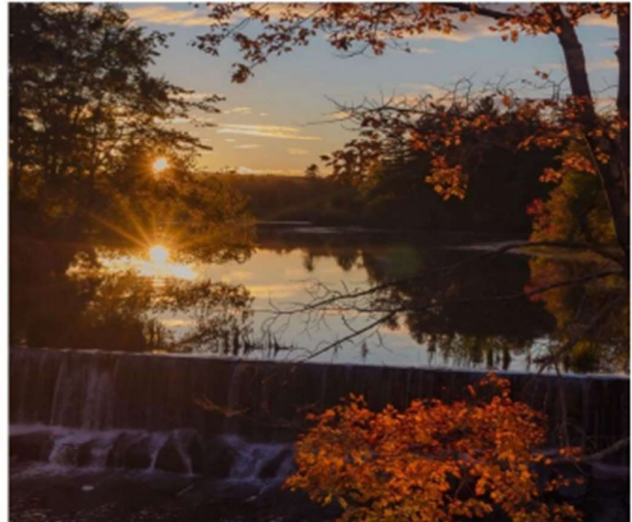


TOWNSEND

OPEN SPACE AND RECREATION PLAN

2023



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Land Acknowledgment

“Land is essential to human understanding of our personal and collective identities, to our health and well-being, and to our very survival as a species on this planet. The lands and waters of Townsend have long served as a site of meeting and exchange among Indigenous Peoples for thousands of years. We acknowledge that this area is within the traditional homelands of many forcibly removed Indigenous Peoples, including the Nipmuc and Abenaki peoples, whose descendants continue to live and work in these lands to this day.

With this land acknowledgment, we recognize the suffering inherent in the separation of a people from their homeland, and that this history still affects those descendants who continue to work and live in these lands today. Townsend strives to steward and respect the lands and waters in our community, both for the legacy of those generations who came before us, and for the generations who will come after us.”

TABLE OF CONTENTS

Land Acknowledgement ii

SECTION I: PLAN SUMMARY 1

SECTION II: INTRODUCTION 5

 2.1 STATEMENT OF PURPOSE 5

 2.2 PLANNING PROCESS AND PUBLIC PARTICIPATION 11

SECTION III: COMMUNITY SETTING 13

 3.1 REGIONAL CONTEXT 13

 3.1.1. *Location and Physical context* 13

 3.1.2. *Socio-Economic context* 13

 3.1.3. *Shared Resources* 14

 3.2 HISTORY OF THE COMMUNITY 20

 3.3 POPULATION CHARACTERISTICS 25

 3.4 GROWTH AND DEVELOPMENT 27

 3.4.1 *Growth and Development Patterns* 27

 3.4.2 *Infrastructure* 28

 3.4.3 *Long-term Development Patterns* 29

SECTION IV: ENVIRONMENTAL INVENTORY AND ANALYSIS 31

 4.1 TOPOGRAPHY, GEOLOGY, AND SOILS 31

 4.1.1 *Topography* 31

 4.1.2 *Geology* 31

 4.1.3 *Soils* 33

 4.2 LANDSCAPE CHARACTER 34

 4.3 WATER RESOURCES 36

 4.3.1 *Rivers, Streams and Wetlands* 36

 4.3.2 *Flood Hazard Areas* 38

 4.3.3 *Water Supply* 38

 4.4 VEGETATION 39

 4.4.1 *Forests* 39

 4.4.2 *Open fields* 40

 4.4.3 *Public Shade Trees* 40

 4.4.4 *Unique Natural Resources* 39

 4.5 FISHERIES AND WILDLIFE 41

 4.6 SCENIC RESOURCES AND UNIQUE ENVIRONMENTS 43

 4.6.1 *Scenic Landscapes and Geologic Features* 43

 4.6.2 *Cultural and Historic Areas* 43

 4.6.3 *Unique Environments - ACEC* 46

 4.7 ENVIRONMENTAL CHALLENGES 48

 4.7.1 *Hazardous Waste and Brownfield Sites* 48

 4.7.2 *Landfills* 49

 4.7.3 *Erosion and Sedimentation* 49

 4.7.4 *Chronic Flooding* 49

 4.7.5 *Septic Systems* 50

 4.7.6 *Stormwater* 50

 4.7.7 *New Development* 50

 4.7.8 *Ground & Surface Water Pollution* 51

 4.7.9 *Impaired Water Bodies* 51

 4.7.10 *Forestry Issues* 52

 4.7.11 *Invasive Species* 52

 4.7.12 *Environmental Equity Issues* 52

SECTION V: INVENTORY OF LANDS OF CONSERVATION AND RECREATION INTEREST 54

 5.1 PRIVATE PARCELS 55

5.1.1 Chapter 61 – Forest lands	55
5.1.2 Chapter 61A – Agricultural lands.....	55
5.1.3 Chapter 61B – Recreation lands.....	56
5.1.4 Private Parcels with Restrictions.....	56
5.2 PUBLIC AND NON-PROFIT PARCELS.....	56
TABLE 5.1 PRIVATELY OWNED PARCELS.....	58
TABLE 5.2 PUBLIC AND NON-PROFIT PARCELS.....	61
<u>SECTION VI: COMMUNITY VISION</u>	70
6.1 DESCRIPTION OF PROCESS.....	70
6.2 STATEMENT OF OPEN SPACE AND RECREATION GOALS	72
<u>SECTION VII: ANALYSIS OF NEEDS</u>	74
7.1 SUMMARY OF RESOURCE PROTECTION NEEDS.....	74
7.2 SUMMARY OF COMMUNITY’S NEEDS.....	74
7.3 MANAGEMENT NEEDS, POTENTIAL CHANGE OF USE.....	75
7.4 COMMUNITY NEEDS IN RELATION TO SCORP.....	75
<u>SECTION VIII: GOALS AND OBJECTIVES</u>	77
<u>SECTION IX: SEVEN-YEAR ACTION PLAN</u>	81
<u>SECTION X: PUBLIC COMMENTS</u>	9X
<u>SECTION XI: REFERENCES</u>	9X
<u>APPENDIX A</u>	9X
SUMMARY OF SURVEY RESPONSES.....	9x
OPEN SPACE & RECREATION SURVEY COMMENTS 11/17/2010	9x
<u>APPENDIX B</u>	9x
MASSACHUSETTS NATURAL HERITAGE AND ENDANGERED SPECIES INFORMATION	9x
<u>APPENDIX C</u>	10x
HAZARDOUS WASTE SITES AND SPILLS	10x
<u>APPENDIX D</u>	11x
PUBLIC FORUM ANNOUNCEMENT	11x
PUBLIC FORUM MINUTES.....	11x
PUBLIC FORUM SLIDE SHOW PRESENTATION.....	11x
<u>APPENDIX E</u>	12x
LETTERS OF COMMENT FROM TOWN BOARDS	12x
<u>APPENDIX F</u>	12x
AMERICANS WITH DISABILITIES ACT SELF-EVALUATION.....	12x
<u>APPENDIX G</u>	12x
MAP 1: REGIONAL CONTEXT.....	12x
MAP 3: ZONING DISTRICTS	12x
MAP 4: SOILS AND GEOLOGIC FEATURES.....	12x
MAP 5: SURFACE WATER RESOURCES	12x
MAP 6: FEMA FLOODPLAINS	12x
MAP 7: WATER SUPPLY RESOURCES	12x
MAP 8: NHESP PRIORITY HABITAT OF RARE SPECIES	12x
MAP 9a: NHESP BioMAP2 AREAS.....	12x
MAP 9b: NHESP BioMAP2 CORE HABITAT SUB-COMPONENT AREAS	12x
MAP 9c: NHESP BioMAP2 CRITICAL NATURAL LANDSCAPE SUB-COMPONENT AREAS	12x

MAP 10: UNIQUE AND SCENIC FEATURES	12x
MAP 11: ENVIRONMENTAL JUSTICE AREAS & CHALLENGES.....	12x
MAP 12: OPEN SPACE AND CHAPTER 61 LANDS	12x
MAP 13: ACTION PLAN.....	12x

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SECTION I: PLAN SUMMARY

The 2023 Town of Townsend, Massachusetts, **Open Space and Recreation Plan (OSRP)** represents the fifth revision of this plan; the two previous revisions of the Plan were completed in 1999 and 2013. The Plan presents a community vision and related goals and objectives and provides recommended actions for implementing those goals and objectives to meet the community vision. The recommended actions are presented as a 7-year Action Plan, which can be used as an implementation strategy and timeline to guide the Town in achieving its vision for open space protection and high-quality recreational opportunities, over the life of this current iteration of the plan.

The 2023 update builds upon the previous versions of the OSRP and makes revisions reflecting the changes which have occurred over the last ten years. Public opinion, as expressed through the 2022 Open Space & Recreation Plan Public Survey and 2023 Public Forum, supports the information presented within the Plan. Further, the updated OSRP utilized the guidance of an appointed Open Space and Recreation Committee, in addition to the public input, to provide a current, relevant, **Community Vision (Section 6)**, evaluation of **Community Needs (Section 7)**, and corresponding set of **Goals and Objectives (Section 8)**, that are all informed and supported by the community. Finally, based on that established information, an updated **7-Year Action Plan (Section 9)** was developed. Hence, the updated Action Plan is: 1. consistent with the current Community Vision; 2. framed to address current Community Needs; and 3. intended to guide and facilitate the implementation of the Plan to achieve its proposed Goals & Objectives within the designated timeframe.

Results of the 2022 Open Space Public Survey indicated that more than 99% of all respondents valued open space in Townsend to some degree. With regard to Open Space goals, respondents indicated that maintaining high quality drinking water was of the greatest importance to the community. Overall, they considered eight broad-scale open space goals (i.e., Open Space and Recreation Community Visions) to be important to the community now and over the course of the next 7 years. These broadscale goals, or “Community Vision” statements are presented below in order of priority based on their indicated levels of importance:

- I. Maintain high quality drinking water.**
- II. Protect the Squannacook River as a natural and recreational resource.**
- III. Protect and maintain surface waters and wetlands.**
- IV. Protect additional lands for recreation, habitat, and water supply protection.**
- V. Retain the natural character and cultural heritage of the Town.**
- VI. Promote increased access to and awareness of public open space lands.**
- VII. Develop and improve recreational facilities and amenities.**
- VIII. Improve linkages between recreational open space, neighborhoods, and commercial areas.**

Additional information related to the public survey and its results can be found within the **Community Vision** section of the Plan (**Section 6**) which provides a more detailed description of the public participation process and the broad-scale, Open Space and Recreation goals, or “community vision” statements presented above. A full summary of the survey questions, results, and comments can be found within **Appendix A**.

The 2022-2023 OSRP Committee, with public participation and input from the Public Survey, also re-assessed the current critical “needs” of the community relative to Open Space and Recreation. Those needs were revised or re-affirmed, accordingly, and updated from the needs listed within the 2013 OSRP. A summary of the most critical of those current, updated needs is presented below:

- **Strengthen and enforce Best Management Practices, Policies, Laws, Bylaws, and associated Rules and Regulations that protect our water and waterways.**
- **Increase communication and outreach through brochures, trail maps, web sites, and other forms of digital and social media.**
- **Increase access to and awareness of Open Space and Recreation lands and opportunities, including those associated with the Squannacook River, through trailhead or parking area signs, written guides, informational kiosks, and wayfinding signs and systems.**
- **Encourage the hiring of a volunteer stewardship coordinator or seasonal land steward(s) to organize citizen volunteers and lead trail improvement projects.**
- **Support regional planning efforts and the work of non-profits in the protection of resources and new or improved recreation facilities.**
- **Continue to improve and expand upon connections of important landscapes and trail networks for habitat, recreation, and bicycle and pedestrian transportation.**
- **Pursue grants for purchase of strategic parcels, to provide physical improvements to increase access to protected lands, for needed recreational facilities, and to maintain existing protected land and community waterbodies, especially for large scale improvements, such as promoting the use of native plants and trees and the removal of invasive, exotic, nuisance, aquatic plants from our ponds.**
- **Begin the process of planning, preparing, designing, and developing a multi-purpose Park and Community Recreation Center.**

The full **Assessment of Community Needs**, including a more detailed description of those listed above, can be found within **Section 7**.

The 2023 OSRP recommends the following strategies to implement the community vision, goals, and objectives identified by the Community as part of this planning process:

1. **Protect watersheds to maintain water quality of surface waters and subsurface waters including public and private water supplies.**
2. **Protect Wildlife Habitat, especially those which are currently underrepresented or sensitive, such as open fields, unique plant communities, priority or estimated habitats of rare and endangered species, BioMap Core Habitat and Critical Natural Landscapes, and areas of high ecological integrity.**

3. **Improve access to protected public lands and to communicate opportunities for passive recreation to the public.**
4. **Improve access, awareness, and condition of our three historic districts.**
5. **Continue to provide and improve links specifically for pedestrian and bicycle trail and pathway networks, but also for open space habitat corridors and greenways through strategic purchases of land between existing areas of open space and recreation lands.**
6. **Improve the quality, quantity and diversity of recreation facilities, opportunities, and programs.**
7. **Provide for improved maintenance of protected municipal open space lands, including parks, playgrounds, and recreation areas.**

Specific Goals & Objectives expanding upon these strategies are provided within **Section 8** and were established as part of the public process of the development of this current update of the Plan.

It is the primary purpose of this 2023 update of the Plan to identify and recommend a set of Actions (provided within **Section 9**) capable of imploring these strategies to achieve the community's Open Space and Recreation *Visions*, address their most important *Needs*, and accomplish the *Goals and Objectives* established within. Overall, the *Community Vision, Needs, Goals & Objectives*, and *Actions*, provided within this Plan encompass **eight (8) categories or themes of Open Space and Recreation** that were identified as important to the community within the town-wide public survey conducted in 2022. Those categories or themes are listed below and shown within **Table 1** as a matrix demonstrating the relationship between each of the Visions and Goals, and the Open Space and Recreation category they represent.

Eight (8) Categories of Open Space Valued by the Community in Townsend:

- Active Recreation Lands, Amenities, and Parks & Playgrounds
- Agricultural Lands
- Ecologically Sensitive Areas (High Integrity Ecosystems, Rare or unique Natural Communities, and Rare or Endangered Species Habitat), Open Fields, and Natural Corridors along waterbodies and between forested areas.
- Forest Lands & Passive Recreation Areas
- Scenic Vistas, Unique Rural Landscapes, Culturally or Historically Important Resources
- Squannacook River
- Waterbodies (Wetlands, ponds, rivers and streams)
- Wellhead Protection Areas and Groundwater Aquifers

Table 1. Summary of Townsend’s 2023 OSRP Community Vision, Goals & Objectives by valued categories of Open Space & Recreation.

2023 Open Space & Recreation Plan – Community Vision, Goals, and Objectives								
	Category of Valued Community Open Space addressed by each Vision, Goal and Objectives							
Vision & Goals	Active Recreation Lands, Amenities, and Parks & Playgrounds	Agricultural Lands	Ecologically Sensitive Areas & Natural Corridors	Forest Lands & Passive Recreation Areas	Scenic, Unique, or Culturally or Historically Important Areas	Squannacook River	Waterbodies (Wetlands, Ponds, and Streams)	Wellhead Protection Areas & Groundwater Aquifers
Vision1								X
Vision2	X		X	X	X	X	X	
Vision3			X	X	X	X	X	X
Vision4	X		X	X		X	X	X
Vision5		X	X	X	X	X		
Vision6	X			X	X	X	X	
Vision7	X			X		X		
Vision8	X			X	X	X		
Goal A.				X				X
Goal B.						X	X	
Goal C.						X	X	
Goal D.		X	X		X			
Goal E.	X			X		X		
Goal F.	X			X				
Goal G.			X	X	X			
Goal H.	X			X	X	X		
Goal I.	X			X				
Goal J.	X			X	X			
Goal K.		X						
Goal L.	X	X	X	X	X	X	X	X

SECTION II: INTRODUCTION

2.1 STATEMENT OF PURPOSE

A town's "open space", or undeveloped lands provide many benefits. Protected open space lands can be designated for a variety of purposes including outdoor recreation, agriculture, forests & forestry, wildlife habitat, and parks & playgrounds. Some open space lands may be dedicated for conservation purposes and used for passive activities such as walking, hiking, and nature study while others may be dedicated to active recreation for uses such as soccer, baseball, or mountain biking. Still yet, some open space lands may allow for other serviceable, yet sustainable land-uses such as agriculture, forestry, fishing, and hunting.

Besides providing recreational opportunities and wildlife habitat, undeveloped open space lands contribute to the provision and protection of clean air, and clean water, and can provide [economic benefits](#)¹ to a town. Recent studies have found that Open Space lands save towns money because they generate more revenue than they cost. Residential lands, on the other hand, cost towns money because they generate less tax revenue than the cost-of-services they require the town to provide. Many different studies, conducted for locations throughout Massachusetts and the United States, indicate that Open Space lands may be a more cost-effective land-use for a town's budget than Residential lands. While there are short-term costs to acquiring Open Space lands, the long-term benefits are clear: Open space lands play a key role in maintaining a balanced town budget and vibrant local economy.

Open Space and Recreation Plans (OSRP) have been shown to be an effective tool for setting a vision and accomplishing a community's land protection and recreation goals. The purpose of this plan update was to expand upon previous versions and to consider and address current community visions, needs, and goals. Its preparation included the inclusion of relevant information from other recent state, local, and regional plans and local initiatives or proposals developed or completed by the Town since the last OSRP update, such as the Townsend Hazard Mitigation Plan & Municipal Vulnerability Preparedness Report (2021), Townsend Walkability Study Report (MRPC, 2021), Montachusett Region Regional Transportation Plan (MRPC, 2020), Massachusetts Statewide Comprehensive Outdoor Recreation Plan (DCR, 2017), Massachusetts Statewide Hazard Mitigation and Climate Action Plan (EOEEA, 2018), Massachusetts Statewide and Regional Climate Assessment Reports (EOEEA, 2022), Townsend Bike Lanes Report/Presentation – Shared Streets & Spaces Project (2021), Rail Trail to Timberlee Park Connection – Shared Streets & Spaces Working Group Presentation (2022), and Townsend Master Plan (2001 & 2022).

On July 18, 2022 the Townsend Planning Board voted to approve the updated Master Plan prepared by , the Townsend Master Plan Committee with the assistance of the Montachusett Regional

¹ For more information on the economic benefits of open space lands and the evaluation of cost-of-services for agricultural and open space lands visit the UMass-Amherst [MassWoods Community Conservation webpage](#) or view the Fact Sheets produced by [UMass - Amherst \(2019\)](#)¹ and [Farmland Information Center \(1995 – 2016\)](#)¹. For an academic review and scientific meta-analysis of cost-of services studies see [Kotchen and Schulte, 2009](#). See hyperlinks below to access source documents referenced within this footnote:
<https://masswoods.org/communityconservation>
https://masswoods.org/sites/masswoods.org/files/pdf-doc_ppt/cost%20of%20community%20services%20for%20four%20towns.pdf
<https://farmlandinfo.org/publications/cost-of-community-services-studies/>
<https://masswoods.org/sites/masswoods.org/files/COCS%20metanalysis.pdf>

Planning Commission, Townsend Planning Board, and Town staff.. The most recent Master Plan (2022) aimed to make Townsend “a sought-after community to live in, work in, and visit” and highlighted the importance of the Town’s natural and recreational resources in accomplishing that mission. The plan identifies several important goals and policy statements related to the importance of natural, cultural, historical, and recreational resources that are consistent with the purposes of this Open Space and Recreation Plan. For example: Townsend will work to maintain the historical buildings, landmarks, character, and open space; Agricultural establishments, existing and proposed will help preserve the landscape of woodlands, fields, and other natural resources; Townsend will ensure that public facilities are maintained in order to protect the investment of the townspeople; Townsend will ensure bylaws, along with growth and development practices protect the groundwater, recharge areas, and wetlands to ensure safe and ample water supply; Townsend will identify and protect wildlife and their habitats; Townsend will address climate change, by protecting air, water quality, noise, light, and other environmental pollution, while establishing practices that use less harmful solutions that support everyday living needs; Townsend will preserve historic and cultural structures and support their ongoing maintenance and use; Townsend will increase the options for financial sustainability of existing agricultural enterprises, and will identify, monitor, and inventory Chapter 61 land in order to preserve this land as open space; Townsend will ensure that open space is maximized for recreation for those that live, work, and visit our community; Townsend will strive to have safe streets by investing in infrastructure such as road repair and sidewalk development, developing partnerships for alternative forms of transportation, supporting bicycle transportation, applying for grants, and working with non-profits to create its transportation system; Townsend will maintain a balance of mixed uses, including agricultural, forest and open space land, as well as small neighborhoods, and commercial development, while preserving its rural and historic character; Town boards, committees, commissions, and departments will integrate the recommendations of the Master Plan into the entire operation of the Town and the Master Plan will serve as a basis for new bylaws, grants, and programs.

The 2022 Master Plan as well as the previous 2001 Master Plan highlighted the importance of Town’s groundwater aquifer which supplies drinking water for townspeople; the importance of Wetland and floodplain areas which work to protect the town from the effects of heavy rains, pollution, and possible flooding; the importance of its water and land resources, particularly the Squannacook River and its riparian corridor, which provide habitat for wildlife and offer plentiful opportunities for both passive and active recreation, as well as visual enjoyment and tourism. Protecting and promoting the wise, sustainable use of these resources is a common goal of Townsend’s Master Plan and Open Space and Recreation Plan. Importantly, both plans recommend the adoption of the Community Preservation Act as a way of accomplishing these shared goals which are of utmost importance to the health and well being of the community, and the environment, natural resources, and ecosystems of its people, wildlife, and fishes.

