost, high-quality options like energy-efficient pre-fab is not at a disadvantage in permitting or zoning processes (consider pre-approving certain designs for infill and refill sites to facilitate replacement of obsolete homes, partner with national leaders for model infill program).
<p>Goal #4: Greenfield supplies quality, permanent affordable housing and creative transitional and supportive housing programs that include the special challenges of homeless and carless households in a rural context.</p>	<p>7. Improve supply and access by ensuring that a full range of quality alternative housing options continue to be developed to serve diverse populations and needs, including the homeless, and those transitioning to and from independence.</p>	<ul style="list-style-type: none"> • Improve quality: Continue to support replacement of aging affordable housing units. <ul style="list-style-type: none"> - Upgrade and replace units that are part of the 13.8% affordable housing “subsidized housing inventory” (SHI); - Encourage continued upgrade and creation of affordable units (priced appropriately to households low to moderate income) offered through the private market (see above for suggestions i.e. small units, incentives). • Adopt inclusionary zoning to ensure ongoing replacement of low-income housing units. • Ensure a full range of alternative housing options continue to be developed to serve diverse populations and needs for whom typical homes and apartments are inappropriate: <ul style="list-style-type: none"> - Dial-Self young adult housing; - Halfway houses, SROs, homeless shelters; - For seniors: accessible apartments for empty-nesters, independent and assisted living, boarding homes and co-housing, nursing homes; - Identify agency to lead facilitating senior co-housing options. For example, identify potential sites and pursue site-preparation for development, i.e., through an ‘active adult overlay’ and securing state/fed infrastructure funding; - Senior housing models that preserve equity (work with Senior Cooperative Housing non-profit to create adaptive reuse apartments like Catholic school); - Housing that supports access to higher education (GCC and Hallmark students, student-appropriate housing near transit nodes to Amherst, Springfield, Holyoke).
	<p>8. Address Housing Demand.</p>	<ul style="list-style-type: none"> • Coordinate with regional stakeholders to ensure municipalities achieve 10% Affordable Housing throughout the region. <ul style="list-style-type: none"> - Work with the Franklin Regional Housing and Redevelopment Authority and the Franklin Regional Council of Governments. • Augment housing options to reduce pressure on rental supply and to reduce displacement due to gentrification (see ideas above).

Multimodal Systems	Health and Well-being	Energy Reduction	Equity	Resilience	Responsible Regionalism	Economic Vitality	Climate Change Mitigation	Natural Resource Protection	TOTAL
		1	1			1	1		4
	1	1	1		1	1	1		6
1	1		1			1			4
			1		1	1			3



Housing

Goal	Strategy	Implementation Actions
<p>Goal #5: Community resilience and individual enjoyment of our abundant natural resources is enhanced through residential development practices that preserve local agriculture, water quality, biodiversity, and the visual integrity of the landscape.</p>	<p>9. Ensure future residential development promotes watershed protection, land conservation and farm preservation goals by focusing activity in areas with existing infrastructure.</p>	<ul style="list-style-type: none"> • Protect Greenfield's high quality drinking water, continue to find ways to reduce residential impact on waterways, and to restore ecological and recreational value. • Rapidly adjust the zoning ordinances to reflect identification of key agricultural, watershed, wildlife or other natural resources. • Document the town's natural assets that have aesthetic and cultural value, such as riverways and rural roads, fields and forests and incorporate their protection into plans and zoning (i.e., to protect historic landscape features like pastoral views and stone walls, to preserve access to green river swimming for area residents – see Land Use chapter). • Improve conservation and cluster development ordinances by adding density bonuses and flexible conservation area percentages to preserve ecologically important areas and incentivize their use by developers (making Greenfield more attractive for development while protecting our natural resources); • Create an incentive bank for developers to choose from, including: parking, riparian buffer, trail connections, etc.
	<p>10. Reduce negative impacts of residential neighborhoods (new or existing) on natural systems while enhancing beneficial access to nature.</p>	<ul style="list-style-type: none"> • Phase in Low Impact Development, maximum parking/impervious surface standards, performance standards to avoid/reduce stormwater runoff through municipal practices and incentives for developers (i.e. more lot coverage and density possible with LID) • Develop a plan for trail and bike connections, serving all neighborhoods, to natural areas (coordinate with the Open Space and Recreation Plan and Land Use recommendation for an Open Space Committee). • Support agriculture and access to food through community gardens and back-yard farming. • Educate residents about yard practices that support biodiversity and resiliency, and contribute to environmental health; minimizing pesticide, water, and energy use, increasing soil fertility, using native plants, installing rain gardens and on-site water management.
<p>Goal #6: Greenfield is a thriving, vibrant, regional urban center with livable, mixed income, well-situated neighborhoods within easy reach of everyday needs.</p>	<p>11. Identify key neighborhood services, amenities and facilities and enhance connections through upgraded sidewalks, bikeways and streets.</p>	<ul style="list-style-type: none"> • A sidewalk program to ensure all urban areas are safely traveled by people of all abilities. • Initiate neighborhood-based planning and update zoning to address town-wide needs (add mixed-use, housing mix, traffic issues, increase population density to support transit nodes) • Divide town into neighborhoods to assess existing and desired local amenities - easy walk to school, neighborhood stores, bus stop, park, community garden, highway access. • Consider a walkability-score or some other assessment tool for ongoing assessment of neighborhood functionality and connectivity. • Integrate neighborhood plans with town-wide multi-modal transit planning • Work with DPW to identify the town's role in maintaining quality neighborhoods – streets, sidewalks, trees, trash pick-up – and potential funding (public health grants, DOT). • Develop funding tools so public improvements keep pace with private investment in homes and neighborhoods: DIF and TIF, and "Betterments" program.
	<p>12. Protect historic character of neighborhoods while facilitating improvement of housing stock.</p>	<ul style="list-style-type: none"> • Document, enhance and protect the unique character of Greenfield's neighborhoods without impeding upgrade and adaptation. • Continue to support creation of live-work spaces to attract and support creative economy workers, telecommuters, semi-retired and startup. • Make it easier to build/rehab a variety of high-quality units by right. • Historic Preservation - document the architecture reflecting our layered history to improve awareness and preservation (Implementation: state historic inventory of historic districts). • Create process for town and residents to identify this character (i.e. neighborhood plans - see previous strategy). • Add to zoning design guidelines, or form-based code style easy to understand visuals. • Enhance the Health Department's capacity to pro-actively solve housing based public health issues (i.e., hoarding, failing sewers, deferred maintenance). • Improve procedures to return abandoned or tax title, or foreclosure properties into use.