The 2001 Master Plan’s primary “natural resources” goal was to: “*Preserve, protect and enhance Townsend’s natural resources*”. The Master Plan included a list of several of Townsend’s important natural resources and several policies and proposals to meet the primary goal. The 2013 OSPR update conducted an inventory of the Town’s protected Open Space and Recreation Lands and elaborated on several of the natural resources policies and proposals outlined in the Master Plan in its Goals and Objectives section. It also established a vision focused on the preservation,

protection, and enhancement of Townsend’s natural resources and included an action plan to achieve specific goals and objectives related to that vision, as called for in the Master Plan (2001). This critical vision is carried forward as part of this 2023 Open Space and Recreation Plan update.

The Master Plan of 2001 also noted that the Town’s abundant natural resources and Open Space lands provided many recreational opportunities including a variety of youth sports programs (Little League Baseball, Softball, Youth Soccer, and Pop-Warner Football), and expressed the importance of programs offered by the Townsend Recreation Commission, including a Summer Recreation Program for school-aged children, family-oriented field trips, and a winter ice skating rink. The Master Plan’s primary “recreation” goal was to: “*provide recreational opportunities for varied age groups [and] interests*”. Over the past 10-years, since the 2013 OSRP, the Recreation Commission, with the assistance of the Town’s Recreation Director, has worked toward and achieved many aspects of that goal. The public surveys for the 2022 Master Plan and this 2023 Open Space and Recreation Plan update both indicated that additional recreational opportunities were still needed and desired, therefore, that important need is again represented within this Plan.

Several important goals of the 2013 Open Space and Recreation Plan were successfully accomplished (or partially achieved). Many of those goals were also consistent with the goals of the 2001 Master Plan and are listed below:

- Develop water conservation and water ban bylaw
- Educate residents on the water cycles and how they get their drinking water
- Improve public access to the Squannacook River
- Protect land abutting the Squannacook River
- Protect vernal pools by certifying those located in public areas
- Improve pedestrian mobility around town
- Increase public access to Harbor Pond
- Publicize trails and parking for open space
- Improve safe walking and biking around town
- Evaluate and inventory town-owned properties suitable for recreation opportunities, including a recreation center (in progress)
- Purchase strategic parcel(s) to protect Old Meetinghouse Park from fragmentation
- Investigate logging of town properties
- Investigate adopting the Community Preservation Act to support open space, affordable housing, historic assets, and recreation (ongoing, voted down at last Town Meeting)
- Hire a Town grant-writer to benefit all departments and committees

These recent accomplishments as well as the new or redefined goals and visions of the 2022 Master Plan, 2020 Municipal Vulnerability Preparedness, Community Resilience Building & Hazard Mitigation Plan, and the *Visions, Goals and Objectives*, and *Actions* of this 2023 OSRP update will further support and enhance the Community’s Open Space, Recreation, Climate Resiliency, and overall sustainability.

The residents of Townsend have long recognized the need to effectively balance the increasing demands associated with residential growth and economic development with those for preservation of the Towns, natural, cultural, and historic resources and open space and recreation needs. Maintaining that delicate balance into the future requires not only the commitment of resources,

but a framework to guide the town's planning and implementation efforts. Open Space & Recreation Planning is one of the primary tools available to communities to establish a vision and action plan for achieving that balance. Recognizing the evolving demands placed on Townsend's natural resources and environment over time, this update represents the fifth revision of the Townsend Open Space and Recreation Plan (OSRP, the "Plan"). Major components of this update continue to focus on core elements and essential needs expressed by residents and the business community within the public surveys of the Master Plan and OSRP, through stakeholder engagement, and as part of the public planning process of this OSRP update.

The major components of this Plan and its primary updates are based upon the following core elements and essential needs of the community:

- Townsend will continue to rely on groundwater resources to satisfy future water supply demands. In addition, on-lot subsurface disposal systems will continue to be used for wastewater management. Given the above, effective planning and management are necessary to satisfy the long-range water supply needs for the Town.
- Preservation of wetlands and wildlife habitat is central to the preservation of Townsend's diverse wildlife community as well as Townsend's agricultural and rural past. This not only provides intangible benefits to residents, but also offers a variety of outdoor recreational opportunities for hikers, hunters, anglers, and naturalists. Townsend is fortunate to have a large amount of open space. These lands are primarily state forests, parks, and wildlife management areas. While these significant areas are a vital addition to the open space in town, they are not accessible to the town for the development of our active recreation needs.
- With the Town's increasing diversity of recreational needs, developing new recreational facilities and providing high-quality recreational opportunities, and acquiring, designating, and developing the land and resources necessary to meet those needs is essential to maintaining the quality of life available to residents and visitors of all ages, abilities, and demographics.
- Townsend must continue to actively work with neighboring communities to achieve regional goals of the protection of ground and surface water quality, preservation of wildlife habitat and expansion of recreational opportunities.
- The Town needs to provide greater information and enhanced outreach and education to increase availability and access to information facilitating greater awareness and knowledge of the opportunities, programs, locations, and facilities available to Townsend's residents and visitors. The town needs to develop a program to make this information readily accessible through increased public outreach and digitally available web-materials such as, fact-sheets, resource and land-use profiles, summary reports, maps, signs, etc.
- The importance of natural habitat corridors and trail network connections, or greenways between open space areas, including conservation and recreation lands, parks,

playgrounds, neighborhoods, downtown, commercial areas, schools, public service buildings, and other important public gathering places is essential to the quality of life of the Town's and region's people and wildlife.

- The incorporation of Sustainable Development Principals, Nature-based Solutions, Low Impact Design & Development, Smart Growth, and other related sustainable land-use and development principals and initiatives is critical to mitigating the risks and vulnerabilities associated with climate-influenced natural hazards identified within the Massachusetts Statewide Hazard Mitigation and Climate Adaptation Plan (2018) and State Climate Assessment Report (2022) and is essential to achieving the Town's Climate Resiliency goals established within the Townsend MVP/CRB Summary of Findings report (2020).

At the time of the previous OSRP (2013) a recent donation of 18 acres behind the new highway garage (Map 207 Lot 56; 2009) and a gift of 2.5 acres (2008) off South Harbor Road (Map 33 Lot 36) east of Squannacook WMA, with approximately 550-feet of shoreline on Harbor Pond) added to the Towns municipally protected open space and increased recreational opportunities. The South Harbor Road parcel provides additional public waterfront access to the Harbor Pond section of the Squannacook River and could be enhanced for recreational purposes such as fishing, canoeing, and kayaking. The Commonwealth of Massachusetts also acquired additional Fish and Wildlife properties on Elm Street, Townsend Hill, and Greenville Roads. Between 1998 and 2013, 1,309 acres (consisting of 75 individual parcels) were protected, with a large portion (546 acres) consisting of State acquisitions. Since 2013, until June of 2023, an additional **XXX acres** were permanently protected in Townsend.

In addition, the following Open Space-related activities have also taken place between 1998 and June of 2023, the date of this most recent OSRP update:

A. Regulations and Designations:

- Groundwater Protection District Bylaw (1998)
- Squannassit ACEC designation (2002)
- Vinton Pond Chapter 91 "Great Pond" designation (2006, under the Squannassit ACEC).
- Freedom's Way National Heritage Area – Federal designation (2009)
- Complete Streets Policy & Prioritization Plan (2017)
- Mass DOT Safe Routes to School Program (designated participant)
- Nashua, Squannacook, Nissitissit Wild & Scenic River – Federal designation (2019)
- Municipal Vulnerability Preparedness (MVP) designation (2020)

B. Open Space Purchases and Protections:

- The former Girl Scout Camp near Vinton Pond containing 76 acres was acquired by DCR in 2006 after nearly becoming a housing development.
- Witch Brook Water Company was purchased by the Town in 2008 and includes two drinking water wells.
- Harbor Trace Well was accepted by the Town from a developer in 2008.
- Between 2000 and 2013, the Townsend Conservation Land Trust acquired 143 acres for permanent protection.

- Between 2013 and 2023, since the last OSRP, the Townsend Conservation Land Trust acquired an additional XXX acres for permanent protection.
- Between 2003 and 2013, 195 acres of Open Space were given to the town under the Open Space Preservation Development (OSPD) regulations.

C. Recreation & Trail Activities:

- The soccer fields at Squannacook Meadows Open Space were leased and reclaimed by the Townsend Ashby Youth Soccer Association.
- The Recreation Commission has added classes in volleyball, tennis, exercise and archery.
- A new playground was installed to replace an old one on town property behind the Spaulding Memorial School and a new picnic shelter was constructed by an Eagle Scout.
- Music and drama programs were added to the summer recreation programs.
- A toddler program, ABC Follow Me, has been added.
- Classes in Babysitting and CPR/First Aid have been added by the Recreation Commission.
- Trails have been developed and maintained by the Boy Scouts in Old Meetinghouse Park and the Basbanes properties, both owned by the Conservation Commission.
- Squannacook River debris management for canoe and kayak access (2017-2018).
- Multi-modal Transportation Network
 - Squannacook River Rail Trail Phase I (2019-2020)
 - Shared Streets & Spaces Grant Program Project (2021)
 - Squannacook River Rail Trail Phase II (2021-2022)
 - Squannacook River Rail Trail Phase III (2022-2023)
 - Timberlee Park
- Townsend Walkability Study (2021)

D. Maintenance/Management of Open Space and Recreation lands

- Forest Management Plan for Old Meetinghouse Park was completed by Bay State Forestry in 2007.
- The Boy Scouts spent over 100 hours in community service maintaining various open space properties.
- Landfill was capped in 2005, creating a possible area for recreation.
- Old Meetinghouse Park forest management cutting under the Forest Management Plan (2013-2014).

The purposes and recent accomplishments demonstrated above are just some of the many reasons why Open Space and Recreation Planning is important to a community. However, the natural, geo-physical, socio-economic, and cultural make-up of every community is different, therefore, the community setting of any given place is as varied and unique as the place itself. This is especially true relative to regional context, population dynamics, development patterns, history & heritage, natural and physical landscape, natural resources, environmental challenges, and existing open space lands, including those that are privately or publicly owned and unprotected, permanently protected, or partially protected by restriction, easement, or term-limited program. These characteristics of a community make up the primary components of an OSRP and, as such form the framework for the outline or template of a Plan. However, while the framework for documenting these characteristics is the same for each community, the characteristics themselves

are unique and variable from one community to the next. For this reason, it is important to identify a community’s specific needs, establish a clear vision, set meaningful, relevant, attainable goals, develop priorities, and create an achievable action plan to enact the vision and attain the goals. One way to accomplish this is through a robust public participation process facilitating the acquisition of local knowledge and information through public input. This can be accomplished using a public outreach survey and by conducting public information and input meetings and stakeholder workshops and interviews as part of the planning process to develop or update an Open Space & Recreation Plan. Below is a description of the public participation and planning process associated with the 2023 Update of Townsend’s Open Space and Recreation Plan.

2.2 PLANNING PROCESS AND PUBLIC PARTICIPATION

The foundation of this OSRP was prepared by the Open Space and Recreation Committee (OSRC) with the assistance of the Montachusett Regional Planning Commission (MRPC), having sought input from the town’s departments and boards, an on-line public survey of the residents and a public forum. This Committee convened between February and March of 2022 and held its initial Update “Kick-off” meeting in April 2022. The Committee, with the assistance of MRPC developed an online public survey to obtain residents’ (and a few non-residents) input related to Open Space & Recreation values, needs, desires, and priorities. The survey was conducted between June 1st and June 31st, 2022. The survey was advertised on the Town webpage and at various Town meetings and events. Paper copies of the survey were available in the Library, Senior Center and Town Hall for those residents who did not have access to a computer. The survey link was sent out by email to town employees, boards, and commissions and the “Town Informational email List”. A flyer advertising the survey was created and distributed by the Townsend Landuse Coordinator and it was promoted and advertised within a public presentation on the “State of the Land” an overview of land use in Townsend which was presented as part of the public outreach informing the public of the OSRP update and the public survey.

The Open Space Committee consists of the following individuals:

Maryjane Churchville	representing the Historic District Commission
David Vigeant	representing the Water Commissioners
Veronica Kell	citizen-at-large representative
Emy Hoff (Vice Chair)	representing the Recreation Commission
James Gates	citizen-at-large representative
George Sullivan	representing the Board of Health
Carol Hoffses (Chair)	representing the Planning Board
VACANT	citizen-at-large representative
Colby Streeter	representing the Conservation Commission

The Committee was supported by:

Michael Crowley (non-member)	<i>former</i> Land Use Coordinator/Support Staff
Beth Faxon (non-member)	Land Use Department Assistant

The public survey resulted in 317 responses. The results and comments were analyzed by MRPC and presented to the OSRC on August 1st, 2022. The results of the Public Survey are shown in **Appendix A**. The survey results and comments were reviewed by the members of the Open Space Committee and key points were highlighted for future reference and review relative to the Plan’s

Community Vision (Section 6), Analysis of Needs (Section 7), Goals & Objectives (Section 8), and potential Actions (Section 9).

A Public Forum was held on June 22nd, 2023, and results of the Public Survey, proposed Community Vision, Analysis of Needs, and Goals & Objectives, and draft maps were presented to the public for comment. In association with the public presentation of the Plan, a 14-day public review and comment period, was held from June 15th to June 29th, beginning 1-week before the public presentation and extending for 1-week after.

The protection of Open Space not only protects the environment and natural resources, but it may also improve the local economy. Given the current social, environmental, and economic challenges facing our communities, and the world we live in, this realization is more important now than ever.”

Community Choices Report – The Trust for Public Land, 1999.

SECTION III: COMMUNITY SETTING

3.1 REGIONAL CONTEXT

3.1.1. Location and Physical context

Townsend occupies 32.83 square miles of land and surface water in western Middlesex County on the New Hampshire border, just north of the City of Fitchburg and east of the Town of Ashby. It is also bordered by Pepperell and Groton to the east, Shirley to the southeast and Lunenburg to the south. Townsend is located 39.5 miles northwest of Boston and provides convenient access to surrounding business, cultural, recreational, and scenic opportunities. Middlesex County is located in the New England physiographic province of the Appalachian Highlands physiographic division, and Townsend is located in the Central Uplands. The Central Uplands cover extreme northwestern Middlesex County, extending eastward almost to the Nashua River. The landscape is characterized by steep hills dissected by deep, narrow, interconnected valleys. The primary feature of Townsend's landscape is the Squannacook River and its adjacent valley and surrounding hills. (See Map 1-Regional Context)

3.1.2. Socio-Economic context

As a suburban, rural New England town, Townsend, like other rural New England towns, has experienced a long-evolving shift from its historical agriculture-dominated local economy to one best described as a bedroom community. As suburban sprawl has spread out to Route 495 and beyond to the Montachusett Region Towns along the Route 2-corridor, many towns have seen commercial and economic growth along with the increased residential development. While the migration of business and technology growth to the Route 495 beltway has placed an increased demand for housing in the region, amounting to residential development pressures in Townsend here has been only a slight increase in commercial development or economic business opportunities in town. Townsend's distance to Route 495 and Route 2, relative to other nearby towns, has been seen as a hinderance to economic development and commercial opportunities. However, a renewed interest in outdoor recreation and a trend toward hybrid and remote-work schedules spurred by the Covid-19 Pandemic, has led to an increased interest in the concept of the "live, work, and play communities", or neighborhoods. The concept involves increased local economic development and recreational opportunities located within walking distance of residential neighborhoods and connecting downtown, commercial areas to neighborhood, schools, and other important public meeting and service areas to increase the convenience and quality of living. Often the concept incorporates low-impact design and sustainable development principals in addition to multiuse pathways and alternate transportation networks and other pedestrian safety and accessibility amenities to provide more livable, walkable, sustainable, neighborhoods and communities. Since the last plan, Townsend has further developed and refined a plan for a multiuse trail and interconnected pedestrian and bicycle network. With resounding community support, donated and volunteer contributions, and state-funded financial support from the Shared Streets and Spaces (a funding program created in response to Covid-19) and other related public and private grant programs, the concept and its core components are well underway. The Squannacook River Rail Trail and its connecting "shared streets and spaces" is expected to lead to commercial, recreational, social, economic, and public health and wellness benefits for Townsend and the surrounding region.

Townsend, historically and presently, possesses a higher median income level than the average median income level of the Fitchburg-SMSA (Standard Metropolitan Statistical Area), which extends to the south of Townsend to include the communities Fitchburg, Lunenburg, Leominster, and Shirley. Compared to all its abutting towns, only Groton and Ashby possess a higher median income. Ashby is only slightly higher, and Pepperell is slightly lower.

For many years, Townsend has been viewed as a small, quiet town on the New Hampshire border. Within the last twenty years, however, this vision of Townsend has begun to change. Between the years of 1970 and 1980, the population of Townsend increased by 68%; between 1980 and 1985 the population increased by an additional 14%; between 1985 and 1990 the town experienced a population increase from about 8,250 to 8,500 residents. The years 1990–1999 showed a slight decrease in the population and growth rate, then between 2000-2002 showed an overall population increase from 9,501 to 9,503 and from 2003-2009 population decreased from 9,415 to 9,326 residents. Between 2010 and 2020 the population remained relatively stable increasing by only 2.25% from 8,926 to 9,127. At the time of this Plan update (June 2023) the estimated population is 9,144.

With the closure of Fort Devens in 1996 and its subsequent redevelopment in the towns of Ayer, Shirley and Littleton, more jobs have been created, and the higher cost of housing closer to Route 495 and Route 2 has created a demand for more affordable housing in Townsend. An Open Space Preservation Development Bylaw was passed by the Town in 1986 and an Open Space Multifamily Development Bylaw was passed in 1989. As of 2013, development permitted under these bylaws had provided 242 acres of open space to the town. Since 2013, it has accounted for an additional XXX acres of open space. In 1999, there were four subdivision plans filed with the Planning Board. From 2001 to 2011 there were nine subdivisions endorsed by the Board:

- In 2001, plans for two 17-home developments were approved with 72 acres of open space.
- In 2004, an 11-home development was completed, with 25 acres of open space.
- In 2005 a 5-home and a 44-home development were approved and still being built with 6 acres of open space.
- In 2006 one 15-home development was presented and is still in process with 17 acres of open space.
- In 2007 one 20-condo multifamily development in 5 buildings was approved but has not yet started construction due to the economy but gave 34 acres of open space to the town.
- In 2009 six house lots and a 58-acre equestrian farm was approved for construction and began in 2010 with 48 acres of open space.
- In 2011 two 24-unit rental buildings were approved under the Chapter 40B provisions with no open space provisions.
- In 2017, 171 North End Road – ANR – one lot split into two lots with the larger lot being sold to the Department of Massachusetts Fish and Game as open space.
- 0 Warren Road – one parcel turned into a lot and a parcel of open space.
- In 2017, 168 Haynes Road – one lot turned into two. The larger lot to be sold to Department of Massachusetts fish and game.

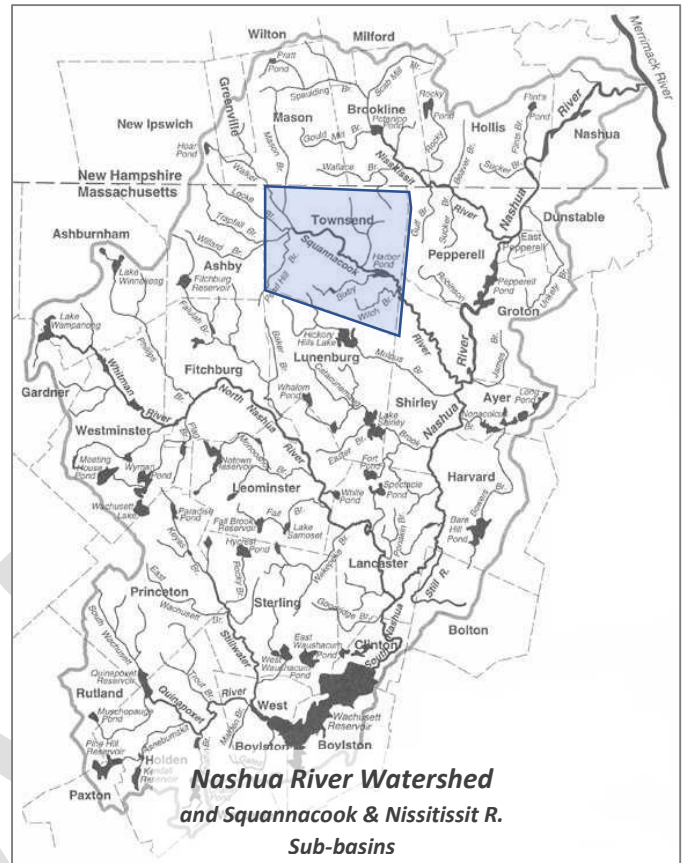
3.1.3. Shared Resources

Townsend lies in the Nashua River watershed. The land within Townsend’s boundaries is drained primarily to the Squannacook River and partially to the Nissitissit River in Pepperell and Brookline, New Hampshire. Beginning in West Townsend at the confluence of three streams, the Squannacook travels through the town to the Harbor Pond, the historic dam and grist mill in the Harbor, then winds southeast to form the border between Shirley and Groton. It finally joins the Nashua River where the towns of Ayer, Shirley, and Groton meet. Townsend’s aquifer flows in a similar direction and, for the most part, follows the Squannacook River.

Sharing the Squannacook and Nashua River watersheds with surrounding towns increases the need for cooperative protection strategies. Townsend’s Conservation Commission is a member of, and

works closely with, the **Nashua River Watershed Association**. Together, they cooperate on preservation and protection projects and collaborations with other towns. The Squannacook River and its riparian corridor is considered a regional resource of significant importance, recognized by the Commonwealth of Massachusetts and Federally, by the National Park Service for its scenic values, water quality, exemplary aquatic and terrestrial wildlife habitat, and high-quality recreational opportunities, including fishing.

In addition to exemplary wildlife habitat, the Squannacook River supports activities such as fishing, hiking, hunting, canoeing, and swimming. Under the **Squannacook and Nissitissit Rivers Sanctuary Act** (MGL Ch. 132A, Sec. 17; 1975) the Squannacook River and associated named tributaries are recognized as **Outstanding Resource Waters** of the Commonwealth. Townsend has accepted the Sanctuary Act as a zoning bylaw and added some provisions to create better local protections. The Act limits new point source discharges and construction within 300 feet of the Squannacook River and its tributaries.



Similarly, on March 12, 2019, the ‘Nashua Wild and Scenic Rivers Act’ was signed into law, designating portions of the **Nashua, Squannacook, and Nissitissit as Partnership Wild and Scenic Rivers**, recognizing those rivers, and the unique, valuable public resources they provide, as Nationally significant. The 52.8 miles of river sections granted with the “Wild and Scenic” designation runs through eleven communities in the Nashua River basin of Southeastern New Hampshire and North Central Massachusetts, including Townsend.

The National Wild and Scenic Rivers System was created by Congress in 1968 (Public Law 90-542; 16 U.S.C. 1271 et seq.) to preserve certain rivers with outstanding natural, cultural, and recreational values in a free-flowing condition for the enjoyment of present and future generations. The primary purpose of the Act is to safeguard the special character of such rivers, while also recognizing the potential for their sustainable use and development for the public benefits they provide. The Act encourages river management that facilitates and promotes such uses that protect the wild and scenic characteristics of the rivers while facilitating community-driven goals related to the sustainable use and benefits of the natural, cultural, and recreational resources and opportunities provided by such unique and important rivers.

It is hereby declared to be the policy of the United States that certain selected rivers of the Nation which, with their immediate environments, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural or other similar values, shall be preserved in free-flowing condition, and that they and their

immediate environments shall be protected for the benefit and enjoyment of present and future generations. The Congress declares that the established national policy of dams and other construction at appropriate sections of the rivers of the United States needs to be complemented by a policy that would preserve other selected rivers or sections thereof in their free-flowing condition to protect the water quality of such rivers and to fulfill other vital national conservation purposes.

(Wild & Scenic Rivers Act, October 2, 1968)

Under the program rivers are classified as wild, scenic, or recreational. **Wild River-Areas** must be free-flowing, or free of impoundments, and have mostly natural forested riparian buffer, making them mostly accessible only by trail. Essentially, their watersheds or shorelines and floodplains are natural and primitive and, as such, their waters unpolluted. Rivers such as these are representative examples of how a river looked, functioned, and was accessed and utilized by native people prior to American colonization by European people. **Scenic River-Areas** must also be free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but they must also be accessible in some places by roads. **Recreational River-Areas** are those that are readily accessible by road or railroad, having some development along their shorelines and with some impoundment or diversion having occurred in the past.

Whether *wild*, *scenic*, or *recreational*, all rivers included in the National System are administered and stewarded with the goal of protecting and enhancing their assessed, designated values. While, designation does not imply federal ownership or prohibit development, it recognizes the unique and important public benefits provided by Wild and Scenic River and promotes and encourages sustainable uses that connect people with important cultural, recreational, and natural resources and opportunities. As such, agricultural practices, residential development, and other uses may continue and “protection” of the river is mostly provided through recognition of its importance and volunteer participation by landowners through stewardship, outreach, education, and a common interest in achieving common goals.

Designated portions of the Squannacook River (and Nashua and Nissitissit) are classified as “*scenic*”. The entire length of the Squannacook within Townsend – from its headwaters in Ash Swamp, through West Townsend, Townsend Center, Townsend Harbor, and beyond to the Groton Town-line, and then from the Groton Town-line (where it re-enters Townsend) to the town lines of Groton/Shirley – is classified as a nationally recognized “scenic” river. After leaving Townsend, the designated area of the Squannacook River then extends downstream to the confluence of the river with the Nashua River in Shirley/Ayer, Massachusetts, excluding from 1,200 feet upstream of the crest of the Hollingsworth and Vose Dam to 2,665 feet downstream.

Wild-and-Scenic-designated portions of the Nashua River are completely outside the borders of Townsend. They include the mainstem of the Nashua River from the confluence of the North and South Nashua Rivers in Lancaster, Massachusetts, and extending north to the Massachusetts-New Hampshire border, excluding:

- From 700 feet upstream of the crest of Ice House Hydroelectric Project Dam to 500 feet downstream.
- From 9,240 feet upstream from the crest of the Pepperell Hydroelectric Project Dam to 1,000 feet downstream.

The designated portions of the Nissitissit River are also completely outside of the boundaries of Townsend. They include from the Nissitissit's headwaters in Brookline, New Hampshire, to its confluence with the Nashua River in Pepperell, Massachusetts. However, because of the partnership, Wild and Scenic Designation that includes the entirety of the Squannacook River within Townsend's boundaries, the overall Nashua, Squannacook, and Nissitissit Partnership Wild and Scenic Rivers are considered a shared regional resource.

As of March 2019, the National System protects 13,413 miles of 226 rivers in 41 states and the Commonwealth of Puerto Rico; this means that the designated portions of the Squannacook, Nissitissit, and Nashua River possess unique, and important characteristics qualifying them for a special designation bestowed upon less than one half of one percent of the nation's rivers.

In addition to being classified by the State as an Outstanding Resource Water, and by the National Park Service as a Wild and Scenic River, much of the area around the Squannacook River and its tributaries are located within the **Squannacook Area of Critical Environmental Concern (ACEC)**. The name "Squannacook" is a portmanteau deriving from the words "*Squann-acook*" and "*Nissit-issit*", the two rivers which, in addition to their tributaries and contributing watersheds form the basis for the quality, uniqueness, and significance of the natural and cultural resources associated with the area and hence, providing the reasoning for its special recognition as an ACEC.

Like with the National Wild and Scenic River designation, recognition of an ACEC does not impart direct government land-protections or regulations, but rather, ACEC designation creates a framework for local and regional stewardship of these critical resource areas and ecosystems. While ACEC designation also requires stricter environmental review of certain kinds of proposed development under state jurisdiction within the ACEC boundaries, it is largely dependent upon community-driven support, goals, guidance, best-management practices, recognition of value, and dedicated stewardship to ensure its success.

The **Townsend State Forest** is located within northern Townsend along the New Hampshire border and covers a large expanse of land. Vegetative and wildlife habitats are supported, along with passive recreational activities and snowmobiling in this woodland sanctuary. The **Willard Brook State Forest** is located within southwest Townsend and is shared with the Town of Ashby. The area supports light recreational use in addition to a variety of habitats for plant and animal species. **Pearl Hill State Park** is located within southwest Townsend and supports camping, hiking, swimming, canoeing and other passive recreation. Like all of Massachusetts' high-quality, world-renowned state parks, these public areas are both managed by the **Massachusetts Department of Conservation and Recreation (DCR)** and attract many locals as well as visitors and tourists to the town from the surrounding region, statewide, throughout New England, and even nationally and internationally.

Two former **Civilian Conservation Corps (CCC)** camps were located within Townsend State Forest. Camp S-82 (Company 1139) was established in the fall of 1935 and operated until 1940¹. Work conducted in Townsend State Forest by company 1139 included construction of roads, trails and water holes, forestry and fire hazard reduction activities, re-planting of fire-damaged areas, and creation of a 700-acre, fenced, wildlife area with wild apple, spruce, and walnut trees. Company 1139 out of Camp S-82 also built recreation facilities at Willard Brook and provided emergency assistance to local communities. Camp S-82 was located off Old Turnpike Road near the Boston and Maine

¹ Townsend State Forest Civilian Conservation Camp Project Record. <https://livingnewdeal.org/projects/cc-camp-s-82-company-1139-townsend-ma/> Project originally submitted by Gary W. Shepherd on April 18, 2023.

Railroad tracks and an old granite quarry, near the area known as “Kings Cross” overlook. The other CCC camp in Townsend State Forest, Camp S-88 was established in 1935 on the east side of the Townsend State Forest and closed the same year.² Its primary, singular objective was to salvage timber and reclaim fire-damaged areas of the 1927 forest fire that burned most of the area now included in the State Forest, including parts of the former village on Fessenden Hill.³

Another defining regional characteristic and shared regional resource is the **Freedom’s Way National Heritage Area** designation, a partnership endeavor between the National Park Service, Freedom’s Way Heritage Association, interested stakeholders, and the people of the region. Natural Heritage Areas are designated by Congress as places sharing a common, representative, yet unique, influential natural and cultural heritage. Such important areas, and their designations and the partnerships they encourage, are intended not only to recognize, honor, and share the stories of the area, but they also have they also contribute to sustainable economic development, healthy environment and people, improved quality of life, education and stewardship, and community engagement and pride.

Freedom’s Way National Heritage Area is a large landscape encompassing 45 cities and towns in a triangular “fan” shape extending out from just north of Boston through Lexington and Concord, and into southern New Hampshire, covering an area of 994 square miles (636,160 acres). Freedom’s Way National Heritage Area connects people, places, and communities through preservation, conservation, and education in an effort to protect and promote the shared resources of the landscape, history, and culture of the region. Their Management Plan (2015) lists 4 primary goals:



Goal 1. To foster a culture of stewardship to preserve the natural, historic and cultural resources of the heritage area as a legacy for future generations.

² The Civilian Conservation Corps: Shaping the Forest and Parks of Massachusetts. A statewide A Statewide Survey of Civilian Conservation Corps. Resources. January 1999. Massachusetts Department of Environmental Management, Division of Resource Conservation, Office of Historic Resources.

<https://ia600902.us.archive.org/10/items/civilianconserva00berg/civilianconserva00berg.pdf>

³ Fessenden Hill Village Historical Research and Interpretive Educational Walk. 2013. Townsend Historical Society (as reported by the Nashoba Valley Voice). <https://www.nashobavalleyvoice.com/2013/09/10/from-village-to-forest-historical-society-brings-fessenden-hill-remains-to-life/>

Goal 2. *To engage and collaborate with organizations, interests and individuals to create a shared regional vision as a living link across landscapes, history, and time.*

Goal 3. *To promote sustainable communities throughout the heritage area that reinforce its character and sense of place.*

Goal 4. *To inspire generations of lifelong learners through innovative educational and interpretive initiatives that connect stories – past and present – to residents and national and international visitors.*

Freedom’s Way identified three major interpretive themes to provide a framework through which they may share the region’s stories to connect communities in a common narrative.

Theme One: A Mosaic of Subtle Beauty

Theme Two: Inventing the New England Community

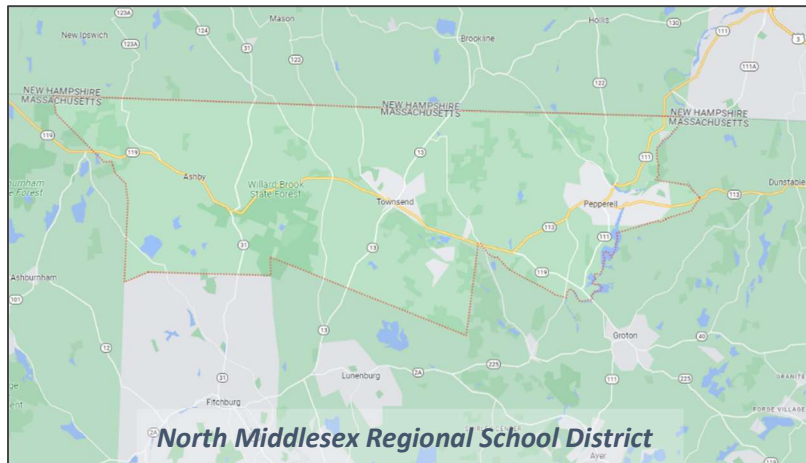
Theme Three: Revolutionary Ideas – Visionaries and Experimenters

The landscape and cultural and historical resources of Townsend optimize those themes and is a perfect example of the canvas, page, and podium upon which Freedom’s Way aims to paint the picture and share the story of the history of this region’s towns and of its people and places.

At the time of the 2013 OSRP a local group of citizens was working to develop the Squannacook River Rail Trail on the abandoned rail line in Townsend and West Groton. Now that group has formally formed into the Squannacook River Greenways, and their initial ideas have evolved into a multi-phased plan that is well underway. Since the last plan, the idea and its early initial steps have evolved, and at the present time (2023) multiple phases of the project have been accomplished (See Section 2 – Introduction, for a detailed summary). In addition, the vision has expanded to include multiple potential connections to neighborhoods, commercial areas, and other important community gathering places. What was proposed as an idea in the 2013 OSRP is now a functional multipurpose recreational trail and the functional underpinnings of a town-wide alternate transportation network, well worthy of the attention it has and will continue to receive in this Plan update.

During the summer and fall months Townsend becomes a regional, by-way tourist destination as Route 119, lined with antique shops, the Squannacook River, and state forests & parks, becomes a scenic roadway for many to drive from the suburbs of the metro-Boston region, all the way to the Vermont border.

Townsend is also part of a regional school district. The North Middlesex Regional School District serves the Massachusetts towns of Ashby, Pepperell, and Townsend. While each Town has its own



elementary school, and Pepperell has its own Middle School (Nissitissit Middle School), Townsend and Ashby are served by Hawthorne Brook Middle School, and all three Towns are served by North Middlesex Regional High School, located in Townsend. Townsend and Pepperell are also part of the Nashoba Regional Technical High School District (Westford), and Ashby is part of the Montachusett Regional

Technical High School District (Fitchburg).

Townsend also participates in a regional household hazardous waste consortium to allow residents to safely dispose of hazardous chemicals.

3.2 HISTORY OF THE COMMUNITY

Originally, our town was part of an area called Wistequassuck by the Native Americans. This land, which was later named Townshend, then Townsend, was first surveyed by Jonathan Danforth in 1676. The land had been granted to Major William Hawthorn of Salem, and although the Major never saw the land, it became known as “Hawthorn’s Grant”.

In the year 1719, 43-years after Hawthorn (a.k.a. Hawthorn) was granted his 6-square-mile farm, municipal rights were granted by the General Court for the establishment of a town at that location to be known as North Town (Townsend), *and* another neighboring town to the south, South Town. The area to the south, later called Turkey Hills, of which Hawthorne’s Grant was a part included the area known as present day Lunenburg and parts of Fitchburg. The Court’s declaration specified that individual allotments of land (lots), were to be granted by a committee, and could not exceed 250-acres per lot. The lots were to be made available for the sum of Five Pounds (to be paid to the Committee), and 3-acres of each lot had to be cleared and fenced by the prospective owner. The owner of each lot was required to build and inhabit a “good Dwelling House” within 3-years’ time. In addition, the town grant required that 4 lots of 250-acres each, be laid out and reserved for the town’s first settled Minister, another for a school, another as a “ministerial lot” presumably for the church, meeting house, common, and general religious and administrative governance of the town, and one for Harvard College. The settlers would be responsible for building “a good, convenient House for the Worship of God” within 4-years’ time and pay the necessary costs of surveys and the Committees service to establishing the settlement. A Garrison was also built to protect the early settlers, and the first meetinghouse to serve the 200 settlers of North Town was built in 1730 on Meetinghouse Hill. The site of a garrison, possibly the first, was located in a small early settlement area known as “Rogersville” near Vinton Pond. A warning cannon was also located here or on Battery Hill in West Townsend. The cannon was used to alert early settlers during altercations with Native people approaching the Town from the west. On June 29, 1732, the town was incorporated as Townshend, named after Charles Townshend (second viscount of Raynham, and a former British Secretary of State). (Sawtelle, History of Townsend, 1887)

In 1733, a dam was built on the Squannacook River at the place now known as Townsend Harbor, and a gristmill and sawmill were erected deriving power from the river. The spelling of the river name later changed to Squannacook. The Conant Tavern (c. 1720), Grist Mill and Cooperage built around the pond are still standing today and are part of Townsend's Historic District II. This part of Townsend was the first to be settled, even prior to the incorporation of the town. Throughout the 18th and early 19th centuries, Townsend Harbor was the industrial heart of the town.

Throughout the 18th century, the boundaries of the town changed. A triangle of land in the northeast part of town was lost to Dunstable. In 1741, a third of the town was taken when the New Hampshire border was moved south. The final change occurred about 1767 when the western boundary was moved to the east to make way for the town of Ashby. (See Figure 3-1 illustrating the original 1732 Town bounds and changes in 1741 and 1767, resulting in the present-day Town boundaries.)

Also in 1767, the Townshend Acts, proposed by Charles Townshend's grandson, were passed by the British Parliament. These acts placed a tax on common items imported by the colonies. The colonists were infuriated by this additional tax, while they were suffering under the Stamp Acts of 1765. Eventually, most of the Townshend Acts were repealed, but the seeds for revolution had been planted. Townshend sent 73 soldiers to Concord on April 19, 1775, nearly 10% of the town population of 821 (taken from the 1776 census). As the war progressed and patriotism took root, the "h" began to drop from the town name in written record. (Sawtelle, History of Townsend, 1887)

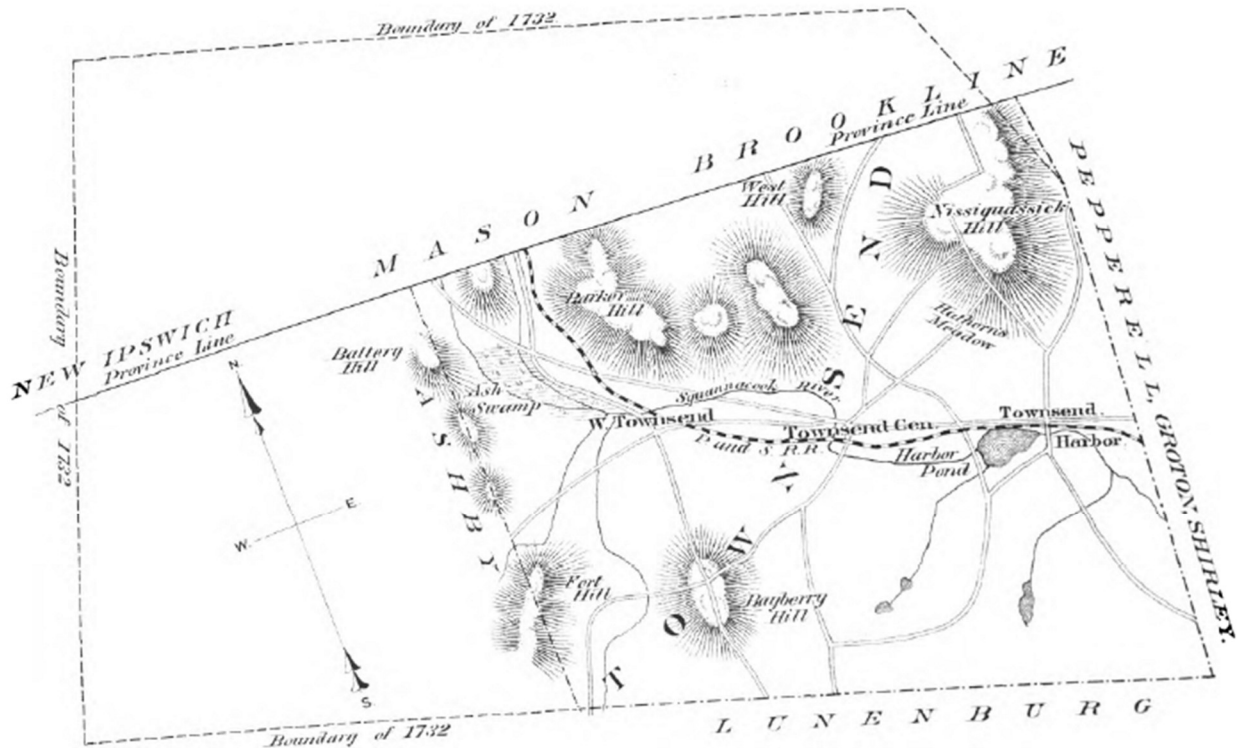


Figure 3-1. Historical Map of Townsend showing the original Town boundaries of 1732 and subsequent changes to those bounds in 1741 and 1767 (Sawtelle, 1887).

After the war, growth in Townsend began to move westward. Because of the earlier boundary changes, the geographic center of town had moved, and so the second meetinghouse, built in 1771, was moved in 1804 to Townsend Center. The first floor of the building was used as the Town Hall until the 1890's, when Memorial Hall was built to commemorate those residents that fought in the Civil War.

Another, small settlement from the 18th to mid-19th century was located on what was then known as West Hill, or the area along today's Fessenden Hill Road near the Brookline, New Hampshire border. By 1878, it was settled by only two or three farms in the area of the summit which was the only area of the entire hill with soils suitable for farming (Sawtelle, History of Townsend, 1878). In the 1930's a forest fire ravaged the area destroying what few homes remained at that time. Ironically, Sawtelle, in describing the area in his History of Townsend (1878) made a prophetic statement when he described the land as most suitable for mixed-stand forestry, not settlement. Following the fire, the entire area was sold to the Commonwealth of Massachusetts and is now Townsend State Forest, an undeveloped area of mixed-stand forest trees and some recreational trails.

As the 19th century progressed, most commercial and manufacturing interests moved closer to the center of town as well, known now as Historic District I. These interests included the production of stockings, clothing, pails, and tubs. The major industry in town was the production of coopering stock. The B. & A.D. Fessenden Company became the largest employer in the town, running lumberyards and sawmills in addition to the coopering factory. The company closed in 1960 after many productive years.

The development of West Townsend, the third village in the town and location of Historic District III, was linked to the turnpike which passed through the area on its way to western Massachusetts and New Hampshire. Several taverns were built, and by 1806, the Joslinville Tavern on Main Street was a main stop on the Boston to Keene Stagecoach. In the 1830's the West Village Female Seminary was built, which helped West Townsend become the cultural center of town.

The railroad came to Townsend in 1846 and had a unifying effect on the town. Many of the goods manufactured in town were now shipped by rail, which further enhanced the development of industry. By 1900, three trains ran in and out of town each day. Each of the three villages of town had a railroad station.