HOUSING TOTALS

Multimodal Systems	Health and Well-being	Energy Reduction	Equity	Resilience	Responsible Regionalism	Economic Vitality	Climate Change Mitigation	Natural Resource Protection	TOTAL
	1	1		1	1	1	1	1	7
1	1	1	1	1			1	1	7
1	1	1	1				1	1	6
	1		1			1			3
5	8	8	11	3	6	9	8	6	64



Natural, Historic, and Cultural Resources

Goal	Strategy	Implementation Actions
<p>Goal #1: Greenfield's natural, cultural and historic resources will be an integral part of the Town's identity with wider recognition and use.</p>	<p>1. Establish an Office of Natural, Historic, and Cultural Resources to oversee parks, recreation, and cultural attractions.</p>	<ul style="list-style-type: none"> • Re-establish a Visitors' Center. • Install information kiosks on Town Common and throughout Greenfield. • Develop a public arts program to foster lively and attractive streetscapes through public and private partnerships. • Create partnerships between the Town and its many museums through collaboration on town-wide events (focused on the museums' specialties) or creation of way-finding signs. • Complete and publish an inventory of historic, natural, and cultural areas and make information readily available to the public. • Create an educational campaign and marketing strategy for Greenfield's recreation, conservation, and tourism resources. <ul style="list-style-type: none"> - Emphasize and promote public pride and awareness; - Create tours of natural, historic, and cultural areas with appropriate signage; - Emphasize hidden assets such as Greenfield Village, Museum of Industrial Heritage, Greenfield Swimming and Recreation Area, YMCA, etc.; - Promote historic areas such as North Meadows, Mohawk Trail view, Pumping Station, Rocky Mountain Range, etc.; - Employ technology to promote Greenfield; <ul style="list-style-type: none"> - install full-color event digital marquee - install rotating billboard(s) - enhance social media, digital marketing, and website - create town-maintained calendar for both Town and privately-organized public events - develop QR Codes for various tour subjects such as buildings, trees, dinosaurs, destinations, parks, playgrounds, etc. - Create welcoming & consistent signage of our historic heritage; - Include privately-organized recreational activities such as bike rides, contra dancing, etc. in town-wide marketing; - Cross-promotion of public and private events through Chamber marketing materials.
<p>Goal #2: Residents and visitors of all ages in Greenfield will enjoy various recreational opportunities as a vital contribution to their health and wellbeing.</p>	<p>2. Identify existing and create new year-round recreational facilities that are accessible to all generations in Greenfield.</p>	<ul style="list-style-type: none"> • Create a permanent Open Space Committee. • Provide more recreational opportunities for teen and elderly populations. • Provide better maintenance for existing facilities, especially preventative. • Develop new events and activities while continuing to support existing events through strengthened Recreation Dept. and public/private partnerships. <ul style="list-style-type: none"> - Support cultural events organized by the Recreation Department; - Develop a marketing strategy for Recreation department; - Increase Recreation Department Operating Budget & staff; - Hire a consultant to develop a Recreation Department Master Plan; - Strengthen and promote the Friends of Recreation, 501 c3, as an independent fundraising source for the Recreation Department; - Reinstitute bike committee/commission; - Foster marathon & bike events and create linkages with private organizations such as hospitals, YMCA, and health clubs; - Recognize the value of the private-sector health clubs and activities such as contra-dancing, martial arts, yoga, hiking, biking, walking, skiing etc.; - Develop a historic trail system highlighting the city's important cultural and historic assets to dovetail with the cultural walking tours. • Implement the 2012 Open Space and Recreation Plan. • Explore the potential of combining parks and recreation into one department.

Multimodal Systems	Health and Well-being	Energy Reduction	Equity	Resilience	Responsible Regionalism	Economic Vitality	Climate Change Mitigation	Natural Resource Protection	TOTAL
	1		1		1	1			4
1	1	1				1	1	1	6



Natural, Historic, and Cultural Resources

Goal	Strategy	Implementation Actions
<p>Goal #3: Our natural world and the scenic, rural, and agricultural landscapes will be protected, preserved, and improved to support biodiversity and healthy living in Greenfield.</p>	<p>3. Identify, celebrate, and preserve open space; continuous wildlife habitat and migration corridors; significant view corridors; heritage landscapes, watersheds, wetlands, and rivers; and agricultural land.</p>	<ul style="list-style-type: none"> • Ensure the rural and scenic character of Greenfield. • Coordinate with local communities and regional organizations. • Celebrate our agricultural history, explore community agriculture, and foster a balanced food supply in Greenfield. • Enhance storm water management and promote land preservation along rivers to ensure high water quality of our rivers and drinking water.
	<p>4. Review, update, and enforce the Town's Zoning Ordinances and environmental regulations to protect all of the above.</p>	<ul style="list-style-type: none"> • Protect our remaining and precious agricultural land in Town through the Agricultural Protection Restriction (APR) and Chapter 61A programs. • Explore ordinances to reduce noise and light pollution.
<p>Goal #4: Greenfield's cultural life will be encouraged, expanded, and better promoted, with more established town-wide events.</p>	<p>5. Create a downtown Cultural Center at the First National Bank to supporting existing activities and create new town-wide events and programs.</p>	<ul style="list-style-type: none"> • Include flexible performance and exhibition space.
	<p>6. Support existing and create new town-wide cultural events through public/private partnerships.</p>	<ul style="list-style-type: none"> • Streamline permits, licensing, and zoning processes for creative enterprises. • Encourage café style outdoor seating. • Encourage the presence of food trucks downtown.
	<p>7. Apply for Cultural District designation from the Mass Cultural Council.</p>	<ul style="list-style-type: none"> • Expand museum offerings and exhibitions. • Foster the creation of a Children's Museum. • Celebrate Greenfield's History.
<p>Goal #5: The historic resources in Greenfield (historic buildings/areas, archaeological sites, and heritage landscapes) will be preserved and protected.</p>	<p>8. Develop and implement a plan for historic preservation that includes creative reuse of historic buildings, the creation of local historic districts, and the nomination of additional National Register historic districts and individual properties.</p>	<ul style="list-style-type: none"> • Ensure the Historical Commission's recommendations regarding protection and preservation ordinances are enacted and carried out. • Revitalize the Historic Commission with better marketing materials both online and in print, and develop an independent website including digital historic building inventory to increase citizens' knowledge and interest. • Explore increasing demolition delay time. • Create and/or promote financial incentive programs to preserve historic facades. • Institute residential and commercial historic plaque program. • Foster linkage between the Town and its many historic museums and organizations. • Identify and preserve historic landscapes and view corridors. • Research designation as a Main Street Community or incorporate National Main Street Center principles (National Main Street Center: www.preservationnation.org).
	<p>9. Support the passage of the Community Preservation Act.</p>	