With swift shipping now available, the farms were able to increase their production. Cranberries were harvested from a bog near Spaulding Street, the Harbor Farm on Main Street produced milk, apples, and produce. Several poultry farms became major suppliers to the New England egg market. Many of these businesses lasted well into the 20th century.

By 1871, the town district schools made way for its first high school located near the center, which also housed primary and intermediate grades. The first bank was chartered in 1854, and the fire department was established in 1875. The first police department came fifty years later in 1926.

In 1927, a major forest fire started on Barker Hill near Rusk Quarry and burned over 16,000 acres of forest, including much of the former Fessenden Hill Village, and extended into areas of southern New Hampshire. The area that burned is the area that is now mostly Townsend State Forest. This major catastrophic event decimated the landscape and was followed soon after by the Hurricane-induced Flood of 1936, and the Hurricane of 1938. Making matters worse, the Great Depression also occurred during the same period of time. The forest fire of 1927, and the events that followed, had a major

impact on the Town's resources, financial and natural, and left resulted in extraordinary financial and biophysical losses. The state soon after purchased the land involved in the fire as a way of compensating the town financially and to salvage some of the timber and restore the land to mitigate the financial and ecological losses. Townsend State Forest is the legacy of that disaster.

By the middle of the 20th century many of the Town's manufacturing and agricultural businesses began to slow, as was true across New England. The train only ran three times a week. The Fessenden Company closed in 1960. The poultry industry waned until only one farm remained in operation in the 1970's. Boston and Maine Railroad left town in 1981. By the end of the century, Sterilite was the largest industry remaining in town.

DRAFT



- A. Congregational Church.
- B. Methodist Church.
- C. Catholic Church.
- D. School.
- E. Post Office.
- F. Franklin, H. R. Station, Peabody & Shibley Dr.
- G. Railroad House.
- H. Central House.
- I. Townsend National Bank.
- J. Fire Station House.
- K. H. A. D. Foundry, Cooperage Works.
- L. W. Foundry & Iron, Cooperage Works.
- M. U. S. Adams, Cooperage Works, Saw & Grind Mill.

TOWNSEND CENTER, MASS.

- N. W. P. Taylor, Furniture Manufactory.
- O. W. D. Orsini, Dry Goods, Groceries, Fancy Goods, Drugs, Hardware, Boots, Shoes & Furriers.
- P. H. S. Hilditch, Dry Goods, Clothing, Boots, Shoes, Groceries, Hardware, Paints Etc.
- Q. C. W. Hilditch, Dry and Fancy Goods, Boots and Shoes, Groceries and Agricultural Tools.
- R. W. Wright, General Merchandise.
- S. W. E. Taylor, Drugs and Medicines.
- T. H. P. Green, Dry Goods and Groceries.
- U. S. Adams, Bookbinder.
- V. W. F. Taylor, Bookbinder.

Bird's Eye View of Townsend, Massachusetts 1889 George E. Stone Library of Congress Rights Old Maps Worcester, MA 01216 www.oldmaps.com

Map 2: 1889 Townsend. This charming old view of Townsend is one of a series of "bird's eye" views made of town centers in the late 1800s. These attractive lithographs were drawn as if the artist were suspended in a hot air balloon.

Over the centuries, Townsend has had some famous artists take up residence. Rufus Porter (1792-1884) was a traveling folk artist who decorated walls with stenciled images and original paintings throughout New England during the first half of the 1800s. Some of his work can be seen at the Reed Homestead in the Harbor and two other private homes in the area. Mr. Porter was also a prolific inventor, creating such things as an air pump, chair cane, a churn, fire alarm, life preserver, and rotary plow just to name a few. (Townsend Historical Society) Winslow Homer, the painter, visited his family in West Townsend in the summer of 1879 and chose a local girl to be the subject of one of his paintings, “Girl with Laurel”. (Divinity and Dust) Samuel S. Thorpe, Jr. (1933-2005) was a well-known and highly collected local artist. He kept an active studio in Townsend, MA and Kennebunkport, ME for many years and his work has found its way into many private and corporate collections throughout the country. Sam Thorpe was known for his classic New England scenes which include sawmills, fishing shacks, maple sugar houses, town commons, and seasonal landscapes.

Townsend has become a residential community with some services, while retaining its rural and historical character. In 2007, Townsend celebrated its 275th Anniversary with many activities, culminating with a grand parade in September of that year. About that same time, Mr. Albert Stone, Chairman of Sterilite Corporation, approached the town with an offer to build a new complex including an 18,000 square foot Library, a Senior Center, and a Meeting Hall. The Complex was dedicated on October 31, 2009. The gift to Townsend was the largest in its’ history. Since the last update of the Plan in 2013, several additional gifts have been made to the Town providing for the construction of a new Fire Department Headquarters (2015), and West Townsend Fire Station (2018), and also made the construction of the new Highway Garage (2007) possible prior to that.

It has been proposed that more action be taken to protect immediately adjoining properties to the Historic Districts, as well as other areas that have significant historical interest. This is particularly important as other structures along Route 119 may contain historical significance while not being located directly within the Historic Districts. Since there are three distinct “centers” of town along Route 119 (West Townsend, Townsend Center, and Townsend Harbor), it was noted in the previous plan that it is difficult for residents to go from one end of Townsend to another, except by car, as there are few sidewalks throughout the town and Route 119 is unsafe to bike or walk on for any extended distances. Since 2013 there have been considerable improvements including the Squanacook River Rail Trail and improved sidewalks and pedestrian safety and signage which has directly addressed and substantially improved the former concern. Additional improvements are in progress and planned. This is an important achievement addressing a long-standing need and providing immediate and long-term community benefits.

More information on the History of Townsend may be obtained by the [Townsend Historical Society](https://townsendhistoricalsociety.org/) (<https://townsendhistoricalsociety.org/>).

3.3 POPULATION CHARACTERISTICS

According to the local census completed by the Town Clerk’s office,⁴ Townsend's population decreased to 9,126 in 2010. This compares with 9,501 in 2000 and 8,430 in 1990. The 2010 U.S. Census showed a population of 8,926 down 2.96% from the 9,198 persons in the 2000 U.S. Census. However, the current 2020 U.S. Census showed a population of 9,127 a 2.25% increase from 2010. (See Table 3.1)

⁴ The local census is completed every year and generally has a better response rate than the U.S. Census, which is only completed every 10 years.

Between 2014 and 2022 there were 102 building permits issued for single family homes and one (1) for a multifamily structure in 2014. The most building permits for single family homes were issued in 2014 (25) and the least were issued in 2022 (7), no data was available for 2016 and 2020. (Source: Townsend’s Annual Reports, Office Town Clerk and Building Inspector)

Employment differs between males and females. The top three jobs for males are in construction, computers/electronics, or professional science and technology, while the top three for females are in health, food or education. Major employers for Townsend residents are the North Middlesex Regional School District, Deluxe Corp., and Sterilite Corp. Deluxe is a \$1.4 billion company with locations in the United States, Canada, and Ireland. They are a growth engine for small businesses and financial institutions as well as one of the top check producers in North America. Sterilite Corp. is the world's largest independent manufacturer of plastic housewares.

As of 2019, race in town consists of 87.3% white, 6.8% Hispanic, 3.0% Asian alone, and 1.6% black alone. (Source: www.ciy-data.com/city/Townsend-Massachusetts.html)

According to the current U.S. Census data, 20.8% of the population are persons under 18, 64% are persons over 18 and under 65, and 15.2% are persons over 65. These three groups make up the majority of the workforce. There are 3,240 households with a population density of 279.1 people per square mile as compared to the State figure of 901.2 persons per square mile. This shows the rural nature of Townsend. In certain sections of town, the density is higher, such as “Timberlee Park” a 500-home subdivision built in the 1970’s in highly dense clusters. Also, the density is higher along the two main roadways, Routes 119 and 13.

Table 3.1 Population Changes for Townsend

	1940	1960	1970	1980	1990	2000	2010	2020
US Census				7201	8496	9198	8926	9,127
Local Census	2065	3650	4281	7610	8430	9501	9126	8,835

Source: MISER Population Projections for Massachusetts, 2000–2020(completed in 2003 and Townsend Town Clerk)

Townsend residents with bachelor’s degrees came in at 40.2% as of 2021, up from 19.4% in 2013 and considerably closer to the statewide average of 45.2%. This increase in the portion of the population over 25-years of age with a bachelor’s degree or higher is a considerable shift from the time of the last OSRP update and previous decades, which may indicate that younger people with a degree are remaining at home or that more people with a degree are moving to or choosing to remain in Townsend than in years past. The median household income as of 2021 is \$105,313, which is higher than the Massachusetts median household income of \$89,026, but less than the Middlesex County median household income of \$111,790. (<https://www.census.gov/quickfacts/fact/table/middlesexcountymassachusetts,townsendtownmiddlesexcountymassachusetts,MA,US/PST045222>)

Those that have moved here over the past 30 years have done so to enjoy the rural satellite community, while having access to major interstate highways to work in urban jobs. Or, after 2020, to move away from urban centers to a place where they can enjoy the rural characteristics while working remotely. Townsends rural character, remote yet accessible location, safety, education, and quality open space recreational opportunities draw people to live in Townsend.

3.4 GROWTH AND DEVELOPMENT

3.4.1 Growth and Development Patterns

As with many other towns in the area, Townsend's early economy was based primarily on manufactured goods produced in several mills in the area. The Squannacook River, for the most part, provided the power for the operation of saw and grist mills, a clothing mill, a machine shop and a large two-story factory which produced coopering stock for many years. The railroad came to Townsend in 1846 and had a unifying effect on the town. Many of the goods manufactured in town were now shipped by rail, which further enhanced the development of industry. Most of the residential development was along Routes 119 and 13 with some outlying farms and residences. By 1900, three trains ran in and out of town each day. Each of the three villages of town had a Railroad Station.

By the middle of the 20th century many of the manufacturing and agricultural businesses began to slow, as was true across New England. The train only ran three times a week. The Boston and Maine Railroad left town in 1981. By the end of the century, Sterilite was the largest industry remaining in town. As a result of the location of the railroad along Route 119, the commercial and industrial zoning districts are generally located in these areas. There are two small areas of Outlying Commercial District on Route 13 north at the New Hampshire border and on Route 13 south on the Lunenburg border. There is one small industrial park, two small shopping malls and several scattered small businesses along Route 119. There are a handful of businesses in the outlying areas that have been grandfathered as current zoning would not allow them. In the 1970s, residential development began to emerge outside of the Route 119 corridor. A 500-home subdivision locally known as Timberlee Park was developed, inviting families to Townsend for low cost. Workers were looking for rural places to live that were inexpensive and not too far to commute to work in and around the cities of Boston and Worcester.

In economically challenged times, especially when energy costs are high, communities furthest from job opportunities usually grow at a slower rate. This is due in part because the increased cost of housing nearer the employment centers is offset by the lower overall cost of commuting the shorter distance. When the economy grows and the cost of housing near the job centers exceeds the cost of commuting, then the outlying towns begin to grow at a faster rate. Another change can happen when new job opportunities are added to the community or in nearby communities, such as those at Devens.

In 2000 the Assessors reported 2,604 single family housing units in town. By 2010, the number grew to 2,776, an increase of 172 in 10 years for an average of 17 single family homes per year. During that same time frame, the number of condominiums rose from 230 to 272, an increase of 42 for an average of 5 per year. The number of multifamily homes has remained steady at about 55 units, partly due to the limited zoning to accommodate them. This development period included a building moratorium approved at the Town Meeting in 2003 and effective 2004. While the need for such a moratorium was to allow the community infrastructure to catch up with the current rate of growth, the economy took a downturn in 2006 that provided an economic slowing of housing growth.

Previous studies of Townsend and its rate of growth and development were projected without the current interest in creating more open space. Some of the open space land recently placed into protected status fell into the category of land unable to be developed, while other parcels were removed from the potential of residential development. As both conservation and development ebb and flow within various constraints, the intersect number of a “final build-out” will remain elusive.

In the final analysis it appears that Townsend will always enjoy more open space than most communities in the Commonwealth of Massachusetts.

3.4.2 Infrastructure

Transportation: Townsend is bisected in all directions by the east-west Route 119 and the north-south Route 13; where Route 119 is owned and maintained by the State. Not including Route 119, there are approximately 87 miles of roads in Townsend. Automobile travel time in all directions has increased over the past decade, because of the increased number of commuters, both originating from town and passing through. In 2013 a state-conducted traffic count for Route 119 showed average daily auto travel more than 13,500 vehicles and more than 9,000 vehicles for Route 13. In 2021 traffic counts on Route 119 near Townsend Harbor and South Street showed daily travel of nearly 13,000 vehicles and approximately 8,000 vehicles on Route 13 indicating that traffic is similar or slightly lower than in 2013. With limited job opportunities in the local area, most workers travel more than 20 miles to and from work. There is no public transportation located in Townsend, except for the Lowell Regional Transit Authority’s “Road Runner Van” for the seniors. For a fee, the Van will transport seniors around town and to other locations by appointment. The closest public transportation spots are the MBTA bus and commuter rail train service to Boston in Ayer (10 miles), or the MBTA commuter-rail stations in Shirley (8 miles), Fitchburg (8 miles), or North Leominster (10 miles) and the Montachusett Regional Transit Authority local bus services in Fitchburg and Leominster (8-10 miles) that have shuttle services to Boston and Worcester.

Townsend has sidewalks only in the center of town along short sections of Route 119 (ending at Townsend Ford to the west, and only as far as Workers Credit Union and the Commercial Plaza to the east) and Route 13 (north to the Police Station/Library/School Complex and partially south to a point just beyond Depot Street). Travelling by foot or bicycle is difficult and dangerous on both Routes 119 and 13 and was listed as a goal in the 2013 Plan to improve this situation. Since then many improvements have been achieved. For example, the Squanacook Greenways organization has made considerable progress in installing a rail trail on the abandoned MBTA rail line from West Groton to the center of Townsend, and since the last Plan update (2013) has achieved completed several phases of this project and the Town has initiated additional pedestrian and bike improvements under the Share Streets and Spaces grant program (2021-2022). These accomplishments will alleviate past challenges and impediments to travelling by foot or bike between the Town Center, Shopping Center, Townsend Harbor, and High School located along the Route 119 corridor. This safe, accessible multiuse pathway will allow for possible bike and pedestrian travel where it was otherwise formerly inaccessible or dangerous.

Water Supply: Townsend has a public water supply and private wells. The public water distribution system is currently controlled by the Townsend Water Department, as allowed in State Enterprise Fund rules. Townsend derives all its public drinking water supply from groundwater. This refers to the water that occurs in the saturated portion of the subsurface. Many private wells are driven deep and could be tapping water often infused with undesirable minerals that need to be filtered out, such as radon. The Town is currently assessing impacts (2021) of Per- and Polyfluorinated Substances (PFAS) on Townwide water supplies and has begun the process of constructing the Harbor Trace PFAC Water Treatment Facility (2022).

The Town currently has five wells serving about 2000 businesses and residences or approximately 50% of the population of Townsend. The most productive of these wells, the Harbor Trace well located off of South Street, produces about 30% of the municipal water. The Main Street well in West Townsend produces about 23%, the Cross Street well in central Townsend about 20% and the two Witch Brook wells, currently servicing approximately 500 homes in the Timberlee Park area of southeastern Townsend, produces about 27% of the total amount of municipal water pumped. Through new acquisition of well sites and changes in zoning by-laws, it is thought that Townsend will have the capacity to provide water to current build-out projections. The challenge for any public water supply is the balance of expanding usage to more subscribers, maintaining the integrity of the current system, conservation, and system-wide water quality protection, all within a reasonable cost, that is still cost effective compared to private wells.

Septic: All buildings in town are currently on private septic systems; however, there are certain areas of the town, particularly near its center, that could benefit from a public sewer system. The density of homes in some areas with limited lot size nearly negates the goals of current Title V subsurface septic disposal system designs in protecting the environment. The debate continues, as the population of the town continues to grow, public sewer may be mandated, but some fear that will mean the ability for greater density for future housing. In all cases, the protection of the public and private water supply will need to supersede all other concerns. The matter is as important now as ever, given the recent adoption of Section 3A within the state zoning law requiring MBTA Communities Multifamily Zoning, a requirement for all towns within or adjacent to the MBTA Commuter Rail (or other MBTA public transportation) service areas to implement zoning allowing for “by-right” high density multifamily housing as designated capacities by or before 2025.

3.4.3 Long-term Development Patterns

Townsend’s area is 32.83 square miles or approximately 21,155 acres. Of this, 97% is residentially zoned, 2% is zoned industrial and 1% is zoned commercial. (See Map 3, Zoning Districts)

Zoning District Distribution	
97% Residential	
	54% Residential B – 2 acres
	43% Residential A – 3 acres
2% Industrial	
1% Commercial	
	0.6% Outlying Commercial District
	0.3% Downtown Commercial District
	0.1% Neighborhood Commercial District

Table 3.3 Zoning District Distribution

The Residential A district is overlaid by the Aquifer Protection District, which was voted as a zoning bylaw at Town Meeting in 1986. This bylaw offers protection of the aquifer from hazardous materials operations, as well as a number of other potentially polluting uses. Any new use containing hazardous or toxic materials is required to obtain a Special Permit from the Zoning Board of Appeals. Any existing use that is prohibited by this bylaw is a grandfathered use and requires a Special Permit any time there is a change or alteration to the use. Another zoning protection for Townsend's water supply is the Groundwater Protection District Bylaw passed in 1998. This district, also called the Wellhead Protection District, contains the Zone I, II, and III recharge areas of all five of Townsend's water supply wells. Several potentially hazardous uses are prohibited in this district. Some of the prohibited uses currently occur in the district and are grandfathered; however, a Special Permit from the Zoning Board of Appeals is required for any changes to these uses. Some potentially hazardous uses are allowed in the district by Special Permit.

Townsend also adopted an Open Space Preservation Development (OSPD) Bylaw and an Open Space Multifamily Development (OSMD) Bylaw in 1986 and 1989 respectively. Both bylaws allow for development more harmonious with natural features and town growth policies and promote the maximum possible protection of open space and watershed protection. Townsend's Earth Removal Bylaw, passed in 1986, protects groundwater by prohibiting excavation closer than seven feet to the water table and requires a Special Permit from the Zoning Board of Appeals.

Townsend is one of 175 Massachusetts communities subject to the new MBTA Communities Multifamily Zoning Law, a requirement for all towns within or adjacent to the MBTA Commuter Rail (or other MBTA public transportation) service areas to implement zoning allowing for "by-right" high density multifamily housing as designated capacities by or before 2025. Townsend is required to identify and approve a compliant Zoning District capable of accommodating the development of 178 multi-family units at a density of 15-units per acre. While this requirement is only for zoning, not development, it is relevant to the near and long-term development patterns of the determined location and town and will require careful consideration and thoughtful planning to maximize its intended benefits (e.g., by-right, transit-oriented multifamily housing that is in line with sustainable development principals and the live, work, play community-concept) and minimize any unintended negative impacts.

A goal of this OSRP Update and a principle of the Planning Assistance Grant that is funding its completion, is consideration and promotion of Massachusetts Sustainable Development Principals. By encouraging Sustainable Development Principals, Low Impact Design, Green Infrastructure, and Nature Based Solutions, this plan will be in line with other plans and statewide initiatives such as climate resiliency goals adopted by the Townsend Municipal Vulnerability Preparedness Program Summary of Findings Report and Hazard Mitigation Plan (2020-21). Incorporating Sustainable Development and Climate Resiliency principles and goals into all projects and specifically Open Space and Recreation visions and priorities is essential to the future development of this and any town.

SECTION IV: ENVIRONMENTAL INVENTORY AND ANALYSIS

4.1 TOPOGRAPHY, GEOLOGY, AND SOILS

4.1.1 Topography

Middlesex County is located in the New England physiographic province of the Appalachian Highlands physiographic division, with Townsend being in the Central Uplands of this division. The Central Uplands cover extreme northwestern Middlesex County, extending eastward to about the Nashua River. The landscape is characterized by steep hills dissected by deep, narrow, interconnected valleys (Soil Survey, NRCS). Townsend is characterized by varying topography. Some areas of town are 250 feet above sea level while other areas climb to over 600 feet above sea level. The elevations of the various hills are: Barker Hill in the northwestern section of town - 690 feet; several hills or drumlins surround an unnamed hill of 660 feet in the Townsend portion of Willard Brook State Forest; Pearl Hill in the southwestern portion of town contains similar topography as Willard Brook State Forest; Bayberry Hill at 690 feet is surrounded by hills of similar height in the south central portion of town; Meetinghouse Hill at 420 feet is just east of the center of town; and Townsend Hill in the northeast section of town is 625 feet. Interestingly, this varied topography made Townsend a possible location for Boston's water supply in the beginning of the century. The Quabbin Reservoir area was chosen instead.

Topography plays a key role in many land use decisions. Irregular topography and steep slopes work to limit development potential in several ways. The town's many hills and valleys create several areas of steep slopes throughout the town. Road construction is difficult on areas of steep slopes greater than 10%. On-site sewage disposal is also limited by steep slopes, primarily due to break out. Services such as water lines are also difficult to install in these areas. There is one section in the southeast portion of town where the land is relatively flat where a 500-house development (Timberlee Park) was built in the 1970's.

Development has occurred primarily in the more low-lying regions along Routes 119 and 13, focused near the three centers in the town. The 1969 Master Plan stated that "the most attractive buildable lands, with outlook and character, are on the hillside and these present difficulties for onsite sewage disposal and also it would also be costly to develop municipal sewer and water services for these lands. Thus, any further intensification of residential or commercial development will probably be confined to the area of Townsend that is presently built up, the main corridor".

This statement, for the most part, still holds true today. Development has occurred near the center of town and on or near Route 119 and Route 13. However, Townsend is also experiencing development throughout the town and pressures on our natural resources have increased.