NATURAL, HISTORIC, AND CULTURAL RESOURCES TOTALS

Multimodal Systems	Health and Well-being	Energy Reduction	Equity	Resilience	Responsible Regionalism	Economic Vitality	Climate Change Mitigation	Natural Resource Protection	TOTAL
	1			1	1	1		1	5
	1					1		1	3
	1					1			2
	1					1			2
	1				1	1			3
		1				1	1	1	4
	1				1	1		1	4
1	8	2	1	1	4	9	2	5	33



Public Facilities, Services, and Energy

Goal	Strategy	Implementation Actions
<p>Goal #1: Municipal buildings, equipment, and operations meet the Town’s needs and are accessible, efficient, resilient, well-staffed, and well-maintained.</p>	<p>1. Create and implement a long-range physical plant*(glossary) capital improvement plan to include buildings and vehicles.</p>	<ul style="list-style-type: none"> • Assess what improvements are needed for all municipal buildings, and when they are needed, with the goal of looking for synergies which could lead to cost savings. This will help the Town prioritize the improvements, budget for the work, and seek supplemental sources of funding such as grant money. The recommendations and priorities identified in the ADA Transition Plan can be folded into this effort. • Central Maintenance, the Planning and Construction Committee and the Sustainability Advisory Committee work together with the goal of making Town-owned buildings as “sustainable as possible” in that they are state-of-the art, incorporate shared spaces, use the least amount of fossil fuel energy as possible, and materials used are as durable and recyclable as possible. • Build all new Town-owned buildings to zero-net-energy ready standards and use “green” materials wherever possible. • Explore purchasing and use of building maintenance software, similar to that presently used by the Sewage Treatment plant. • Update fire and emergency services equipment so no equipment is older than 20 years. • Ensure that we have quality, cost-effective ambulance services. • When replacing equipment and vehicles, purchase the most environmentally-friendly products possible. • Develop and implement procurement policies that support Town’s sustainability goals
	<p>2. Continue to explore how to meet the space and staffing needs of Municipal Services</p>	<ul style="list-style-type: none"> • Continue to examine the feasibility of expanding and improving space for Police, Fire, and Emergency Dispatch and Emergency Management facilities (Continue to explore resistibility of housing them together in a Public Safety Complex). • Create a satellite police station downtown. • Continue to explore the feasibility of an expanded Town Hall, so that staff can more easily communicate and collaborate. • Continue to explore adequate space for Central Maintenance, including parking space. • Address DPW space needs for staffing, equipment and materials. • Create staffing plan to address inadequacies caused by absences.
<p>Goal #2: The Department of Public Works will have an updated budget and capital improvements plan, and sustainable funding to provide the necessary services to the Town of Greenfield.</p>	<p>3. Review and expand long-range capital improvement plan, budget, funding, and schedule for the Department of Public Works that embraces the principles of sustainability and climate change adaptation (See DPW addendum.)</p>	<ul style="list-style-type: none"> • Includes plan for staffing that balances internal staff with external consultants/contractors to provide effective services. • Work with the Greenfield Tree Committee to create and fund a plan that maintains healthy trees in the urban core that aims to achieve a 40% tree canopy, and complete and keep updated an urban core tree inventory. • Identify additional funding sources for maintenance and capital projects to supplement the Town budget. <ul style="list-style-type: none"> - Reduce capital expenses by using timely, strategic, and innovative approaches to maintenance. - Continue to work with Franklin County Transportation Planning Organization (TPO) on state Transportation Improvement Plan (TIP) funding requests. - Continue to advocate for state funding of our infrastructure. - Seek additional funds for special projects that especially make infrastructure “greener.”
	<p>4. Reduce solid waste and disposal costs through a comprehensive program that includes recyclable materials, compostable food waste, and yard waste, and reduction of disposable items.</p>	<ul style="list-style-type: none"> • Food composting at schools and curb-side pick-up for all • Reduce cost and amount of sewage sludge.

Multimodal Systems	Health and Well-being	Energy Reduction	Equity	Resilience	Responsible Regionalism	Economic Vitality	Climate Change Mitigation	Natural Resource Protection	TOTAL
	1	1		1		1	1	1	6
									0
1	1	1		1	1		1	1	7
						1	1	1	3



Public Facilities, Services, and Energy

Goal	Strategy	Implementation Actions
<p>Goal #3: The library, and senior and youth services have adequate, healthy facilities and expanded staffing and programs, and state, federal, and private services remain in Greenfield.</p>	<p>5. Improve Library that includes a Community Center with adequate parking.</p>	<ul style="list-style-type: none"> • Finalize feasibility study that for a facility that has a minimum of 30,000 square feet • Seek funding for expanded or new facility • Increase staffing as needed • Explore funding to reflect usage (i.e. 50% of usage is non-Greenfield residents)
	<p>6. Reinstate the Town Youth Commission to enhance services and activities for the Town's youth.</p>	<ul style="list-style-type: none"> • Assess needs, identify gaps, work with the Town's Recreation Department • Leverage quality services offered by YMCA, Community Action Youth, Game store and more and seek additional public/private partnerships. • Explore the creation of a skateboard park. • If Youth facility secured, place near the new Community Center/Library.
	<p>7. Work with Council on Aging to improve Senior Services by moving to a larger/healthier space with adequate staffing and increased programs.</p>	<ul style="list-style-type: none"> • Seek new facility that is healthy, and has adequate space for expanded senior activities and staff, and as near the new Community Center/Library as possible to take advantage of shareable facilities. • Increase staffing who can reach out to seniors who are unable to come to the senior center (i.e., home visits), and help them with appropriate applications for assistance. • Increase volunteers to support senior activities and services. • If new senior facility is secured, place it near to the new Community Center/Library.
	<p>8. Continue to advocate for keeping regional services that are physically located in Greenfield that serve both residents of Greenfield and greater Franklin County.</p>	<ul style="list-style-type: none"> • Work with state and private agencies to ensure social services available to Greenfield residents as well as Franklin County Residents • Continually seek ways to work with and collaborate with health-care providers, clinics, and private providers to ensure quality health care, mental health care, and substance abuse treatment is available and appropriate for the population.