4.1.2 Geology

Knowledge of the local geology is essential in making responsible land use decisions. Development in areas of stratified drift deposits (with high groundwater yield) has the potential to contaminate the public and private drinking water supplies. Areas of till and bedrock may provide too slow a percolation rate to allow thereby prohibiting the siting of septic systems. Also, the many areas of steep slopes throughout the town may cause breakout problems for private septic systems. All these factors need to be considered in growth planning throughout the town. (See Map 4: Soils & Geologic Features)

Bedrock

The bedrock underlying Townsend was formed 500-280 million years ago. The main formations are Pennsylvanian biotite granite and the Berwick formation. The granite is pink-colored and contains crystals of biotite and magnetite. It is found in the north central part of Townsend and can be seen in outcrops visible at ground surface. The Berwick formation is a thin-bedded, calcareous sandstone that has been metamorphosed (recrystallized under high temperature and pressure) into a mica schist. It is found along the eastern border of Townsend. Other bedrock units in Townsend include the Fitchburg Complex (another biotite granite), the Worcester formation (a carbonaceous slate), and the Littleton formation (a grey-black mica schist).

Glacial Deposition: Till

Most of what meets our eyes today was created by glaciers about 15,000 years ago. The hills found throughout Townsend are composed of bedrock overlain by till. Till is a poorly sorted mixture of sand, with some silt and even less clay mixed with angular boulders and cobbles. It was either smeared onto the bedrock surface underneath the moving ice or deposited directly by flowing off the surface of the melting glacier. The amount of till found in these hills varies in thickness, often within the same hill.

In the northwest part of town, the Townsend State Forest contains hills with only 5 to 15 feet of till overlying bedrock. Townsend Hill (in northeastern Townsend) also has thinner till on its slopes, particularly its eastern slope, with till thicker than 15 feet at its summit. Bayberry Hill (in south central Townsend) has a combination of thicknesses, as does the hill south of the Warren and Shirley Road intersection in southeastern Townsend.

Till can form layers that trap water, altering the typical flow of water and occasionally creating perched wetlands on hills and slopes. Townsend Hill contains many wet areas along Townsend Hill Road and Wallace Hill Road that prevents development and affects the placement of septic systems.

Glacial Deposition: Stratified Drifts

In Townsend's valleys, the glaciers deposited stratified drifts of material. The flowing water from the glacier's melt-water streams sorted these materials by grain size: coarse gravel and sand were deposited further downstream than the finer silts, sands, and clays. No deposits of fine material occur in Townsend, but deposits of coarse sand and gravel occur along the Squannacook River and other larger rivers. Ash Swamp (in northwestern Townsend); Pearl Hill Brook (in southwestern Townsend); from the Harbor Pond as far west as Route 13 and as far south as Bixby Reservoir; and Witch's Brook are all surrounded by this type of deposit.

The coarse stratified materials are extremely permeable and are, therefore, a desirable aquifer. They are also in relatively flat areas, so the town center, West Townsend center, and Harbor Village shopping center have all been constructed in these areas. They also occur near water, so the old Grist Mill and Cooperage, which used water for power, were constructed on this type of deposit in Townsend Harbor. Routes 119 and 13 follow these deposits for almost their entire lengths in Townsend, east to west and south to north, respectively. And, finally, several old gravel pits are located in these deposits, showing that this type of material has a commercial use as well.

Post-Glacial Features

Geologic features that occurred after glaciations include floodplain alluvium, swamp deposits, and artificial fill. Alluvium was deposited by existing rivers. Along the Squannacook River, these deposits consist mostly of sand, fine gravel, and silt. Some of these deposits are also found along Walker Brook and Pearl Hill Brook in West Townsend. Swamp deposits of peat and organic muck surround several marshes, swamps and bogs in town. The only area of artificial fill on the map is the North Middlesex Regional High School in the far east of town.

4.1.3 Soils

The soils of Middlesex County have developed primarily in the past 10,000 years since glaciation. Since then, they have undergone little weathering compared to soils in unglaciated areas. As such, the development of soil horizons are minor and what horizons do exist are less pronounced (USDA, Soil Survey of Middlesex County, Massachusetts, 2009).

The soils in Townsend have been mapped and interpreted by the Natural Resources Conservation Services (NRCS). The NRCS broke down Townsend's soils into the following classifications¹: (See Map 4: Soils & Geologic Features)

1. **Canton-Charlton-Hollis Associations:** Gently sloping to steep, very deep to shallow well drained and somewhat excessively drained, loamy and sandy soils formed in glacial till and ice-contact stratified drift; on uplands. This association is mostly in forests. Some areas are in hay land and pasture. Many nearly level to strongly sloping areas are used for home sites. This association has severe limitations for onsite sewage disposal. It is poorly suited to cultivated crops and suited to orchards and pasture where surface stones are removed and slopes do not exceed 15 percent. This association has moderate potential for conifer production. This association can be found in the northwest and southeast portions of the town. These areas are generally mostly forested, with residential development limited by protected open space in both areas of town. Development has been limited to existing roadways.
2. **Hinckley-Freetown-Windsor Associations:** Nearly level to steep, very deep, excessively drained, sandy soils that formed in glacial outwash, and nearly level, very deep, very poorly drained, organic soils. This association is mostly forested. Some areas are cropland. Many nearly level to strongly sloping areas are used for homesites. A few isolated areas are used as sources of sand and gravel. This association has severe limitations for onsite sewage disposal, as the Hinckley and Windsor soils readily absorb but may not adequately treat the effluent from septic tanks. This association is poorly suited to cultivated crops and pasture as the Hinckley and Windsor soils are droughty and require irrigation for optimum crop production. Freetown soils have severe limitations for urban use because they are

¹ It should be noted that these general soil areas are made up of a few dominant soils and several other soils of a lesser extent. The soils may have a number of different properties; however, the soils generally hold the same limitations for a specific use (such as home sites or septic/sewage disposal). It is important that any soil determination for a particular use be site-specific. The general soil classification is useful only for an overview of the town and for general planning purposes.

wetlands. These soils can be found mostly in the central western and northeastern portions of town.

3. **Paxton-Montauk-Woodbridge Association:** Nearly level to steep, very deep, well drained and moderately well drained, loamy soils formed in glacial till; on drumlins and smooth-sloping ground moraines. This association is mostly forest. Some areas are orchards, hay, or pasture. Some nearly level to strongly sloping areas are used for homesites. This association has severe limitations for onsite sewage disposal because of restricted permeability and a seasonal high water table. Where slopes do not exceed 15 percent, this association is well suited to cultivated crops, orchards, pasture, and has good potential for conifer production. Areas with slopes in excess of 15 percent are suitable for orchards, but are subject to erosion. Areas of town with this soil association are the southwest and northeast portions.
4. **Quonset-Carver Association:** Nearly level to steep, very deep, excessively drained, sandy soils that formed in glacial outwash in the northwest part of the survey area. This association is mostly in forests, though some areas are used as cropland. Many nearly level to strongly sloping areas are used for homesites. A few isolated areas are used as a source of sand and gravel. This association has severe limitations for onsite sewage disposal, as the soils readily absorb, but may not adequately filter the effluent from septic tanks. Where slopes do not exceed 15 percent, the soils are suited to cultivated crops and pasture, but are droughty and require irrigation for optimum crop production. These soils are found mostly to the south of Route 119 and to the east of Route 13, all the way to the Groton town border.

4.2 LANDSCAPE CHARACTER

Townsend's Landscape Character has evolved through a combination of three forces: Townsend's natural history, its cultural history and the environmental protections in place to safeguard the natural landscape. The natural history of Townsend is described well in other sections of this plan, but in summary, two major events give Townsend its natural landscape character. The first happened ~300 million years ago and is the development of the underlying bedrock which defines our hill and valley topography. Geographically, the hilly portions of Townsend are mostly in the north and west of Town. The valleys are the Squannacook River Watershed and include the Squannacook River, its streams and tributaries, its surface waters and the floodplain areas including wetlands. The second major natural event, the glacial deposits that surface the native bedrock, occurred 15,000 years ago. The glacial deposits in Townsend, primarily sand and gravel deposits led to droughty and rocky soil and promoted a small industry of mining for those materials. These types of soils are conducive to certain types of agriculture and specific forest types. Most important however, are the water storage capacities of these glacial outflows which have created a large aquifer and a source of water recognized statewide for its high quality.

The surface of Townsend's land is highly diverse and contains several hills, valleys, sandy plains, wetlands, bedrock ledges, forests, rivers, brooks, and streams. The Squannacook River traverses the entire length of the town winding its way around and between its hills and accounts for the more level, lower-lying areas of historic, alluvial plains of sand and fertile soils. Throughout these floodplain areas remain scars of ancient oxbows and former paths of the river's bed as it carved its way and changed its course over geologic time.

The borders of the town on all sides are hilly, with five primary hills being Townsend Hill (originally known as Nissequassick Hill), Fessenden Hill (formerly West Hill), Barker Hill, Battery Hill, and Bayberry Hill.

Nissequassick Hill, its original, native name, or Townsend Hill, as it is now known, lies in the northeastern part of town and its gradual and broad grade covers all or most of that area into Groton (to the east) and Brookline, New Hampshire (to the north). In 1878, Townsend Hill was still referred to as Nissequassick Hill and offered views of Mount Monadnock and Mount Watatic to the northwest, Mount Wachusett to the west, and Jo(e) English Hill in New Boston, New Hampshire, to the north.

Fessenden Hill (formerly known as West Hill) is located in the northern part of town west of Route 13 along Fessenden Hill Road. In the History of Townsend, 1878, it was described as a hill of rocky soils with considerable areas of ledge and poor drainage marked by several wooded swamps and ravines caused by rivulets of drainage water coursed by the rocky ledge. Today, the hill and the surrounding land is encompassed by what is now Townsend State Forest. The entire area around Fessenden Hill and a small settlement that had developed on this hill in 1700 and 1800's was destroyed by a large forest fire in 1927.

Barker Hill is located in the northwestern part of Townsend within Townsend State Forest off of Barker Road and between there, Old Turnpike Road, and Mason Road. The Rusk Quarry, or area known as Kings Cross, is located on a part of Barker Hill.

Battery Hill is located in the West Townsend along the border with Ashby and is the hill (and ridgeline) west of Ash Swamp and north of West Meadow Road. The feature forms a north-south ridgeline or series of hills that is bisected by Route 119 as it enters Willard Brook State Forest. On the southern end (just south of 119 and north of Vinton Pond) lies what was formerly known as Fort Hill.

Bayberry Hill is located between Fitchburg Road (Route 13) and Lunenburg Road (South of West Elm Street) in the vicinity of Bayberry Hill Road.

The cultural history of Townsend has been preserved in three currently designated historic areas, the Harbor, The Center, and West Townsend. The first settlement at the Harbor was closely tied to that area's natural resources, the 45-acre Harbor Pond resulting from the damming of the Squannacook River in 1733. Townsend's mill industry first developed at the pond overflow. As roadways developed and railroads were introduced, the character of the landscape also changed. The area at the center of town was the intersection of two major roads and churches, the town hall and the towns common were developed in this central location. West Townsend, at first a way station for travelers journeying to western New England, became home to industries with the addition of the railroad.

Development occurred primarily along the roads with huge amounts of farmland or undeveloped land behind. As with most New England towns, as agriculture and manufacturing moved to more lucrative areas, our character shifted. Abandoned agricultural land became forest tracts with

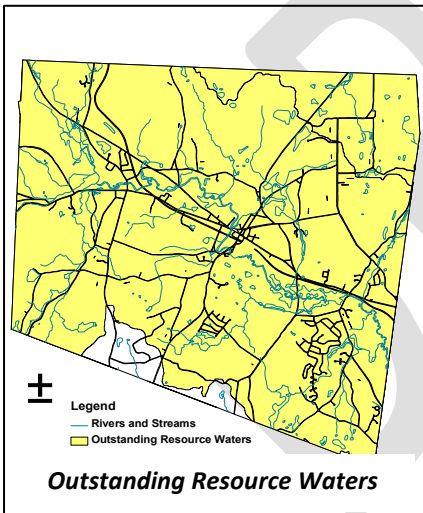
historic remnant stone walls the only reminder. Use of the railroad beds was discontinued, and remnant trestles remain. The town, which had traditionally developed in a linear fashion along connecting roads, started to develop small neighborhood developments and the pressure for better services and schools went hand in hand with population rise. New roads into areas outside of the major river corridors were built to service new housing. On steep land, mostly the houses continued to follow the road. In flatter areas denser neighborhoods were built.

Surprisingly, Townsend development pressure was not as strong as other areas and a combination of state land purchasing and poor development sites on the hills has kept most of the development along the flatter valley areas. Recognition of the importance of the aquifer came in 1986 with the passage of the Aquifer Protection Overlay District Bylaw which protects the aquifers from new structures and uses considered hazardous. Townsend remains primarily a hill and valley town with a mostly well protected aquifer. The foresight to protect the three main historic centers has led to a strong historic presence in the town and the abundance of protected open space has led to an environmental ethic of preservation of the rural character and wildlife habitats.

4.3 WATER RESOURCES

4.3.1 Rivers, Streams and Wetlands

Townsend lies almost entirely within the Nashua River Watershed, with over 85% of the town's land draining into the Squannacook River. There are more than 200 acres of open water in the Town, the largest being Harbor Pond covering more than 40 acres, followed by Bixby Reservoir with approximately 18 acres and finally Vinton Pond with slightly less area covered. These major water bodies are used for a variety of recreation purposes, including sport fishing. Under



the State Area of Critical Environmental Concern (ACEC) Program Vinton Pond is designated as a Great Pond and is afforded more protection from development and degradation. The Department of Environmental Protection (DEP) has determined under the Massachusetts Surface Water Quality Standards that almost all of Townsend's surface water resources are classified as Outstanding Resource Waters (ORWs) because of their value as socio-economic, recreational, ecological, and/or aesthetic resources. The rivers and streams designated as ORWs in Townsend are Bayberry Hill Brook, Bixby Brook, Locke Brook, Mason Brook, Pearl Hill Brook, Pumpkin Brook, Squannacook River, Stewart Brook, Trout Brook, Walker Brook, Willard Brook, Witch Brook and Wolf Brook, as well as several unnamed streams. Almost the entire town is

considered ORW. (See Figure 4.1, ORW Resources) Over the past few years, both state agencies and local boards have put forth legislation and bylaws to ensure protection of Townsend's water resources for the future.

The gem of the Town is the Squannacook River, which arises from Ash Swamp in the northwest and meanders southeasterly through the entire town to Harbor Pond and eventually empties into the Nashua River in West Groton. The Squannacook and its tributaries were afforded a 300' buffer zone protection through the Commonwealth's Squannacook and Nissitissit River Sanctuary Act

passed in 1975. The Squannacook provides an excellent platform for wildlife, both resident and transient and is designated a Class B Coldwater Fisheries waterway by the State. The Massachusetts Division of Fisheries and Wildlife (MADFW) stocks the Squannacook River with trout (Brook, Rainbow, and Brown). They stock in several locations including Harbor Pond, and the Squannacook River (several locations including Elm Street) and the tributaries of Mason, Walker, Willard, Pearl Hill, Bixby and Witch Brooks, but not Bayberry Hill Brook nor Hawthorne Brook. Stocking locations may vary year-to-year. (See Map 5, Surface Water Resources)

Our waterways and wetland areas provide an environment for a variety of trees such as Red Maple, Alder, Arrow-Wood, and many others. Additionally, our wetlands support growth of plants such as blueberries, willow, and winterberry. A wide variety of species are helpful in anchoring soils in flood control and storm drainage areas. Our wetland areas and waterways provide the needed aquifer water recharge capacity necessary to assure an adequate supply of clean fresh drinking water. One of the major concerns in ground water pollution is by way of phosphorous. When surface water and ground water is subjected to phosphorous overload from excessive septic system effluent, lawn fertilizers, agricultural fertilizers, impervious surface runoff and animal wastes, it causes excessive weed and algae growth, including toxic invasive varieties. Recent concerns at the time of this update (2023) in Townsend and elsewhere are related to the presence of Per- and Polyfluorinated Substances (PFAS) in groundwater. PFAS, a group of chemicals used to make fluoropolymer coatings and products that resist heat, oil, stains, grease, and water, such as non-stick cookware and water repellent clothing, do not break down and hence, remain persistent in the environment. Scientific research has shown that exposure to some PFAS in the environment may be linked to harmful health effects in humans and animals. More research is needed to better understand the health effects of PFAS exposure. Townsend's groundwater is an extremely valuable resource, and a continuum of citizen surveys affirms the Town's goal of protecting these resources.

The Commonwealth extended its wetland and river protection by enactment of The Rivers Act of 1996. In Townsend, residents voted unanimously at the 1997 Annual Town Meeting to extend the Conservation Commission's jurisdiction by amending the Townsend Wetlands Bylaw to include protection of vernal pools and isolated wetlands, and to double possible civil penalties for violations.

Townsend has a large number and area of wetlands within its borders. Almost all of the recent development outside of the Route 119 corridor required approval of the Conservation Commission. Townsend Hill Road, Wallace Hill Road and Bayberry Hill Road have unique drainage areas and problems with break-out of groundwater causing serious problems with locating drinking water wells and septic systems. Townsend has several large swamps including Ash Swamp at the headwaters to the Squannacook River, Dead Swamp in the Townsend State Forest and Wolf Swamp to the east of Route 13 north; as well as large swampy areas around several spots on the Squannacook River and Witch Brook; as well as an extensive swamp in and around the Cross Street Public Drinking Water Well. There are two bog areas in town, as well as numerous certified and potential vernal pools. Wetland resource areas provide critical habitat to wildlife and help maintain the aesthetic beauty of our town. They also provide priceless yet "free" services including drinking water purification, groundwater recharge, flood control, and pollution prevention.

4.3.2 Flood Hazard Areas

The large numbers of streams, including the Squannacook River, combine to produce a significant floodplain area in the town. The most severe flooding occurred along the Squannacook River in 1936. According to the Federal Emergency Management Agency (FEMA), other low-lying areas are subject to periodic flooding including Mason Brook, Walker Brook, Locke Brook, Willard Brook, Pearl Hill Brook and Witch Brook. The largest drainage areas are associated with the Squannacook River (156 square miles), Walker Brook (63 square miles), and Willard Brook (27 square miles). Previous FEMA (Federal Emergency Management Agency) maps were somewhat conservative compared to those issued in June of 2010. An additional update to the FEMA National Flood Hazard Layer for the parts of the Nashua River Basin (including Townsend) in 2017 further refined flood zones and provided a digital GIS viewable data layer, an improvement from the previous paper FIRM maps. (See Map 6, FEMA Floodplains) Floodplain maps and other FEMA resources can be viewed on the Internet at <http://msc.fema.gov> or displayed using the MassGIS MassMapper application at <https://maps.massgis.digital.mass.gov/MassMapper/MassMapper.html>. The increased areas of concern designated by FEMA may serve to deter expansion or new growth in those affected areas, as they are now identified as a greater risk in severe weather conditions and as such may be required to be covered by property or flood insurance.

4.3.3 Water Supply

Two aquifers underlie approximately one half of the Town, and much of the rest of the Town is relied upon for aquifer recharge. The movement of groundwater occurs from the point of highest water table contour to the lowest. This movement is slow but predictable. Unwise land use decisions in one part of the town may affect municipal or private wells in another part of town.

Most eastern Massachusetts communities' high yield aquifers are located within glacial outwash valleys bordered by lower yielding glacial till at higher elevations. This classic hill and valley aquifer is readily apparent along the Squannacook River valley, thought to have been formed by glacial meltwater approximately 15,000 years ago. These coarse sand and gravel deposits can be seen within numerous sand and gravel pits located within the valley itself.

The USGS (United States Geological Survey) identified and mapped "developable" aquifers in Townsend during the late 1970s (USGS Hydrologic Atlas, 1977). Developable aquifers are defined as those capable of yielding sufficient water for industrial or public water supply use. To that end, the town has updated the delineation of primary recharge areas serving the developable groundwater supplies identified by the USGS and the Nashua River Watershed Association (NRWA). This information is being updated to reflect the more current FEMA influence on the USGS findings.

The wells draw their water from a specific section of the aquifer, referred to as a recharge area. Recharge areas are determined by a number of factors, including ground water flow, varying geological composition of the aquifer, and the pumping rates of each well. Three specific zones exist within the recharge area itself. The first is a 400-foot radius known as Zone I which must be owned by the municipality. This is a protective radius required by the DEP in accordance with 310 CMR 22.02 around the wells or well fields with approved yields of 100,000 gallons per day or greater. The second zone or Zone II is the areas of aquifers which contribute water to a well

under the most severe pumping and recharge conditions that can be realistically anticipated (180 days of pumping at safe yields, with no recharge from precipitation). It is bounded by the groundwater divides, which result from pumping the well and by the contact of the aquifer with less permeable materials such as till or bedrock. In some cases, streams or lakes may act as recharge boundaries. In all cases, Zone II shall extend up gradient to its point of intersection with prevailing hydro geologic boundaries (a groundwater flow divide, a contact with till or bedrock, or a recharge boundary). The final zone or Zone III is the till area, also contributing water to the well, but at a less significant rate. Zone III means that land area beyond the area of Zone II, from which surface water and groundwater drain into Zone II. The surface drainage area as determined by topography is commonly coincident with the groundwater drainage area and will be used to delineate Zone III. In some locations, where surface and groundwater drainage are not coincident, Zone III shall consist of both the surface drainage and the groundwater drainage areas. (See Map 7, Water Supply Resources) The Townsend Water Department codified the town well zones and the Town passed a Groundwater Protection Bylaw in 1998 and further clarified and amended it in 2009. A municipal water conservation ban, or Declaration of state of water supply conservation is established as Section 87-5 of the Outdoor Water Use Bylaw adopted by the Town in 2016. There is also an Aquifer Protection Overlay District Bylaw which prohibits certain types of uses and presence of hazardous materials for any new construction or reuse.

Protection of the Town's water supply may take a number of various routes. Town acquisition of land is the best way to prevent future contamination. This acquisition should occur beyond the 400-foot Zone I designation to the primary recharge area of Zone II. However other regulatory means, such as large lots and the prohibition of hazardous chemical and medical disposal also help to prevent future contamination. As noted earlier, Townsend overlies its aquifer areas, which is the present and future source of drinking water. Three aspects of the aquifer should be noted: First it lies predominantly south of Route 119, a moderately developed residential area of town; secondly, the aquifer stretches into adjoining towns, amplifying the need for local and regional ground water resource management; finally, despite state agency and local conservation purchases, large portions of Townsend are still available for residential development, with a large percentage of this land overlying the aquifer. Strategic parcels should be considered for purchase by the town when they become available if they are within Zone II of the current well sites.

4.4 VEGETATION

4.4.1 Forests

According to the USDA, Townsend is approximately three quarters forested. Townsend's forests are used extensively by the public for recreation, hiking and mountain biking, hunting and fishing. Large masses of greenery provide visual screens and add to the undeveloped, rural character, especially when they mask development as they do in Townsend. Because of sheer size, such forests offer excellent opportunities for large, secluded trail systems and the potential for connected networks between forested areas. These systems afford citizens the chance to exercise, relax, find solitude, and study the natural world. The effects of such places on a town's quality of life are immeasurable. Additionally, because many animal species need large tracts of forest to survive, these are critical conservation resources. Upland forest habitat contiguous with wetlands is particularly valuable. The diverse ecotones between these systems provide scenery and wildlife habitat. Townsend is abundant with these types of habitats with its many streams and wetlands within and bordering forests.

Forests also provide an element of the quality of life of our community not generally thought of. The vegetative cover of the landscape positively affects the town by controlling erosion caused by precipitation, modifying temperature, and modifying environmental extremes, particularly air temperature, water flow, and air composition, all helping to make Townsend a healthy, pleasant place to live.

Townsend State Forest is made up of large tracts of continuous forest in the northern part of town owned by the State Department of Conservation and Recreation (DCR). These forests are either white pine stands or oak-hickory. These tracts are managed by the state with annual selective cutting. Willard Brook and Pearl Hill State Parks represent another large forest tract in the southwest corner of the town. There are other tracts of large size of mostly pine and hardwood mix owned by the MADFW and DCR along the Squannacook River in the center and southeastern sections of town. There are pockets of aspen - grey birch and elm, ash and maple and even several American elm found throughout town.

Townsend has more than 1,300 acres of forest land protected under Chapter 61. In order to qualify for the Chapter 61 program, a landowner must have 10 or more contiguous acres of forest land and a long-term commitment to improving the "quality and quantity" of timber on that land. Other values such as wildlife, aesthetics, and recreation can also be incorporated into the management goals of the property through the Forest Stewardship Program. An approved Forest Management Plan describing and mapping property resources and stating management objectives is required to guide stewardship of the property. This plan is based on the landowner's objectives and is renewed every ten years to reflect changing conditions, goals, etc.

4.4.2 Open fields

Open fields contribute to the rural lifestyle of Townsend and provide critical habitat that is often lacking. Townsend has over 1,100 acres of agricultural land under Chapter 61A, much of it family-owned farms. Many species, such as the bobolink, require old field environments to live. The areas found between forest and open field is especially rich in animal and plant species. Open fields offer scenic panoramas and add to rural character. Every effort should be made to support local farming and to provide owners of old farms with the information, tools, and resources needed to adequately address and respond to the pressures of development to encourage and facilitate continued agricultural use, family ownership, and long-term, or permanent protection of agricultural resources.

4.4.3 Public Shade Trees

In 1896, Townsend adopted a General Bylaw entitled Streets and Sidewalks which has within it a section on the Protection of Trees which prohibits the use of any public tree for any use which would damage the tree such as affixing a sign, tying up livestock, etc. In 1899, the town voted to accept Massachusetts General Law Chapter 190, Acts of 1896 concerning the preservation of shade trees and election of a Tree Warden. In 1974 the town accepted Massachusetts General Law Chapter 40, Section 15C known as the Scenic Roads Act; declaring all roads of Townsend as "Scenic Roads", with the exception of State numbered Routes 119 and 13. The Planning Board added procedures for removing public trees to their Rules and Regulations at that time. A public hearing is required any time a person or organization would like to remove trees from any scenic

road as part of a project or individual action. The Tree Warden, along with the Planning Board, makes the decision on the removal of trees.

4.4.4 Unique Natural Resources

As of this date, there are 47 certified vernal pools in Townsend with several more potential vernal pools. According to NHESP, there are no rare or endangered plant species in the town. There are two areas of town that are considered bogs and are within protected open space. The Squannassitt Area of Critical Environmental Concern (ACEC) was designated in December 2002. (See Section 4.6 for discussion of this unique area)

In addition, the Squannacook Nissitissit Rivers Sanctuary and Outstanding Resource Waters as well as the Wild and Scenic Designated portions of the Squannacook River are designated as local, statewide, and nationally unique and important natural resources.

Prime farmland soils, Prime Forest Land, BioMap Critical Habitat and Critical Natural Landscapes, as well as designated Priority and Estimated Habitats of rare and endangered species of plants and animals all exist within Townsend and should be considered as unique and critically important natural resources.

4.5 FISHERIES AND WILDLIFE

In Townsend there are a number of species that make their homes in interior and riverside local forests and woodlands. These areas support mostly small rodents and mammals such as mice, voles, cottontail rabbit, gray and red squirrels, chipmunks, bats, muskrats, minks, weasels, woodchucks, beavers, otters, and porcupines. Raccoon, skunk, and opossum are common and have become a nuisance in some locations particularly as predators of precious turtle eggs. More secluded forests are home to larger wildlife such as coyotes, foxes, bobcats, and deer. Fisher have been seen occasionally in Ashby and Townsend. Residents also report seeing the occasional moose and bear. In addition, many types of birds inhabit the woodlands including blue jays, robins, sparrows, orioles, owls, woodpeckers, wild turkeys, grouse, pheasant, woodcock, and a great variety of songbirds.

Waterways, water bodies, and other wet areas in town tend to provide suitable habitats for fish, amphibians, reptiles and other birds that enjoy the water. The Squannacook River and several of its tributaries, including Mason Brook, Locke Brook, Pearl Hill Brook and an Unnamed Tributary to Pearl Hill Brook, Willard Brook, and Bayberry Hill Brook, are designated Coldwater Fish Resource Areas by the Commonwealth of Massachusetts. These streams possess conditions capable of supporting coldwater fish, such as Eastern brook trout, and have been documented to support a population of coldwater fish at some point in time. In addition, hatchery raised trout are stocked in multiple locations of the Squannacook River and some of its tributaries for recreational fishing opportunities. In addition, amphibious species such as frogs, salamanders, and toads tend to make their homes near local waters in wetlands, as do water-loving birds such as Great Blue Heron, geese, and ducks. The most common reptiles include garter and black snakes, and snapping, painted, and spotted turtles. Red-backed salamanders are common under rotting logs. Spotted salamander populations have been declining, and blue-spotted salamanders are considered rare. (NRCS, 2009)

According to the Massachusetts Natural Heritage and Endangered Species Program (NHESP), there are thirteen species of fish and wildlife that are considered endangered, threatened or of special concern indigenous to Townsend. Of these thirteen, eight are vertebrates and five are invertebrates. There are also 47 certified vernal pools and hundreds of potential vernal pools (PVPs). There is a large cluster of vernal pools in the northeastern part of town that provide particularly good habitat for species that depend on this environment for breeding. The clusters mean that there are alternate habitats if something happens to one pool, and slightly different conditions in each may provide different habitats for pool dependent species. (MADFW, 2011) Certifying the PVPs would provide more protection to these wetlands and the species that use them. The Conservation Commission and the Friends of Willard Brook have led campaigns to certify all vernal pools on public property and some private property of willing residents. (See Map 8: NHESP Priority Habitats of Rare Species)

The amount of wetlands, woodland and undeveloped land in general supports a diverse range of wildlife in Townsend. In particular, Townsend is known for having critical habitat and occurrences of rare turtles, especially the state-threatened Blandings Turtle. The MADFW provided information for the 2013 Update of this Open Space and Recreation Plan which is in Appendix B and includes a list of Townsend's rare & threatened species, natural communities, and fact sheets describing BioMap2 components. Excerpts from this letter are presented here:

"The best Blandings Turtle (Threatened) populations in Massachusetts are in the towns around the Nashua River valley. Townsend provides important Blandings habitat in the wetlands along the Squannacook River, its tributaries, and across the eastern part of town in a variety of habitats....Wood Turtles (Special Concern) live in streams and associated uplands; in Townsend, one of the best regional populations is in some of the same areas as the Blandings in Townsend....The incidental capture of the smaller Wood Turtle population, along with a small population of Eastern Box Turtles within BioMap2 Core habitat is actually a demonstration of the strengths of the Cores as tools for biodiversity protection. Eastern Box Turtles are terrestrial turtles, inhabiting a variety of dry and moist woodland habitats, with the core of their Massachusetts populations occurring in the southeastern part of the state.

American Bitterns (E) are one of a group of birds called secretive (or inconspicuous) waterbirds. These heron-like birds nest and forage in marshes that have dense cattails, tussock sedge or shrubs. They are very sensitive to disturbance. Vesper Sparrows (T) are grassland birds whose habitats often include taller woody vegetation interspersed within the grassland. The habitats are typically dry, well-drained sites with a mixture of short grass, bare ground, and shrubs, trees, or other high structures from which males can sing, including telephone lines and poles.

Bridle Shiners (SC) are small minnows (<2inches long) that are found in clear water in slack areas of streams and rivers and are also found in lakes and ponds.

Several species that are no longer listed under MESA (the Massachusetts Endangered Species Act) remain of conservation concern. Spotted Turtles (delisted) use a mix of habitats – dry open uplands for nesting, and forested and non-forested wetlands and their edges for basking, foraging, mating, and over wintering. Vernal pools and larger wetlands are important for Spotted Turtles.

The rare invertebrates that are known from Townsend are all aquatic species found in or along the Squannacook. Two species of rare mussels (Triangle Floater (SC) and Creeper (SC)) known from Townsend require clear water in streams and ponds. Seven species of rare dragonfly species occur in similar areas along the Squannacook....The multiple species of dragonflies and freshwater mussels present in the Squannacook emphasize the quality of the river and its water, and its importance in providing habitat for a variety of species, common and rare.

Townsend has several BioMap2 areas – the areas of most importance to protect in order to maintain the biodiversity of the town, region, and state. BioMap2 cores were produced by NHESP to identify the areas of most importance for biodiversity: they are based on known locations of rare species and uncommon natural communities, and incorporate the habitats needed by those species to maintain the local populations....There are also areas of Critical Natural Landscape (CNL) the protection of which will enhance the viability of the BioMap2 areas and pick up large Landscape areas that are themselves very important for all species....Both Core Habitat and CNL areas are intended as targets for land acquisition to protect the biodiversity of Townsend. Land that abuts currently protected open space within the BioMap2 Cores or CNL should be targeted for acquisition. Many of the polygons of both aspects of BioMap2 extend into other towns: these large polygons provide opportunities to protect large unfragmented areas that will provide the best opportunities to limit further species loss from the town and region.” (NHESP, 4/8/2011)

Numerous wildlife co-exist in the wetlands in the town, particularly along the Squannacook River. However, the large wetland areas in Ash Swamp, Dead Swamp, Wolf Swamp, and the Meadow Road wetland all were identified by the MADFW as being of regional importance. Many of these parcels (except for Dead Swamp) are privately owned. The diversity of wildlife communities in Townsend offers excellent opportunities for recreational use of fish and wildlife resources. Scientific, cultural and recreational values are associated with wildlife and natural communities. Hunting remains a popular recreational pursuit in Townsend. Fishing also is a major form of recreation in many of the tributaries of the Squannacook River. (See Maps 9a, 9b, and 9c: NHESP BioMap2 Areas)

To maintain wildlife, an effort must be made to protect their habitat. In general, the preservation and maintenance of a diversity of wildlife habitats is critical to ensure that populations of all native wildlife species continue to be represented in Townsend. There are several factors which determine the survival of a species, such as quantity of food, shelter and necessary breeding environment. As Townsend develops, consideration of these factors should be part of many land use decisions. The Commonwealth demonstrated this attitude by including wildlife as a significant interest under the Wetlands Protection Act. The diversity of habitat, as currently seen in Townsend, means a diverse wildlife and a healthy biological community. The MADFW continues to purchase strategic parcels of land to preserve large tracts for habitat.

4.6 SCENIC RESOURCES AND UNIQUE ENVIRONMENTS

4.6.1 Scenic Landscapes and Geologic Features

Due to the town's varying topography, elevated hills and open fields, several scenic features are evident. The residents are most familiar with these areas and have pointed out a number they would like to see maintained. These views add a great deal to the rural nature of the community

and serve to enhance the quality of life for Townsend's residents and those who drive through the town. These vistas are primarily from Townsend Hill, Barker Hill, Bayberry Hill and other elevated areas, although pleasant views are present throughout the town. Some of the resources and unique areas the residents would like protected are the Squannacook River, Ash Swamp, the Town Common, Bixby Reservoir, vernal pools, isolated lands subject to flooding and agricultural properties. (See **Map 10: Unique and Scenic Features**) There are still a number of farms located in Townsend and this is evident by the many hay fields and production fields dotted throughout the landscape. All along most of the rivers and streams in town there are scenic vistas and plentiful wildlife habitat.



In 1974 the Planning Board adopted the Scenic Roads Act under MGL Ch. 40, Section 15C and designated all of the roads of Townsend, with the exception of Routes 13 and 119, as scenic roads and subject to a Planning Board public hearing before any trees are cut or removed or stone walls are removed or relocated.

There are several geologic features in Townsend that are scenic and unique. In the Townsend Hill Wildlife Management Area owned by the State in the northern part of town, there is a deep ravine that affords beautiful vistas. In the Townsend State Forest north of Turnpike Road, there is a quarry that is privately owned. There are many abandoned gravel pits in town, some private, but most owned by the State and Town that afford unique wildlife habitats and successional plant growth. Townsend is abundant in sand and gravel, as is evident by the number of gravel pits located in town. Some pits are still operational and afford their owners an income from the product. In the valleys of the many hills in town there are mostly coarse glacial stratified deposits, and the hills are mostly composed of shallow bedrock overlain by thin and thick till.

4.6.2 Cultural and Historic Areas

Townsend has three Historic Districts, one in each of the three “village” areas. **Historic District I** is in the center of town and includes town-owned buildings such as Memorial Hall built in 1894 (currently serving as Town Hall and housing municipal offices), the “Town Hall Annex” building built in 1915 (which was the first bank building in town and previously housed the Fire Department Headquarters and, prior to that, Townsend National Bank) now serves as the Townsend Recreation Center. The central and defining feature of Historic District I is the Town Common which serves as a community meeting place for a variety of public activities and events, and is a perfect example of a rural New England town-common, complete with a classic (and often-used) example of a bandstand gazebo. Also included in Historic District I are several private residences, four buildings which serve as private commercial businesses, and two churches.

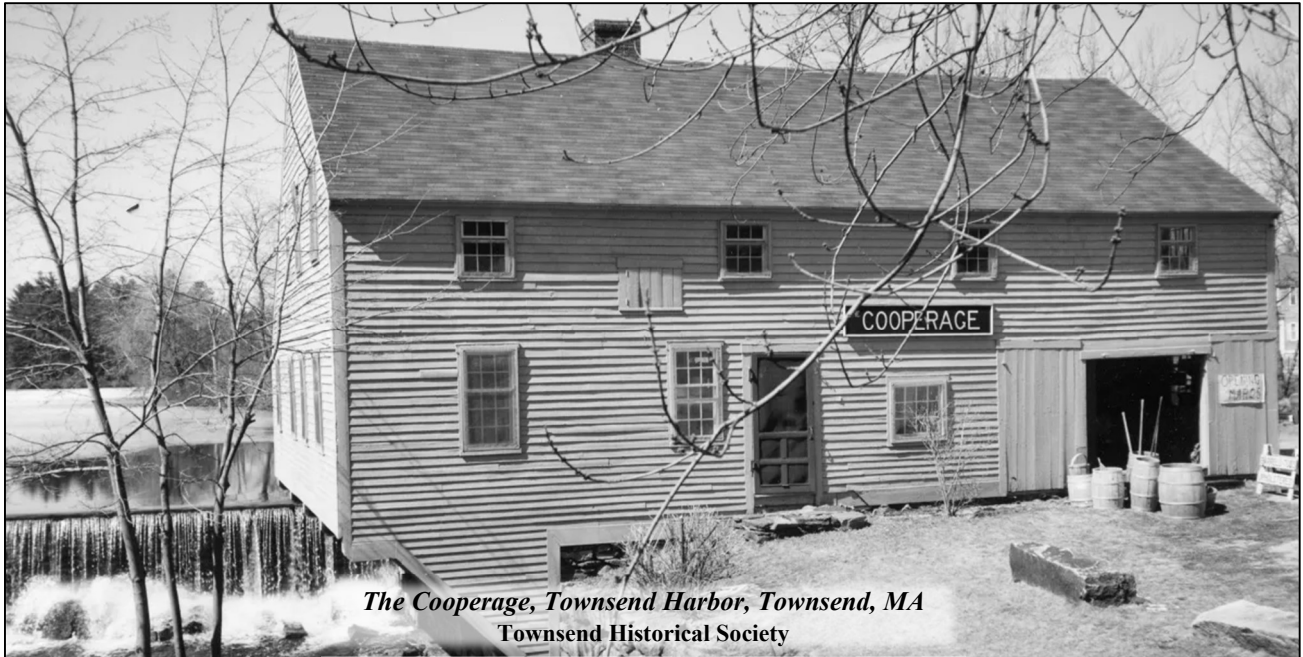
Historic District II, located in “the Harbor”, which is the “village” in eastern Townsend where the Squannacook River becomes the Harbor Pond. In this District, known as Townsend Harbor, or more colloquially referenced by locals as simply “the Harbor”, there are several buildings owned by the Historical Society that serve as examples of Townsend’s past cultural and historical heritage. For instance, there is the Spaulding Grist Mill, built between 1812 and 1840, on the site of the Town’s first saw mill (1733) and grist mill (1734-5), an example of an early water-powered mill where the grinding stones were driven by a horizontal wheel powered by water from the Squannacook River. The mill processed corn and grain grown by local farmers until it closed in the 1920s. It is currently, and has been for some time, closed to the public while under repair.

Another property, the Reed Homestead, built by tanner John Jewett, in 1790, and sold to another tanner, Oliver Reed in 1809 is a Federal-style dwelling that was home to four generations of the Reed family. The home includes a room with murals attributed to Rufus Porter, itinerate painter, inventor and founder of The Scientific American Magazine, and a rare early country clothing collection, as well as grounds containing Victorian gardens with authentic plantings.



Then there is the Cooperage, built in 1733, it began as a mill for sawing boards. It was later converted to a fulling mill. In the mid-1800s it housed the barrel-making business of E. Spaulding, when the six-sided cooper fireplace was added. Later a riverside restaurant occupied the premises. Now it is a common stop for antique collectors, weekend thrifters and flea marketers, and seasonal byway tourists. It operates as a renowned antique shop specializing in genuine New England antique furniture and wares and offering a wide variety of traditional souvenirs in the “gift shop”. The building was acquired by the Townsend Historical Society from the Society for the Preservation of New England Antiquities.

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The Cooperage, Townsend Harbor, Townsend, MA
Townsend Historical Society

The final building in the Harbor owned by the Historical Society is the Harbor Church. Built in 1853 as a Unitarian meetinghouse, the building was closed and abandoned as a church after just a few years. It stood empty until its development as a theater and community center in the late 1800s. Now it occasionally serves as a place to hold meetings and a spot for weekend antique or craft sales. There are also several residences located within Historic District II and two buildings used for private businesses.

Historic District III, located in the “village” of West Townsend, is the Town’s third village center. The Village of West Townsend included two buildings owned by the Town, the West Townsend Fire Station, built in 1900, and the West Townsend Reading Room, built in 1930. Unfortunately, the Fire Station (as well as the adjacent, original American Legion building, a former seminary) has been demolished since the previous plan and a new fire station was built on the site. The Reading Room is used as a meeting place for various non-profit organizations and the public. It can be rented out for functions by contacting the Town municipal offices. Other properties in this district include private residences, private businesses and one church.



West Townsend Fire Station
demolished in 2018

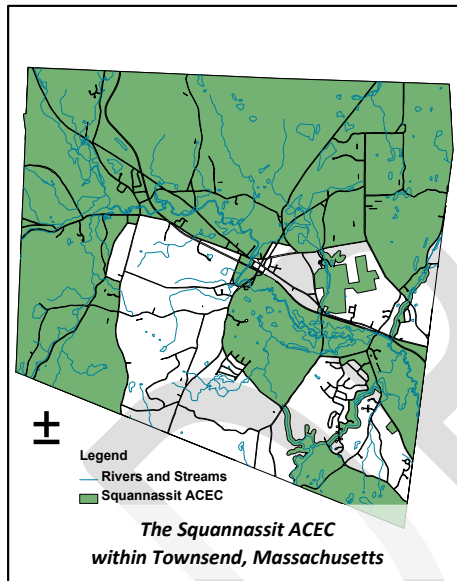
MEB Photo
www.Firenews.org

4.6.3 Unique Environments - ACEC

In December 2002, the Massachusetts Secretary of Environmental Affairs designated the Squannassit Area of Critical Environmental Concern (ACEC). (See Figure 4.2, Squannassit

ACEC) ACECs are places in Massachusetts that receive special recognition because of the quality, uniqueness and significance of their natural and cultural resources. These areas are identified and nominated at the community level and are reviewed and designated by the state's Secretary of Environmental Affairs. ACEC designation creates a framework for local and regional stewardship of critical resources and ecosystems. Townsend contains 40%, or 15,050 acres, of the Squannassit ACEC which covers approximately 70% of Townsend. According to the 2001 State BioMap about 46% of the Squannassit ACEC is BioMap Core Habitat and 33% is designated as Supporting Natural Landscape.