Multimodal Systems	Health and Well-being	Energy Reduction	Equity	Resilience	Responsible Regionalism	Economic Vitality	Climate Change Mitigation	Natural Resource Protection	TOTAL
	1				1	1			3
1	1		1						3
	1		1			1			3
	1		1		1				3



Public Facilities, Services, and Energy

Goal	Strategy	Implementation Actions
<p>Goal #4: Green Infrastructure Practices will reduce municipal infrastructure costs, protect public health and safety, and preserve natural areas.</p>	<p>9. Incorporate cost-effective Green Infrastructure and Low Impact Design (LID) strategies into all municipal projects & work with developers and residents on what they can do.</p>	<ul style="list-style-type: none"> • Reduce storm water runoff. <ul style="list-style-type: none"> - Adopt a Green Stormwater Infrastructure Ordinance that addresses the Town, developers, and residents. - Use Rain gardens, bioswales, permeable pavement, and green parking lot design when upgrading or permitting all roads, parking lots, sidewalks, and parks. • Continue to offer financial incentives to homeowners to disconnect downspouts and sump pumps. • Develop and implement Strategic Education and Outreach Plan on the benefits of Green Infrastructure through public/private partnerships that include information on water management, building healthy soil (instead of using chemical fertilizers, herbicides etc.), the value of native trees, shrubs, and vegetation that offer shade and support biodiversity in our backyards and our region. • Develop and adopt an urban Tree Ordinance that aims to maintain a minimum of a 40% tree canopy in the urban area so as to reduce the heat island effect, beautify, and create natural habitat. • Maintain Parks and Open Space that create “healthy human habitats.” • Search for funding and technical assistance to implement these. • Continue to minimize Town’s use of chemical fertilizers and pesticides on Town properties.
<p>Goal #5: Greenfield will be a showcase “solar city” and be 40% of the way to meeting its 2050 goals adopted in 2009 to Reduce CO2 by 80%, and to reduce the money we spend on energy that leaves the region from \$67 million/year (2008) to ZERO.</p>	<p>10. Greenfield will continue to reduce municipal energy use and its carbon footprint through innovative programs, conservation, energy efficiency, the installation of renewable energy systems, and continue public/private partnerships to reduce residential and business energy use and installation of renewable energy systems.</p>	<ul style="list-style-type: none"> • Continue to implement municipal aggregation (Greenfield Community Light and Power) that offers 100% renewably-produced electricity to all residents and businesses. • Develop a long-range energy reduction plan for municipal operations. <ul style="list-style-type: none"> - Establish a list of prioritized projects and capital improvement plan for energy efficiency projects in municipal buildings, lighting, and solid waste management. - Create a Green Fleets Policy to include a plan for maintaining existing and “right-sizing” the fleet with more fuel efficient vehicles for Town departments. • Develop sustainability principles or guidelines for Town projects, operations, policies and regulations including new or renovated municipal facilities. <ul style="list-style-type: none"> - These principles should include net-zero energy standards for new construction, energy and water conservation, the use of green building materials, and waste minimization. They can also be incorporated into Town operations such as requests for proposals, area plans, and maintenance contracts. • Work with Sustainability Advisory Committee to identify new opportunities.
	<p>11. Continue public/private partnerships to reduce residential and business energy use and installation of renewable energy systems.</p>	<ul style="list-style-type: none"> • Continue to invest CDBG funds in residential building upgrades. • Decrease energy use through public education and outreach programs such as the Energy Smart Homes, and Energy Smart Businesses programs. • Increase local zero-carbon electricity production through town-wide programs such as Solarize Mass and Community-Shared Solar. • Work to improve state and utility energy efficiency programs by working with state agencies, utility companies, non-profits, and the state legislature. • Measure and report progress toward our 2050 goals.
<p>PUBLIC FACILITIES, SERVICES AND ENERGY TOTALS</p>		

Multimodal Systems	Health and Well-being	Energy Reduction	Equity	Resilience	Responsible Regionalism	Economic Vitality	Climate Change Mitigation	Natural Resource Protection	TOTAL
	1	1		1			1	1	5
	1	1				1	1	1	5
		1	1		1	1	1		5
2	8	5	4	3	4	6	6	5	43



Education

Goal	Strategy	Implementation Actions
<p>Goal #1: All schools and administrative buildings and equipment are safe, have adequate space, are attractive, well maintained, have good air quality, and are energy efficient.</p>	<p>1. Maintenance is performed regularly, and all maintenance is approached as an opportunity to upgrade facilities to become safer, healthier, more sustainable, energy efficient, and beautiful, and purchasing policies ensure school vehicles are as energy efficient as possible.</p>	<ul style="list-style-type: none"> • All safety systems and features are inspected regularly such as: entrances and exits, ADA compliance, elevators, fire and fire escapes, elevators, chimneys, playgrounds, kitchens, and paint as needed. • Environmental health inspections are up to date including: air quality, mold and mildew, water quality, and asbestos and chemical monitoring. • Security systems, as recommended for individual schools, are current and monitored. • HVAC, plumbing and electrical systems are repaired with longevity, low maintenance, and sustainability in mind. • Cleaning continues to be done with “green” products and no toxic chemicals, including chemical fertilizers are not used anywhere in school buildings or on the grounds. • Storage for the school system and individual schools is abundant, well lit, and accessible.
<p>Goal #2: The Greenfield school system is a choice-in system with high-quality, energy-efficient facilities and adequate staffing to offer a broad range of options that provide quality education for 21st Century jobs.</p>	<p>2. Ensure that budgeting and policies provide quality facilities and curriculum with adequate staffing and administration to meet the over-arching student and maintenance needs of our school system.</p>	<ul style="list-style-type: none"> • Ensure that teacher/student ratio does not go exceed a ratio of 1:22. • Add a curriculum coordinator or Assistant Superintendent to ensure quality curriculum is available for our students. • Increase salaries for substitute teachers. • Add plumber to maintenance staff rather than waiting for a contractor to fix an immediate problem. • Hire a grant writer that is shared with all town departments to seek innovative opportunities that are interdepartmental. For example, a grant that would benefit the schools and further the economic development or health goals of the town.
<p>Goal #3: Facilities, equipment and technology systems for staff and students are up to date and connected to Town systems where relevant and allowable.</p>	<p>3. Ensure that all communication systems, such as computers, telephones and wireless Internet access, are current, accessible and meet state and federal regulations.</p>	<ul style="list-style-type: none"> • Implement the Greenfield Public Schools Technology Plan, 2014-2017 • Connect to Town systems where relevant and allowable. • Install Wi-Fi throughout the School Department facilities. • Ensure communication systems, such as telephones and Internet, are up-to-date and attentive to federal and state requirements to schools.
<p>Goal #4: School security is addressed and maintained at all levels (schools, administration building, storage facilities, etc.).</p>	<p>4. School building entrances, both exterior and interior, are secure, but welcoming of authorized individuals.</p>	<ul style="list-style-type: none"> • Security systems, as recommended for individual schools, are current and monitored. • All safety systems and features are inspected regularly such as: entrances and exits, ADA compliance, elevators, fire and fire escapes, elevators, chimneys, playgrounds, kitchens, and paint as needed.
	<p>5. Security policies are in place and regularly maintained to ensure proper vetting of individuals attempting to enter the schools.</p>	<ul style="list-style-type: none"> • Evaluate all of the security policies across all of the schools and conduct a gap analysis to determine what is missing. • Work with Police and other Emergency Management personnel to craft and uphold all security policies throughout the School Department.