As of 2009, there are 36 Natural Heritage Certified Vernal Pools within the ACEC, as well as 369 Potential Vernal Pools as identified through photo-interpretation in the 2001 Mass Aerial Survey of Potential Vernal Pools. While not all of these locations will turn out to be certifiable vernal pools when checked on the ground, a high percentage will be functioning vernal pools. State-wide there is an average density of 5.574 Potential Vernal Pools per 1000 acres. By contrast, in the Squannassit ACEC, the average density of PVPs is 9.844 per 1000 acres, about 1.75 times the state average.



The Squannassit ACEC connects with the boundary of the Central Nashua River Valley ACEC to the south, along the Nashua River corridor, and is adjacent to the Petapawag ACEC, which is located along and to the east of the Nashua River, from the Town of Ayer north to New Hampshire. The Squannassit and Petapawag ACECs share the Nashua River corridor and its associated physical, biological and cultural resources and history. Although the two areas were nominated and designated as separate ACECs, it is important to state that the Nashua River corridor is a central resource feature of both of these ACECs (as well as a central feature of the Central Nashua River Valley ACEC).

There is highly significant drinking water resources present within the ACEC. These include portions of several high-yield aquifers as defined by the United States Geological Survey (USGS) in the areas of Pearl Hill-Willard Brook and

Witch Brook in Townsend. Extensive medium-yield aquifers are located along the length of the Squannacook River in Townsend. According to the Squannassit ACEC designation report, the wetland resource areas included in the ACEC are significant to the groundwater supply and private water supplies, the prevention of pollution, flood control, the prevention of storm damage, the protection of fisheries, and the protection of wildlife habitat – all of which are public interests defined in the Wetlands Protection Act and regulations promulgated there under. The area lies at the transition between two major forest biomes, the northern hardwood-hemlock-white pine forests which extend into Canada, and the central hardwood-oak-hickory forests which extend to Georgia. Both biomes exist together in varying combinations throughout the Squannassit ACEC, resulting in diverse mixtures of vegetative species.

According to the nomination report, the five largest tributaries to the Nashua River in this area flow to the southeast, while the Nashua River flows to the north. The direction of flow of the tributaries is controlled by deep underlying bedrock valleys. The report states that the confluence of diversity of topography, soils, hydrology, and vegetation is unique and has, in turn, resulted in a corresponding diversity of habitat types and therefore of biodiversity. Agriculture and forestry are important components of the overall resource complex. The area contains unique and highly significant archaeological and historical resources, as well as scenic landscapes of statewide significance.

There are approximately 2,310 acres of farmland within the ACEC, 6% of the total ACEC acreage. This MassGIS land use coverage data can be separated into the following categories: cropland, 1,385 acres; pasture, 650 acres; orchard, 215 acres; and nursery, 60 acres. The largest amounts of cropland within the ACEC are located in Pepperell (approximately 405 acres) and Townsend (385 acres). The largest amounts of pasture within the ACEC are located in Pepperell (approximately 275 acres) and Townsend (195 acres). Both the Squannacook and Nissitissit Rivers are on DEP's "Alert Status". While achieving water quality standards for a Class B Cold Water Fishery and Outstanding Resource Water, issues relating to increased development and subsequent loss of riparian cover and increase in impervious areas pose a serious threat to these watersheds. Increasing water withdrawals will impact stream flow and habitat and augment the impacts of increasing temperatures and bacterial contamination during wet weather events. (State ACEC Website, 2011)

4.7 ENVIRONMENTAL CHALLENGES

Over the last thirty years, the residents of Townsend have protected its aquifer through Zoning Bylaws. Although important regulations are in place to protect the future water supply of Townsend we are still faced with several environmental problems.

4.7.1 Hazardous Waste and Brownfield Sites

According to data maintained by the Massachusetts DEP Bureau of Waste Site Cleanup, there are several properties in Townsend that are confirmed hazardous waste sites or have experienced reportable releases of chemicals in the past ten years. A comprehensive list of areas of chemical releases and spills, as well as their current remediation status, can be found in **Appendix C and on Map 11: Environmental Issues**. There is a 2-acre site on Turnpike Road that was a rudimentary dump site that could potentially fit into the Brownfield Program.

Townsend has auto body shops, repair shops, service stations, vehicle fleet maintenance, a highway department, and manufacturing within its aquifer district. These businesses use significant amounts of toxic material such as solvents, paint thinners, oils, and degreasers. As of now, none of these businesses have been identified as having any groundwater contamination, but the potential for contamination does exist.

The Town of Townsend participates in the Devens Regional Household Hazardous Products Collection Center, a regional collaboration where, for a fee, residents can bring their hazardous waste. The Center is open twice a month from March through December. The Townsend Highway Department collects waste oil once a month from residents. Over 2,000 gallons of waste oil has been collected from 2014 through 2022. (Townsend Annual Reports 2014-2022)

4.7.2 Landfills

The Town's Landfill located on Greenville Road was capped in 2004. The landfill needs to be monitored for 30 years, including gas and water monitoring wells which are analyzed for contaminants in the leachate ponds and infiltrate water that may pollute our groundwater. The Board of Health has contracted with Weston & Sampson to conduct testing on the collection lagoons to gather data for eventual shutdown of the treatment system which could happen as early as 2020.

The Landfill also serves as a recycling center where residents can bring bulky items for a nominal fee. In 2022 a statewide ban on disposal of textile mattresses was put into effect. The Town has since partnered with Tough Stuff Recycling, Inc. to offer curbside pickup for proper recycling of such mattresses. The Board of Health also received another grant from MassDEP to purchase a new container to store recyclable mattresses. Mattress recycling bags were also made available by the Board of Health for a small fee of \$5.00 each. The curbside trash and mandatory recycling programs continue. In 2022, the town collected 910 tons of paper, glass, cans, and plastic and 2,373 tons of trash, which is 18 tons less of recycling and 114 tons more trash than collected in 2021. The community is urged to "Reduce, Reuse, Recycle". (2022 Townsend Annual Town Report)

4.7.3 Erosion and Sedimentation

There are no constant and significant problems with erosion in Townsend, as most are short-term and related to particular development projects. Specific areas at risk for erosion in Town, if developed, are those areas with slopes from 8 to 15 percent and greater. This should be noted, as slope conditions usually do not prevent development but do increase costs, and if care is not taken, can lead to serious environmental problems.

Areas in Townsend that are at risk from sedimentation are generally waters with substantial floodplains or with excessive slopes at their shore lands. The areas falling into the first category are the banks of the Squannacook River and some of its tributaries that tend to be eroded and wash downstream when waters rise during heavy rainfall and flood them out. In addition, there occasionally are developments under construction that increase sedimentation due to inadequate or failing erosion and sedimentation control. In all cases, the sedimentation that occurs contributes heavily to non-point source pollution and causes water quality problems. To mitigate these conditions, erosion should be carefully monitored, and Best Management Practices (BMPs) adhered to as outlined in Townsend's Stormwater Bylaw and the Department of Environmental Protection's Stormwater Management Policy Handbook.

4.7.4 Chronic Flooding

Most areas in Townsend that are at risk of flooding are those areas near rivers, streams, and wetlands. The land in Townsend that is most susceptible to being submerged from a storm event is the Squannacook River shore lands and some of its tributaries. The meandering nature of the Squannacook has created a substantially sized floodplain, creating large buffers between the river's edge and buildable upland areas. However, some portions of the Squannacook are developed and are subject to periodic flooding which is created by runoff from snowmelt or long-term rain events. While development immediately adjacent to the rivers is limited by existing zoning bylaws, low-lying areas near ponds and brooks tend to see the brunt of any flood damage that does occur.

4.7.5 Septic Systems

Townsend at present is entirely private septic systems for wastewater disposal. System failures are common; however, the recently revised Massachusetts Title V regulations seem to gradually support repair. Older homes along the Squannacook and its tributaries often have cesspools and failing systems, which contribute to the nutrient enrichment, oxygen depletion and bacterial contamination of the water bodies. The issue of on-site sewage disposal is an important consideration when examining the high number of private wells in Townsend. This factor and the low pumping rate restrict this “zone of contribution” to a limited land area. The abundance of steep slopes in town also restricts locations of private septic systems. The Townsend Board of Health regulations prohibit leaching fields within 100 feet of a wetland and 200 feet of a perennial stream.

4.7.6 Stormwater

Stormwater runoff occurs when precipitation from rain or snowmelt flows over the ground. Impervious surfaces like driveways, parking lots, sidewalks, and streets prevent stormwater from naturally soaking into the ground. Stormwater can pick up sand, debris, chemicals, pesticides, fertilizers, oils, salt, litter and other pollutants and flow into a storm drain or directly into a lake, stream, river, or wetland. Anything that enters a storm drain is discharged into the water bodies we use for public drinking water, swimming, boating, and fishing.

In 2003 the Town of Townsend was required by the Environmental Protection Agency (EPA) to apply for a National Pollutant Discharge Elimination System (NPDES) Phase II permit. This permit was received and must be renewed every five years. The Phase II permit requires municipalities and operators of construction sites to prevent sediment and other pollutants from washing into nearby streams, rivers, and lakes. In response to this requirement, Townsend successfully passed at Town Meeting in the fall of 2007 a Stormwater Bylaw and an Illicit Discharge Elimination Bylaw. Under the new bylaws, construction that would disturb a minimum of one acre is required to obtain a Stormwater Permit from the Planning Board. This applies to residential as well as commercial and industrial sites. (Townsend Stormwater Committee pamphlet)

The Townsend Highway Department monitors and repairs all of the stormwater structures in the town including cleaning catch basins and piping infrastructures and sweeping the streets in the spring to remove potential contaminants from the roadways. There are several locations throughout the town that need drainage improvements and the Highway Department gets to these as time and budget allow.

4.7.7 New Development

Due to the extensive wetlands and steep slopes in town, potential new development sites are difficult to locate. Engineers are forced to develop creative house lots to “fit” houses onto the land while avoiding wetlands and slopes. The **Conservation Commission has a 50 foot no build zone within their regulations** that keeps structures from encroaching on these important resources. The Commission is working on revising their regulations to require a 75 foot no build zone to better protect the wetlands. As noted in Section 3.4.3, all of the subdivision developments in the 2000s have been Open Space Preservation Developments, creating more dense neighborhoods with open

space donated to the town. Due to the extensive endangered species habitat in Townsend, new development increasingly must file applications for approval with the Natural Heritage and Endangered Species Program.

4.7.8 Ground & Surface Water Pollution

Potential sources of ground and surface water contamination in Townsend include failed septic systems, a golf course, construction sites, sand and gravel mines, intensive agricultural operations, the former landfill/transfer station, and potential PFAS contamination². A 1984 study by the Nashua River Watershed Association produced vital data concerning Townsend's water supply. A number of concerns were identified by the town as they examined their present and future water supply. These concerns included high nitrate and sodium levels, potential contamination threats to the town's well fields and increasing water demand by a rising population. Septic systems, road salt, farming and increased industrial and residential development have the potential to negatively impact Townsend's water supply if not properly sited or managed. Since groundwater is anticipated to satisfy the town's long-term water supply needs, protection of groundwater quality is of paramount importance, particularly over primary recharge areas located along the Squannacook River valley. The most common contamination source is effluent from septic systems, specifically, nitrogen. The conservative chemical nature of nitrogen means it is not appreciably removed as it moves through the ground water system. Road salts follow this same general pattern and may end up in a public drinking water supply well as sodium.

Private wells serving single-family dwellings draw groundwater from a very limited portion of the aquifer. These wells are generally shallow and may penetrate only 10' to 12' into the aquifer. Although the dimensions of this area are small (a technical report on Cape Cod estimates the captive area for a private well to be 400 feet in length by 100 feet in width), the potential for a "short circuiting" between on-site septic systems and wells does exist. Likely contaminants to private wells include nitrogen, salts, and household hazardous waste.

4.7.9 Impaired Water Bodies

According to the State, Townsend currently has no impaired water bodies. Instances of septic breakthrough, stormwater runoff and agriculture runoff negatively affect the water bodies in town. Elevated phosphate and nitrate levels can foster cultural eutrophication negatively impacting recreational opportunities (boating, fishing and swimming). According to the 1998 Nashua River Watershed Report Card, the Squannacook River between Harbor Pond and Hollingsworth & Vose in West Groton is rated as on alert for chemistry and swimming and partially supportive of biology due to elevated temperature readings above those protective for a cold water fishery. Downstream of Harbor Pond there are increasing water quality problems due to high levels of fecal coli form, low dissolved oxygen, erosion leading to sedimentation, increasing siltation and noxious aquatic and invasive weeds in Harbor Pond itself. (Nashua River Watershed Association Five Year Action Plan 2003-2007.)

² https://www.townsendma.gov/sites/g/files/vyhlf1331/f/news/townsend-2290000-pfas6_combo_pn_2021-05-25_revised.pdf
https://www.townsendma.gov/sites/g/files/vyhlf1331/f/news/pfas_letter_fall_2021.pdf

4.7.10 Forestry Issues

According to the USDA, Townsend is approximately three quarters forested. Townsend's forests are used extensively by the public for recreation, hiking, mountain biking, hunting, and fishing. Large masses of greenery provide visual screens and add to undeveloped, rural character, especially when they mask development as they do in Townsend. Because of sheer size, such forests offer excellent opportunities for large, secluded trail systems. These systems afford citizens the chance to exercise, relax, find solitude, and study the natural world. The effects of such places on a town's quality of life are immeasurable. Additionally, because many animal species need large tracts of forest to survive, large blocks of forest are critical conservation resources. The vegetative cover of the landscape positively affects the town by controlling erosion caused by precipitation, modifying temperature, modifying environmental extremes, particularly air temperature, water flow and air composition, and help to make Townsend a healthy, pleasant place in which to live. Townsend's forests are susceptible to the potential impacts of acid rain, invasive pests such as hemlock woolly adelgid and emerald ash borer, various tree diseases, changing climatic conditions, loss of forests for large-scale residential, industrial, or commercial development, including commercial solar arrays, and other invasive and destructive insects and plants. There are significant amounts of invasive plant species all around the town. The invasive Asian Longhorn Beetle has not been detected in Townsend as of yet. However, most recently, in July of 2022, the Massachusetts Department of Agricultural Resources confirmed a detection of the invasive spotted lanternfly in Townsend³. Spotted lanternfly is an invasive sap-feeding insect that has the potential to negatively impact many agricultural commodities, including apples, peaches, grapes, hops, maple syrup, and ornamental plants. In addition, it has the potential to negatively impact outdoor activities due to the swarming behavior that can occur in late summer.

4.7.11 Invasive Species

There are several locations in town where there are invasive species. Some examples are invasive aquatic plants in the Harbor Pond, bittersweet all over town, Japanese knotweed in roadside drainage areas, etc. The pond at Pearl Hill State Park recently underwent various techniques by DCR to rid the pond of invasive weeds. There is an invasive stand of *Phragmites* in the Dead Swamp in Willard Brook State Forest that DCR and the Friends of Willard Brook will be treating and removing in 2013. Both the Planning Board and the Conservation Commission have a policy of recommending native plants and prohibiting known invasive species for any construction projects.

4.7.12 Environmental Equity Issues

As of November, 2022, Townsend has one Environmental Justice population Block Group, based on income⁴. (Mass EOEEA, EJ Viewer) Lower income populations are sometimes disproportionately impacted by social or environmental conditions. Addressing the needs of such populations to ensure that they have equal access to resources and do not face an increased degree of impact is an important part of community development planning, especially with regard to Open Space and Recreation access and opportunities. In evaluating the open space and recreation locations in town, there are open space parcels throughout the town and open space access or

³ <https://www.townsendma.gov/conservation-commission/news/spotted-lanternfly-has-been-sighted-townsend>

⁴ Income based EJ populations are those of which at least 25% or more of the households within an assessment area have a median household income that is 65% or less than the state median household income.

opportunities are not limited to only certain areas or certain groups. In addition, the recent development of the Squannacook Rail Trail and the Shared Streets and Spaces pedestrian and bike improvements have increased access to multiple Open Space and Recreation resources and opportunities, including access to the Squannacook River and Townsend Harbor Pond. Further, both of these projects are located within the area of Environmental Justice concern and, by their nature and location, serve to lessen EJ impacts and provide substantial benefits to all population segments.

The State's landholdings are numerous and afford many types of passive recreation, including hiking, biking, fishing, swimming, and nature viewing. In particular, state parks and waterfront swimming areas offer an affordable and accessible means of public outdoor, waterfront recreation access that would not otherwise be available to lower-income residents of a rural community.

For active recreation such as ball fields, tennis courts and basketball courts, residents must travel to one of the three school complexes. The tennis and basketball courts at the middle school were recently upgraded and repaired and are now useable by the public. There are playgrounds associated with the elementary school and preschool properties, but these are located in the center of town and must be driven to if you live outside the center of town. The area known as Timberlee Park, a 500 home subdivision has no playground or useable ball fields. There also is no playground in West Townsend. There is one town-owned ball field in West Townsend that the Little League utilizes. There is also an area called Squannacook Meadows which is leased by the local soccer organization, however, problems arise with this use as it is a prime endangered species habitat. Most of the active recreation facilities in town are owned by the school. There have been preliminary discussions regarding a 20-acre town-owned parcel being developed into an active recreation location, including soccer fields, baseball and softball fields, skate park, walking/jogging paths, and playgrounds and picnic areas.

SECTION V: INVENTORY OF LANDS OF CONSERVATION AND RECREATION INTEREST

For the purposes of this plan, open space is defined as land that is valued for natural processes and wildlife, agricultural and forest production, aesthetic beauty, active and passive recreation, and other public benefits. Such lands include working and natural forests, meadows and grasslands, farms, public parks, stream and river corridors, and other natural lands. Historic and cultural sites are often associated with significant open spaces and are a part of our common heritage. The ecological importance of open spaces and its ability to sustain our spirit have long been appreciated and it provides residents with a range of essential and fundamentally irreplaceable services, such as pure water, abundant wildlife, and a moderating influence on our changing climate.

This section provides information about Townsend's current open space. The inventory matrix and maps include parks, forests, wildlife management areas, conservation lands, and significant other open space parcels drawn from data provided by the Townsend Assessor's office. This inventory can provide guidance to Townsend by identifying certain lands of recreational and open space interest for future needs. Lands that are owned by the Conservation Commission are protected in perpetuity under Article 97 and can only be taken out of protection by a vote of the Massachusetts legislature. Parcels owned by the Town of Townsend have no permanent protection and can be used for purposes other than open space. However, most of the town-owned properties have wetlands on them and were only gifted to the town in the 1970s and 80s because they were unbuildable. Some of these properties should be transferred to the care and custody of the Conservation Commission in order to protect them from development. Properties owned by the Water Department are protected under the Drinking Water Rules and Regulations.

During the economic downturn of 2007-2009, known as the "Great Recession", and in the several years following (in and around 2012-2013, around the time of the last update of this plan), the State began purchasing land that was strategically linked to various conservation programs associated with the Fisheries and Wildlife Department and the Department of Conservation and Recreation. Those initiatives combined with land already under state control resulted in approximately 31% of Townsend land under State ownership. Other local initiatives including Chapter 61, 61A and 61B (Chapter Land) and other programs put approximately 14% of land into semi-protection. The Chapter Land program was created by the State to give preferential tax treatment to those landowners who maintain their property as open space for the purposes of timber production, agriculture, or recreation. The town has an option ("right-of-first-refusal") to purchase any Chapter Land whenever the owner plans to sell or convert it to a residential, commercial or industrial use. The town shall have a period of 120-days, in the case of intended sale, as a first refusal option to meet a bona fide offer to purchase the land. Despite all these measures to conserve open land for various purposes, residential building still occurs within areas that are either unsuitable for sustainable development or which possess characteristics or resources that would be better suited for protection than development. Such unsustainable development, and the loss of beneficial open space lands or critical natural resources, or subsequent negative impacts to those resources, can have long-lasting deleterious effects on a community. Alternatively, wise use, sustainable development, and protection of open space and natural resources can have long-lasting positive impacts to a community and its financial, natural, and physical resources.

The Commonwealth of Massachusetts is a significant landholder in Townsend. Land owned by the Department of Conservation and Recreation and the Department of Fisheries and Wildlife totals 6,572 acres, or 31.1% of the total area in town. If other public open space in town is included, 7,160 acres in town are permanently protected open space, or 33.8% of the town. In addition, there

are 3,017 acres of land protected through Chapter 61, 61A, or 61B, making a total of 10,177 acres under some degree of protection, or 48.1% of the land in town. This is up from XX% in 2013, 41.1% in 1988, and 45.6% in 1997.

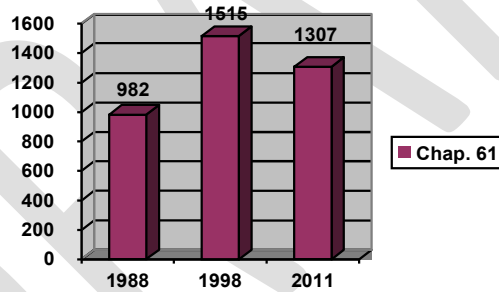
5.1 PRIVATE PARCELS

The private parcels discussed in this section include Chapter 61 (forest lands), Chapter 61A (agriculture) and Chapter 61B (recreation land) and other lands privately owned and protected. (See Table 5.2 and Map 12: Open Space & Chapter 61 Lands)

5.1.1 Chapter 61 – Forest lands

Chapter 61 of the Massachusetts General Laws applies to parcels with 10 or more contiguous acres of forest land that have been certified by the state forester as being under an approved forest management plan. Properties under Chapter 61 get preferential tax treatment as compared to similar properties taxed at full market value. To ensure that land under Chapter 61 is managed in a long-term sustainable fashion, there is a penalty for withdrawal from the program and changing it to residential, industrial or commercial use. This penalty consists of payment for the difference between taxes paid and taxes deferred plus interest. The penalty is computed for the previous five years under certification. Townsend has the right of first refusal should these properties be put on the market for another use. In June 2023, there were approximately 1,367.33 acres of land in Townsend enrolled in the program as Chapter 61 Forest Lands.