Multimodal Systems	Health and Well-being	Energy Reduction	Equity	Resilience	Responsible Regionalism	Economic Vitality	Climate Change Mitigation	Natural Resource Protection	TOTAL
	1	1	1				1	1	5
	1		1			1			3
	1		1	1		1			4
	1								1
	1								1



Education

Goal	Strategy	Implementation Actions
<p>Goal #5: Walking and biking to school is common practice for Greenfield’s students, school grounds are secure with arrival areas, including school drop-off/pickup areas, that are beautiful, welcoming, and safe.</p>	<p>6. Re-evaluate bus, visitor, delivery, staff, and parental vehicle needs to ensure that drop-off areas are safe and attractive; that air quality (from vehicle emissions) is not compromised; and there is adequate staff and visitor parking.</p>	<ul style="list-style-type: none"> • School grounds are secure, beautiful and welcoming with signage, paths, benches, bike racks, trees, shrubbery, and flowers. • There is adequate space for deliveries and parking for staff, parents, and visitors. • Create a landscape maintenance plan that ensures exterior curbs, steps, rails and trim are in good condition and grounds are regularly mowed and maintained. • Replace outdated lighting and storm water systems with energy efficient lighting and vegetated swales to address storm water runoff from buildings and other impermeable surfaces. • The community has access to school facilities such as sports fields, playgrounds, libraries, meeting spaces and auditoriums as needed after school hours. • All exterior play, sports, and gathering places have secure perimeter fencing. • Spaces for outdoor classrooms are available and utilized during good weather.
	<p>7. Expand Safe Routes to School program from once a month to weekly, then daily with the goal of increasing health, exercise, and not-motorized ways of traveling around.</p>	<ul style="list-style-type: none"> • There is a plan to replace school vehicles, including buses, in a timely fashion and ensure they are as energy efficient as possible.
<p>Goal #6: The school meals program offers healthy food choices and engages in sustainable practices during preparation and disposal.</p>	<p>8. Reduce waste by applying for composting grant and implementing it, while using washable or compostable trays, plates, and flatware.</p>	<ul style="list-style-type: none"> • Determine the best approach for implementing a compost program, perhaps through a pilot at one or more of the schools. • Investigate grants through local, state and federal foundations and other funding sources to provide seed money for a composting program.
	<p>9. Implement farm-to-school program by working with local farmers and other farming organizations (such as Just Roots) for access to locally-grown food and farming expertise as well as to support continuing educational options for Greenfield Public School teachers about food and local agriculture.</p>	<ul style="list-style-type: none"> • Investigate options for local food suppliers to provide food to the Public Schools. • Work with Just Roots to establish a curriculum for the schools that addresses local food and skills in farming and the agricultural trade. • Investigate funding opportunities through local, state and federal sources to provide grants to jumpstart a new program or supplement existing work. • Implement a certificate program for teachers that prepare them to develop curriculum that teaches students about farming and the importance of local food.
<p>Goal #7: Facilities for Special Ed students in all schools are appropriate to the students’ learning needs, and are quiet.</p>	<p>10. Explore creating on-site and off-site facilities that meet the needs of a variety of special education programs at all age levels.</p>	<ul style="list-style-type: none"> • Work with Special Education Teachers at the School District to determine what the needs are of the special education students, and what type of facilities are necessary to facilitate their learning. Identify the gaps.

EDUCATION TOTALS

Multimodal Systems	Health and Well-being	Energy Reduction	Equity	Resilience	Responsible Regionalism	Economic Vitality	Climate Change Mitigation	Natural Resource Protection	TOTAL
	1	1	1	1			1	1	6
1	1	1					1	1	5
		1				1	1	1	4
	1		1		1	1			4
	1		1						2
1	9	4	6	2	1	4	4	4	35



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Glossary of Terms

- **Access Management Techniques:** a set of techniques that State and local governments can use to control access to highways, major arterials, and other roadways. The benefits of access management include improved movement of traffic, reduced crashes, and fewer vehicle conflicts.
- **Accessibility:** the degree to which a product, device, service, or environment is available to as many people as possible. The concept often focuses on people with disabilities or special needs and their right of access.
- **Accessory Dwelling Unit:** a self-contained apartment in an owner occupied single-family home/ lot that is either attached to the principal dwelling or in a separate structure on the same property.
- **Adaptable/Adaptation:** the resilience of places in response to uncertain, volatile and rapid change. This concept is defined as the dynamic capacity to effect and unfold multiple evolutionary trajectories that enhance the overall responsiveness of the system to unforeseen changes.
- **Adaptive Reuse Overlay District (AROD):** a zoning overlay district that encourages the reuse of existing buildings and mixed use development. Land within the AROD may be developed, redeveloped, and used in accordance with the provisions of the municipal zoning by-laws otherwise applicable to such land, or may be developed, redeveloped and used as provided in AROD.
- **Affordable housing:** housing deemed affordable to those with a median household income as rated by country, state, region or municipality by a recognized Housing Affordability Index.
- **Agricultural Preservation Restriction:** a voluntary program by Massachusetts Department of Agriculture. The intention of this program is to offer a non-development alternative to farmers and other owners of “prime” and “state important” agricultural land who are faced with a decision regarding future use and disposition of their farms. Towards this end, the program offers to pay farmland owners the difference between the “fair market value” and the “agricultural value” of their farmland in exchange for a permanent deed restriction which precludes any use of the property that will have a negative impact on its agricultural viability.
- **ADA:** Americans with Disability Act
- **ANR - Approval Not Required:** An “Approval Not Required” (ANR) plan refers to the division of land that already has frontage along an existing road. An ANR plan is also referred to as an 81-P Plan or a Form A plan. State law provides that any proposed lot which is provided suitable access and which meets minimum frontage requirements on an existing public way which the Planning and Economic Development Board determines to be adequate does not need official subdivision approval by the Planning and Economic Development office. Instead, such lots are shown on an ANR plan that is subject to the Planning and Economic Development Board’s endorsement that “subdivision approval is not required.”
- **Betterments:** a special assessment for public improvement. The cost of all or a portion of a public improvement made upon formal order or vote of a board of officers of a local government may be assessed as betterments. G.L. Ch. 80: 1.
- **Bicycle Boulevards:** Bicycle boulevards, sometimes called bicycle priority streets, are low-volume streets where all types of vehicles are allowed but have been optimized for bicycle travel through traffic calming and diversion, signage and pavement markings, and

intersection crossing treatments. Bicycle boulevards are shared roadway facilities that, when correctly implemented, are comfortable and attractive to cyclists with a wide range of abilities and ages but are discouraging to cut-through motor-vehicle traffic.

- **Bike-Share Program:** a service in which bicycles are made available for shared use to individuals on a very short term basis. The main purpose is transportation: bike share allows people to depart from point “A” and arrive at point “B” free from the worries of ownership
- **Biodiversity:** or “biological diversity” is a variety of plants, animals and other living things in a particular area or region.
- **Carbon sequestration:** the process of capture and long-term storage of atmospheric carbon dioxide (CO₂) or other forms of carbon to either mitigate or defer global warming and avoid climate change. It has been proposed as a way to slow the atmospheric and marine accumulation of greenhouse gases, which are released by burning fossil fuels.
- **Cluster areas:** development areas that site homes on smaller lots so the same number of homes is clustered on a smaller portion of the total available land. The remaining land, which would have been allocated to individual home sites, is now converted into protected open space and shared by the residents of the subdivision and possibly the entire community. The main objective of cluster development is to allow residential, or even commercial, development while still protecting the area’s environmental features, allowing for more open space, and protecting farmland and the character of rural communities.
- **Compact development:** aims for a more efficient use of land through higher-density planning. It can be applied in new urban development as well as redevelopment projects such as infill or brownfield development. Benefits of compact development include: reducing sprawl; reducing dependency on private car use; creating walkable environments; increasing economic efficiency in delivering basic urban services.
- **Complete Streets:** is a transportation policy and design approach that requires streets to be planned, designed, operated, and maintained to enable safe, convenient and comfortable travel and access for users of all ages and abilities regardless of their mode of transportation. Complete Streets allow for safe travel by those walking, bicycling, driving automobiles, riding public transportation, or delivering goods.
- **Cohousing:** Collaborative housing in which residents actively participate in the design and operation of their own neighborhoods. Cohousing residents are consciously committed to living as a community. The physical design encourages both social contact and individual space. Private homes contain all the features of conventional homes, but residents also have access to extensive common facilities such as open space, courtyards, a playground and a common house.
- **Community Preservation Act:** a Massachusetts state law (M.G.L. Chapter 44B) passed in 2000. It enables adopting communities to create a local, dedicated fund for open space and historic resource preservation, development of affordable housing, and the acquisition and development of outdoor recreational facilities. Funds are raised through a voter-authorized surcharge on local property tax bills of up to 3%. Local adoption of CPA by a community triggers annual distributions from the state’s Community Preservation Trust Fund, a statewide fund held by the Massachusetts Department of Revenue. Deed recording fees charged by the state’s Registries of Deeds are the funding source for the statewide Community Preservation Trust Fund. Revenues from these two sources—the local CPA property tax surcharge and annual distributions from the state’s Community Preservation Trust Fund—combine to form a city or town’s Community

Preservation Fund.

- **Cottage Housing:** is a new model of clustered single family housing that provides a transition between single family housing neighborhoods and higher density areas, creating a development pattern that maximizes land values, reduces infrastructure costs and provides housing next to services.
- **Coworking space:** a shared working environment, often an office, where a group of people who are not usually employed by the same organization and work independently but share space and resources.
- **Density bonuses:** a zoning tool that permits developers to build more housing units, taller buildings, or more floor space than normally allowed, in exchange for provision of a defined public benefit, such as a specified number or percentage of affordable units included in the development.
- **Ecosystem:** a community of living organisms (plants, animals and microbes) in conjunction with the nonliving components of their environment (things like air, water and mineral soil), interacting as a system.
- **Ecotourism:** responsible travel to natural areas that conserves the environment and improves the well-being of local people. Ecotourism is about uniting conservation, communities, and sustainable travel.
- **Food hub:** broadly defined as facilities that manage the aggregation, storage, processing, distribution or marketing of locally and regionally produced food. A food hub fulfills from one to all of these functions and comes in a variety of shapes and sizes.
- **Form-based code:** a means of regulating development to achieve a specific urban form. Form-based codes create a predictable built results and a high-quality public realm by controlling physical form primarily, with a lesser focus on land use, through municipal

regulations. Form-based codes offer a powerful alternative to conventional zoning.

- **Gateway:** an area that serves as an entrance or a means of access, such as the roadway that leads between one community to another.
- **Green Communities Designation and Grant Program:** an initiative of the Green Communities Division of the state government that works with municipalities toward qualification as a Green Community and provides funding to qualified municipalities for energy efficiency and renewable energy initiatives. A city or town must meet these five criteria to be designated a Green Community:
 - Criterion 1: Provide as-of-right siting in designated locations for renewable/alternative energy generation, research & development, or manufacturing facilities.
 - Criterion 2: Adopt an expedited application and permit process for as-of-right energy facilities.
 - Criterion 3: Establish an energy use baseline and develop a plan to reduce energy use by 20% within five (5) years.
 - Criterion 4: Purchase only fuel-efficient vehicles.
 - Criterion 5: Set requirements to minimize life-cycle energy costs for new construction; one way to meet these requirements is to adopt the new Board of Building Regulations and Standards (BBRS) Stretch Code.
- **Green infrastructure:** Green infrastructure uses natural hydrologic features such as vegetation, soils, and natural processes to manage water and provide environmental and community benefits. At the scale of a city or county, green infrastructure refers to the patchwork of natural areas that provides habitat, flood protection, cleaner air, and cleaner water. At the scale of a neighborhood or site, green infrastructure refers to stormwater management systems that mimic nature by soaking up and storing water.

- **Greenhouse gas emissions:** Greenhouse gases are gases that trap heat in the atmosphere. The primary sources of greenhouse gas emission include electricity production (fossil fuel burning), transportation (fossil fuel burning), industry (fossil fuel burning and certain chemical reaction), commercial and residential (fossil fuel burning, use of certain products that contain greenhouse gas, and the handling of waste), and agriculture (livestock, agricultural soils and rice production).
- **Habitat:** the natural environment in a particular species of animal, plant or other organism lives, or the physical environment that surrounds a species population.
- **Hardscape:** the paved areas like streets and sidewalks, large business complexes, housing developments, and other industrial areas where the upper soil profile is no longer exposed to the actual surface of the Earth and is nearly impervious. The term is especially used in heavily urbanized or suburban areas with little bare soil.
- **Urban heat island effect:** a term describing a phenomenon that built-up areas are significantly hotter than nearby rural areas due to human activities. The main cause of the heat island effect is from the modification of land surfaces, which use materials that effectively store short-wave radiation. Waste heat generated by energy usage is a secondary contributor. Urban heat island can affect communities by increasing summertime peak energy demand, air conditioning costs, air pollution and greenhouse gas emissions, heat-related illness and mortality, and water quality.
- **Heritage landscapes:** those special places and spaces that help define the character of our community and reflect its past. They are the result of human interaction with the natural resources of an area, which influence the use and development of land. These geographic areas contain both natural and cultural resources.
- **Impervious materials or surfaces:** mainly artificial structures – such as pavements (roads, sidewalks, driveways and parking lots) that are covered by impenetrable materials such as asphalt, concrete, brick, and stone – and rooftops. Soils compacted by urban development are also highly impervious. On an impervious surface, water is forced to travel over it until it finds a place it can penetrate the soil or enter a wetland or waterway. As it runs over these impervious areas, water can pick up potentially toxic substances (like oil or fertilizer) and carry these materials to our water resources.
- **Incentive Bank or Fund:** a dedicated fund to support a range of issues including affordable housing, services for workers and low- to moderate-income families, and community development projects.
- **Inclusionary zoning:** a tool that can be used by municipalities to ensure adequate affordable housing is included in the normal course of real estate development. It requires a portion of the housing units in certain real estate developments to be reserved as affordable to low- and moderate-income households.
- **Incubators:** programs designed to support the successful development of entrepreneurial companies through an array of business support resources and services, developed and orchestrated by incubator management, and offered both in the incubator and through its network of contacts.
- **Infill development:** the reuse and repositioning of obsolete or underutilized buildings and sites for new or improved development.
- **Intermodal:** or intermodal transport, involves using two or more modes of transportation in a journey. The goal of intermodal passenger transport is to reduce dependence on the automobile as the major mode of ground transportation and increase use of public transport.

- **LED** – Light Emitting Diode: A semiconductor diode that converts applied voltage to light and is used in lamps and digital displays. Major benefits of LED lighting include: efficiency, longevity, durability, safety, and “green” or Earth-friendly.
- **Low Impact Development (LID)**: an approach to land development (or redevelopment) that works with nature to manage stormwater as close to its source as possible. LID employs principles such as preserving and recreating natural landscape features, minimizing effective imperviousness to create functional and appealing site drainage that treat stormwater as a resource rather than a waste product. This approach implements engineered small-scale hydrologic controls to replicate the pre-development hydrologic regime of watersheds through infiltrating, filtering, storing, evaporating, and detaining runoff close to its source.
- **Major Development Review (MDR)**: one type of development review process that is intended to implement general plan policies and other adopted policy and design standards, regulations and guidelines in order to achieve quality development which is functionally as well as aesthetically enhancing to the community, and to minimize adverse effects on surrounding properties and the environment.
- **MassWorks Grant**: includes the following funding programs: Public Works Economic Development (PWED), Community Development Action Grant (CDAG), Growth Districts Initiative (GDI) Grant Program, Massachusetts Opportunity Relocation and Expansion Program (MORE), Small Town Rural Assistance Program (STRAP), and Transit Oriented Development (TOD) Program. See this linked form more details: <http://www.mass.gov/hed/economic/eohed/pro/infrastructure/massworks/what-is-it/>
- **Mobility**: the ability to move physically or the quality of being mobile.
- **Multi-family housing**: a classification of housing where multiple separate housing units for residential (i.e. non-commercial) inhabitants are contained within one building or several buildings within one complex.
- **Native plants**: a term to describe plants indigenous or naturalized to a given area. This includes plants that have developed, occur naturally, or existed for many years in an area (e.g. trees, flowers, grasses, and other plants).
- **Nodes**: areas of concentrated development that provide retail, housing, transit and other services. Nodes are found outside of downtown areas in neighborhoods and along corridors.
- **NGOs – non-governmental organizations**: legally constituted corporations created by natural or legal people that operate independently from any form of government.
- **PACE – Property Assessed Clean Energy**: a means of financing energy efficiency upgrades or renewable energy installations for buildings.
- **Parklets**: a small space serving as an extension of the sidewalk to provide amenities and green space for people using the street. It is typically the size of several parking spaces. Parklets typically extend out from the sidewalk at the level of the sidewalk to the width of the adjacent parking space, though some have been built at the level of the street with access from the sidewalk.
- **Perpetuity**: the quality or state of being perpetual or continuing forever (or for a very long time).
- **Pocket parks**: a small park accessible to the general public. They are frequently created on a single vacant building lot or on small, irregular pieces of land. They also may be created as a component of the public space requirement of large building projects. Pocket parks can be urban, suburban or rural, and can be on public or private land.

Although they are too small for physical activities, pocket parks provide greenery, a place to sit outdoors, and sometimes a children's playground.

- **Rain gardens:** a shallow depression planted with deep-rooted native plants and grasses that allows rainwater runoff from impervious areas, like roofs, driveways, walkways, parking lots, and compacted lawn areas the opportunities to be absorbed.
- **Resilient/resiliency:** the ability to recover readily from misfortune and become strong, healthy, or successful again.
- **Retrofit:** modernizing or expanding with new or modified parts, devices, systems, or equipment.
- **Riparian buffers:** a term used to describe lands adjacent to streams where vegetation is strongly influenced by the presence of water. They are often thin lines of green containing native grasses, flowers, shrubs and trees that line the stream banks. They help prevent sediment, nitrogen, phosphorus, pesticides and other pollutants from reaching a stream and are important for good water quality.
- **Road Safety Audit:** the formal safety performance examination of an existing or future road or intersection by an independent, multidisciplinary team. It qualitatively estimates and reports on potential road safety issues and identifies opportunities for improvements in safety for all road users.
- **Roundabout:** a type of circular intersection or junction in which road traffic is slowed and flows almost continuously in one direction around a central island to several exits onto the various intersecting roads.
- **Safe Routes to School Program:** a national and international movement to create safe, convenient, and fun opportunities for children to bicycle and walk to and from schools. The goal of Safe Routes to School is to get more children bicycling and walking to

schools safely on an everyday basis. This improves the built environment and increases opportunities for healthy physical activity for everyone.

- **SameRoadsSameRules:** a campaign initiated by MassBike in partnership with Massachusetts Department of Transportation, Executive Office of Public Safety and Security, Department of Public Health, and Department of Conservation and Recreation. Aimed at both bicyclists and motorists, it is about coexisting in a shared space, respecting each other as human beings, using common sense, and keeping yourself and others safe by following a common set of rules.
- **Sharrows:** or "shared lane marking (SLM)" is a pavement marking installed on streets popular with bicyclists but too narrow for conventional bike lanes. The sharrow is installed 11 feet from the curb, or approximately 4 feet from parked cars. It is intended to indicate where bicyclists should ride to avoid traveling within the door zone of parked cars. It also alerts motorists to share the road with bicyclists and conveys that the street is a preferred bike route.
- **Speed hump:** a vertical deflection traffic calming device. It is a bump in a roadway with heights typically ranging between 3 and 4 inches.
- **Sprawl:** the uncontrolled, auto-oriented, and low-density spreading or expansion of a city or its suburbs. It often involves the construction of residential and commercial buildings in rural areas or otherwise undeveloped land at the outskirts of a city.
- **Stormwater:** water that originates during precipitation events. It may also be used to apply to water that originates with snowmelt that enters the stormwater system. Stormwater that does not soak into the ground becomes surface runoff, which either flows directly into surface waterways or is channeled into storm sewers, which eventually discharge to surface waters.

- **Stretch Code:** an optional appendix to the Massachusetts building energy code that allows cities and towns to choose a more energy-efficient option. It offers a streamlined and cost effective route to achieving approximately 20% better energy efficiency in new residential and commercial buildings than is required by the base energy code.
- **Streetscape:** the visual elements of a street, including the road, adjoining buildings, street furniture, trees and open spaces, etc., that combine to form the street's character.
- **Subsidized Housing Inventory:** The Subsidized Housing Inventory is used to measure a community's stock of low-or moderate-income housing for the purposes of M.G.L. Chapter 40B, the Comprehensive Permit Law. While housing developed under Chapter 40B is eligible for inclusion on the inventory, many other types of housing also qualify to count toward a community's affordable housing stock.
- **Sustainability:** for humans, sustainability is the potential for long-term maintenance of wellbeing, which has ecological, economic, political and cultural dimensions. Sustainability requires the reconciliation of environmental, social equity and economic demands - also referred to as the "three pillars" of sustainability or (the 3 Es).
- **TDM – transportation demand management:** the application of strategies and policies to reduce travel demand (specifically that of single-occupancy private vehicles), or to redistribute this demand in space or in time.
- **Traffic calming:** Definitions of traffic calming vary, but they all share the goal of reducing vehicle speeds, improving safety, and enhancing quality of life. Most definitions focus on physical improvements to the roadway to change driver behavior and compel drivers to slow down. These techniques include: raised intersections, raised crosswalks, roundabouts, speed humps, textured pavement, and curb extensions (chicanes).
- **Tree canopy:** the upper layer or habitat zone, formed by mature tree crowns and including other biological organisms. The term is also used to refer to the extent of the outer layer of leaves of an individual tree or group of trees.
- **Urban fabric:** the physical aspect of urbanism, emphasizing building types, thoroughfares, open space, frontages, and streetscapes but excluding environmental, functional, economic and sociocultural aspects.
- **UrbanRiver Visions Program:** an initiative of the Massachusetts Executive Office of Energy and Environmental Affairs that is aimed to unlock the potential of local riverfronts through creation of charrette-based visions and action agendas.
- **U.S. Census:** a decennial population census mandated by the United States Constitution and carried out by the Census Bureau. It is the number one source of current population data and the latest Economic Indicators.
- **VMT – vehicle miles traveled:** the total number of miles driven by all vehicles within a given time period and geographic area. It is used by regional transportation and environmental agencies for planning purposes. VMT is influenced by factors such as population, age distribution, and the number of vehicles per household. However, the greatest factor by far is how land uses are arranged.
- **Visitability:** an international movement to change home construction practices so that virtually all new homes, whether or not designated for residents who currently have mobility impairments, offer three specific accessibility features:
 - At least one zero-step entrance on an accessible route leading from a driveway or public sidewalk;
 - All interior doors providing at least 31 3/4 inches (81 cm) of

unobstructed passage space; and

- At least a half bathroom on the main floor.
- **Walking bus:** a form of student transport for school children who, chaperoned by two adults (a “Driver” leads and a “conductor” follows), walk to school, in much the same way a school bus would drive them to school. Like a traditional bus, walking buses have a fixed route with designated “bus stops” and “pick up times” in which they pick up children.
- **Way-finding:** a term used to refer to the user experience of orientation and choosing a path within the built environment, and it also refers to the set of architectural and/or design elements that aid orientation.
- **Zero-Net Energy:** a Zero-Net Energy building is one that is optimally efficient, and over the course of a year, generates energy onsite, using clean renewable resources, in a quantity equal to or greater than the total amount of energy consumed onsite.
- **Zoning:** a device of land-use planning used by local governments in most developed countries. The word is derived from the practice of designating permitted uses of land based on mapped zones which separate one set of land uses from another. Zoning regulates the uses, dimensional boundaries and height of privately owned buildings and land.
- **Zoning Ordinance:** written regulations and laws that define how property in specific geographic zones can be used. Zoning ordinances specify whether zones can be used for certain purposes such as residential or commercial, and may also regulate lot size, placement,

bulk (or density) and the height of structures. Zoning ordinances are lengthy documents describing not only the acceptable use for specified areas of land, but also the procedures for handling infractions (including any penalties), granting variances and hearing appeals.

Organizations and Agencies

- ACS – American Community Survey
- DCR – Department of Conservation and Recreation
- CISA – Community Involved in Sustainable Agriculture
- EPA – US Environmental Protection Agency
- FCCDC – Franklin County Community Development Corporation
- FRCOG – Franklin Regional Council of Governments
- FTRA – Franklin Regional Transit Authority
- GBA – Greenfield Business Association
- GCC – Greenfield Community College
- HUD – US Department of Housing and Urban Development
- MassDEP – Massachusetts Department of Environmental Protection
- MassDOT – Massachusetts Department of Transportation
- MassGIS – Massachusetts Office of Geographic Information
- MISER – Massachusetts Institute of Social and Economic Research
- NRHP – National Register of Historic Places
- USACE – Army Corps of Engineers