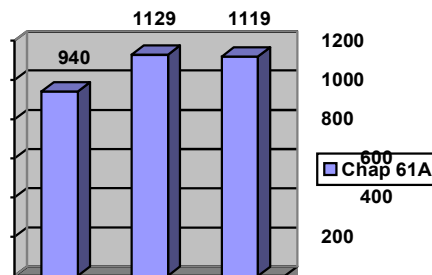
Acreege in Townsend in Chapter 61:



5.1.2 Chapter 61A – Agricultural lands

The agricultural and horticultural land classification program under Massachusetts General Laws Chapter 61A is designed to encourage the preservation of the Commonwealth's valuable farmland and promote active agricultural and horticultural land use. It offers significant local tax benefits to property owners willing to make a long-term commitment to farming. In exchange for these benefits, the city or town in which the land is located is given the right to recover some of the tax benefits afforded the owner when the land is removed from classification and an option to purchase the property should the land be sold or used for any other purpose than to continue raising farm products. In June 2023, there were approximately 944.43 acres of land in Townsend enrolled in the program as Chapter 61A Agricultural Lands.

Acreege in Townsend in Chapter 61A:



0 1988 1998 2011

DRAFT

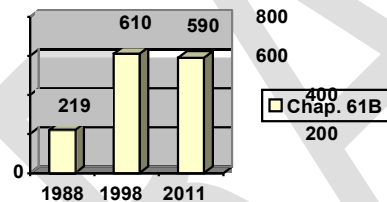
5.1.3 Chapter 61B – Recreation lands

Chapter 61B of the Massachusetts General Laws applies to parcels of five acres or more that have been classified for recreational use. It offers significant local tax benefits to property owners willing to make a long-term commitment to preserving land in an undeveloped condition or for use for outdoor activities. In exchange for these benefits, the city or town in which the land is located is given the right to recover some of the tax benefits afforded the owner when the land is removed from classification and an option to purchase the property should the land be sold or used for any purpose other than to maintain it as open space or recreational use. There are two ways a parcel can qualify:

1. It must be maintained in a substantially natural, wild or open condition or must be maintained in a landscaped condition permitting the preservation of wildlife and natural resources. It does not have to be open to the public, but can be held as private, undeveloped, open space land.
2. It must be used for certain recreational purposes and must be open to the public or members of a non-profit organization.

In June 2023, there were approximately 506.21 acres of land in Townsend enrolled in the program as Chapter 61B Recreation Lands.

Acreage in Townsend in Chapter 61B:



The overall acreage in Townsend covered by this reduced tax program has fallen from 3,254 acres in 1998 to 3,016 acres in 2011, a drop of 7%, and has dropped by approximately 200 more to 2,817.97 acres in 2023.

5.1.4 Private Parcels with Restrictions

As of June 2023, there are currently 13 conservation restriction (CR) and one conservation easement held on private land within Townsend. There are currently no parcels being currently held in an Agricultural Preservation Restriction.

5.2 PUBLIC AND NON-PROFIT PARCELS

Between 2007 and 2014, the State has been purchasing land that is strategically linked to various conservation programs associated with the Fisheries and Wildlife Department and the Department of Conservation and Recreation. Those initiatives combined with land already under state control will result in approximately 31% of Townsend land under State ownership. The Commonwealth of Massachusetts is a significant landholder in Townsend, and they are continuing to purchase land in town. In 1998, land owned by the Department of Conservation and Recreation and the Department of Fish and Game totaled 5,660 acres, in 2011 it totaled 6,572 acres, now, in 2023, it equals X,XXX acres. This is an increase of XX%.

The Town of Townsend has also increased its land holdings since 1998. Town and Conservation

Commission land has increased from 641 to 944 acres as of 2013. Between 2013 and 2023, the Conservation Commission acquired another XXX acres of permanently protected land.

The Townsend Conservation Land Trust, founded in 1988, had 41 acres of land in 1998, and owned 184 acres in 2013. In 2023, they own a total of XXX acres.

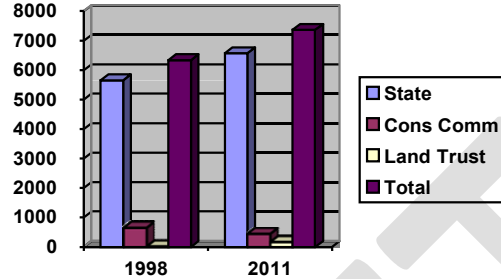


Table 5.2 lists all public parcels in Townsend. In this table F/W refers to the Massachusetts Department of Fish and Wildlife, DCR refers to the Massachusetts Department of Conservation and Recreation, TCLT refers to the Townsend Conservation Land Trust, TCC refers to the Townsend Conservation Commission, TWD refers to the Townsend Water Department, TOT refers to the Town of Townsend, and NMRSD refers to the North Middlesex Regional School District comprising Townsend, Ashby, and Pepperell. (See Map 12: Open Space & Chapter 61 Lands)

Table 5.1 Privately Owned Parcels

PARCEL ID	LOCATION	ACRES	USE	ZONING	PROTECTION	Notes
4 17 1	WEST MEADOW RD	0.17	Booster Pumping Station	RB2	Easement	
32 18 0	WARREN RD	68.00	Active recreation	RA3	Conservation Restriction	
3 4 1	HAMILTON HILL RD	0.08	Forested island	RA3	Conservation Restriction	
32 19 0	WARREN RD	68.00	Active recreation	RA3	Conservation Restriction	
36 18 2	BOUTELLE RD	29.62	Forest land	RB2	Conservation Restriction	
28 44 0	BOUTELLE RD	29.62	Forest land	RA3	Conservation Restriction	
23 26 0	GILCHRIST RD	83.13	Forest land with wetlands	RB2	Conservation Restriction	
18 25 0	TURNPIKE RD	41.50	Forest land with Squannacook River Frontage	RA3	Conservation Restriction	
19 43 2	TURNPIKE RD	0.21	Passive recreation	RA3	Conservation Restriction	
19 43 3	TURNPIKE RD	2.50	Passive recreation	RA3	Conservation Restriction	
9 10 0	RYAN RD	22.46	Passive recreation	RA3	Conservation Restriction	
13 8 26	KRISTOPHER LN	24.15	Passive recreation	RA3	Conservation Restriction	
46 3 4	NORTH END RD	27.90	Forest land	RB2	Conservation Restriction	
46 3 5	NORTH END RD	22.81	Forest land	RB2	Conservation Restriction	
26 42 0	OLD MEETING HOUSE RD	2.30	Forest land	RA3	Chapter 61	
14 2 11	TYLER RD	37.22	Forest land	RB2	Chapter 61	
14 2 13	TYLER RD	32.75	Forest land	RB2	Chapter 61	
16 6 0	CLEMENT RD	33.00	Forest land	RB2	Chapter 61	
23 26 0	GILCHRIST RD	89.00	Forest land	RB2	Chapter 61	
25 1 0	EMERY RD	10.50	Forest land	RA3	Chapter 61	
27 45 0	OLD MEETING HOUSE RD	11.76	Forest land	RB2	Chapter 61	
38 4 0	BROOKLINE RD	1.38	Forest land	RA3	Chapter 61	
38 5 0	BROOKLINE RD	7.50	Forest land	RA3	Chapter 61	
48 8 0	MAIN ST	25.50	Forest land	RB2	Chapter 61	
7 24 0	OLD CITY RD	13.60	Forest land	RB2	Chapter 61	
7 4 0	LUNENBURG RD	33.60	Forest land	RB2	Chapter 61	
7 8 0	LUNENBURG RD	25.50	Forest land	RA3	Chapter 61	
9 14 12	BLOOD RD	3.64	Forest land	RA3	Chapter 61	
13 9 0	MASON RD	40.00	Forest land	RA3	Chapter 61A	Type of protection contradicts land use code (601)
16 59 0	CLEMENT RD	4.00	Forest land	RB2	Chapter 61A	Type of protection contradicts land use code (601)
24 5 1	SOUTH ROW RD	42.00	Forest land	RA3	Chapter 61A	Type of protection contradicts land use code (601)
28 44 2	MEADOW RD	3.12	Forest land	RA3	Chapter 61A	Type of protection contradicts land use code (601)
35 14 1	ADAMS RD	42.34	Forest land	RB2	Chapter 61A	Type of protection contradicts land use code (601)
35 27 0	TOWNSEND HILL RD	78.96	Forest land	RB2	Chapter 61A	Type of protection contradicts land use code (601)
36 18 2	BOUTELLE RD	2.23	Forest land	RB2	Chapter 61A	Type of protection contradicts land use code (601)
36 19 0	MEADOW RD	18.00	Forest land		Chapter 61A	Type of protection contradicts land use code (601)
36 4 0	MEADOW RD	29.00	Forest land	RB2	Chapter 61A	Type of protection contradicts land use code (601)
37 8 2	BALL RD	64.00	Forest land	RB2	Chapter 61A	Type of protection contradicts land use code (601)
38 6 0	BROOKLINE RD	14.50	Forest land	RA3	Chapter 61A	Type of protection contradicts land use code (601)
9 14 0	LUNENBURG RD	33.70	Forest land	RB2	Chapter 61A	Type of protection contradicts land use code (601)
9 14 13	WEST ELM ST	2.00	Forest land	RA3	Chapter 61A	Type of protection contradicts land use code (601)
24 34 0	SOUTH ROW RD	18.00	Forest land	RB2	Chapter 61B	Type of protection contradicts land use code (601)
32 19 0	WARREN RD	40.20	Forest land	RA3	Chapter 61B	Type of protection contradicts land use code (601)
8 10 1	LUNENBURG RD	10.00	Forest land	RB2	Chapter 61B	Type of protection contradicts land use code (601)
24 33 0	SOUTH ROW RD	25.50	Forest land	RA3	Chapter 61	Type of protection contradicts land use code (911)
21 1 2	BARKER HILL RD	19.17	Forest land	RB2	Chapter 61B	Type of protection contradicts land use code (911)
16 11 0	CLEMENT RD	9.36	Field crops, Non-productive land	RB2	Chapter 61	Type of protection contradicts land use code (713)
35 21 0	HIGHLAND ST	10.00	Field crops, Non-productive land	RB2	Chapter 61	Type of protection contradicts land use code (713)
18 25 0	TURNPIKE RD	41.50	Field crops, Non-productive land	RA3	Chapter 61A	
28 45 0	ADAMS RD	20.00	Field crops, Non-productive land	RA3	Chapter 61A	
16 4 0	CLEMENT RD	12.05	Field crops, Non-productive land	RB2	Chapter 61B	Type of protection contradicts land use code (713)

RB2=Residential B-2acres, RA3=Residential A-3acres

Table 5.1 continued

21 8 0	BARKER HILL RD	18.51	Field crops, Non-productive land	RB2	Chapter 61B	Type of protection contradicts land use code (713)
13 16 0	TURNPIKE RD	23.00	Hiking	RA3	Chapter 61	Type of protection contradicts land use code (801)
21 5 0	BARKER HILL RD	62.00	Mixed Use (Primarily Agriculture, some Commercial)	RB2	Chapter 61A	
35 30 1	WALLACE HILL RD	9.70	Mixed Use (Primarily Agriculture, some Residential)	RB2	Chapter 61	Type of protection contradicts land use code (071)
28 37 0	MEADOW RD	12.60	Mixed Use (Primarily Commercial, some Agriculture)	RA3	Chapter 61	Type of protection contradicts land use code (037)
25 2 0	EMERY RD	226.00	Mixed Use (Primarily Commercial, some Forest)	RA3	Chapter 61	
18 65 0	SCALES LN	115.00	Mixed Use (Primarily Commercial, some Recreation)	ID	Chapter 61	Type of protection contradicts land use code (038)
35 8 0	WALLACE HILL RD	19.00	Mixed Use (Primarily commercial, some residential and Chapter 61A)	RB2	Chapter 61	Type of protection contradicts land use code (0317)
37 24 0	NORTH END RD	3.70	Mixed Use (Primarily Forest, some Agriculture)	RB2	Chapter 61A	
26 20 0	FITCHBURG RD	33.02	Mixed Use (Primarily Forest, some Residential)	RA3	Chapter 61	
32 18 0	WARREN RD	8.00	Mixed Use (Primarily Industrial, some commercial and Chapter 61B)	RA3	Chapter 61	Type of protection contradicts land use code (0438)
17 2 0	BAYBERRY HILL RD	6.00	Mixed Use (Primarily Recreation, some Residential)	RB2	Chapter 61	Type of protection contradicts land use code (081)
28 54 0	MEADOW RD	17.90	Mixed Use (Primarily Residential, some Agriculture)	RA3	Chapter 61	Type of protection contradicts land use code (017)
36 20 0	MEADOW RD	4.80	Mixed Use (Primarily Residential, some Agriculture)	RB2	Chapter 61	Type of protection contradicts land use code (017)
36 30 0	BROWN RD	8.40	Mixed Use (Primarily Residential, some Agriculture)	RB2	Chapter 61	Type of protection contradicts land use code (017)
38 10 0	NORTH END RD	21.34	Mixed Use (Primarily Residential, some Agriculture)	RA3	Chapter 61	Type of protection contradicts land use code (017)
4 16 0	WEST MEADOW RD	9.80	Mixed Use (Primarily Residential, some Agriculture)	RA3	Chapter 61B	Type of protection contradicts land use code (017)
10 47 0	WEST ELM ST	4.54	Mixed Use (Primarily Residential, some Agriculture)	RB2	Chapter 61A	
19 72 0	BURGESS RD	15.50	Mixed Use (Primarily Residential, some Agriculture)	RA3	Chapter 61A	
35 30 0	WALLACE HILL RD	54.32	Mixed Use (Primarily Residential, some Agriculture)	RB2	Chapter 61A	
4 7 0	WHEELER RD	17.00	Mixed Use (Primarily Residential, some Agriculture)	RB2	Chapter 61A	
45 1 0	BALL RD	26.42	Mixed Use (Primarily Residential, some Agriculture)	RB2	Chapter 61A	
8 24 0	LUNENBURG RD	16.00	Mixed Use (Primarily Residential, some Agriculture)	RB2	Chapter 61A	
31 24 0	WARREN RD	44.00	Mixed Use (Primarily Residential, some Agriculture)	RA3	Chapter 61B	Type of protection contradicts land use code (017)
4 22 0	WEST MEADOW RD	120.00	Mixed Use (Primarily Residential, some Agriculture)	RA3	Chapter 61B	Type of protection contradicts land use code (017)
46 1 0	NORTH END RD	58.00	Mixed Use (Primarily Residential, some Agriculture)	RB2	Chapter 61B	Type of protection contradicts land use code (017)
37 21 0	NORTH END RD	2.70	Mixed Use (Primarily Residential, some Chapter 61, 61A)	RB2	Chapter 61A	
14 2 12	TYLER RD	23.12	Mixed Use (Primarily Residential, some Forest)	RB2	Chapter 61	
23 18 0	PIERCE RD	9.00	Mixed Use (Primarily Residential, some Forest)	RA3	Chapter 61	

RB2=Residential B-2acres, RA3=Residential A-3acres

Table 5.1 continued

25 10 0	OLD MEETING HOUSE RD	13.00	Mixed Use (Primarily Residential, some Forest)	RA3	Chapter 61	
28 44 0	BOUTELLE RD	25.30	Mixed Use (Primarily Residential, some Forest)	RA3	Chapter 61	
2 25 0	SAUNA ROW RD	48.83	Mixed Use (Primarily Residential, some Forest)	RA3	Chapter 61A	Type of protection contradicts land use code (016)
36 19 4	MEADOW RD	11.14	Mixed Use (Primarily Residential, some Forest)		Chapter 61A	Type of protection contradicts land use code (016)
15 15 0	TYLER RD	25.00	Mixed Use (Primarily Residential, some Forest)	RA3	Chapter 61B	Type of protection contradicts land use code (016)
24 1 1	TYLER RD	57.42	Mixed Use (Primarily Residential, some Recreation)	RB2	Chapter 61	Type of protection contradicts land use code (018)
15 12 0	DOGWOOD DR	80.00	Mixed Use (Primarily Residential, some Recreation)	RA3	Chapter 61A	Type of protection contradicts land use code (018)
23 23 0	WARREN RD	25.00	Mixed Use (Primarily Residential, some Recreation)	RB2	Chapter 61A	Type of protection contradicts land use code (018)
31 25 0	WARREN RD	21.00	Mixed Use (Primarily Residential, some Recreation)	RB2	Chapter 61A	Type of protection contradicts land use code (018)
9 32 0	BAYBERRY HILL RD	11.00	Mixed Use (Primarily Residential, some Recreation)	RB2	Chapter 61A	Type of protection contradicts land use code (018)
17 10 0	BAYBERRY HILL RD	8.00	Mixed Use (Primarily Residential, some Recreation)	RB2	Chapter 61B	
6 2 0	GREENVILLE RD	53.00	Mixed Use (Primarily Residential, some Recreation)	RB2	Chapter 61B	
23 2 0	SEAVER RD	5.50	Nature Study	RB2	Chapter 61	Type of protection contradicts land use code (803)
9 21 2	BAYBERRY HILL RD	21.22	Nature Study	RB2	Chapter 61	Type of protection contradicts land use code (803)
9 33 0	BAYBERRY HILL RD	5.15	Nature Study	RA3	Chapter 61	Type of protection contradicts land use code (803)
10 53 0	SAUNDERS RD	13.00	Nature Study	ID	Chapter 61B	
12 3 0	OLD TURNPIKE RD	8.00	Nature Study	RA3	Chapter 61B	
13 17 0	TURNPIKE RD	75.00	Nature Study	RA3	Chapter 61B	
8 33 1	LUNENBURG RD	12.00	Nature Study	RB2	Chapter 61B	
8 7 1	LUNENBURG RD	5.00	Nature Study	RB2	Chapter 61B	
9 21 0	BAYBERRY HILL RD	17.00	Nature Study	RB2	Chapter 61B	
10 71 0	WEST ELM ST	5.12	Non-productive Woodlands		Chapter 61A	
10 46 2	WEST ELM ST	72.00	Non-productive Woodland	RB2	Chapter 61B	Type of protection contradicts land use code (722)
20 5 0	BURGESS RD	15.43	Nurseries	RB2	Chapter 61A	
10 46 3	WEST ELM ST	5.43	Pasture	RB2	Chapter 61A	
4 6 0	WHEELER RD	13.00	Pasture	RB2	Chapter 61A	
8 23 0	LUNENBURG RD	2.46	Pasture	RB2	Chapter 61B	Type of protection contradicts land use code (718)
35 13 3	HIGHLAND ST	34.90	Productive woodland	RB2	Chapter 61	Type of protection contradicts land use code (717)
16 10 0	CLEMENT RD	21.00	Productive woodland	RB2	Chapter 61A	
45 1A 0	BALL RD	13.59	Productive woodland	RB2	Chapter 61A	
9 39 0	BLOOD RD	11.04	Residential, Commercial	RB2	Chapter 61	Type of protection contradicts land use code (0137)
44 15 1	BALL RD	12.00	Residential, Commercial	RA3	Chapter 61A	Type of protection contradicts land use code (0137)
16 5 0	CLEMENT RD	21.50	Single Family Residential	RB2	Chapter 61	Type of protection contradicts land use code (101)
19 82 0	TURNPIKE RD	26.50	Single Family Residential	RA3	Chapter 61	Type of protection contradicts land use code (101)
26 43 0	OLD MEETING HOUSE RD	9.00	Single Family Residential	RA3	Chapter 61	Type of protection contradicts land use code (101)
26 37 1	OLD MEETING HOUSE RD	12.60	Single Family Residential	RB2	Chapter 61A	Type of protection contradicts land use code (101)
32 33 0	WARREN RD	13.70	Single Family Residential	RA3	Chapter 61A	Type of protection contradicts land use code (101)
46 3 1	NORTH END RD	50.01	Single Family Residential	RB2	Chapter 61A	Type of protection contradicts land use code (101)
8 48 0	BAILEY RD	20.00	Single Family Residential	RB2	Chapter 61A	Type of protection contradicts land use code (101)
10 46 1	WEST ELM ST	30.57	Truck Crops	RB2	Chapter 61A	
19 71 0	BARKER HILL RD	39.77	Field crops, Non-productive land	RA3	Chapter 61A	

RB2=Residential B-2acres, RA3=Residential A-3acre

Table 5.2 Public and Nonprofit Parcels

MANAGEMENT AGENCY	ACRES	LOCATION	ASSESSOR'S MAP	AREA NAME	CURRENT USE/ POTENTIAL RECREATION USE	CONDITION	FUNDING	PUBLIC ACCESS	TRAILS	ADA COMPLIANT	ZONING
TWD	5.3	Off Harbor Trace Rd	33-79-0	Harbor Trace Well	Water Supply Protection/Passive recreation	location of pump station with solar panels	OSPD	No	No	No	RA3
TWD	28.66	25 Harbor Trace Rd	33-79-18	Harbor Trace Well	Water Supply Protection, Squannacook River Public Access/passive trails	gravelly, sandy area with some shrubs and trees	OSPD	Yes	No	No	RA3
TWD	14.53	Redwood St	53A-310A-0	TOT undeveloped	Ball Field, Wetlands	grassy, shrubby		Yes	No	No	RA3
TWD	2.21	Ash Street	53A-992-0	Witches Brook Water Supply	Water Supply Protection Access to ball field/NONE	dirt driveway	Muni	Yes	No	No	RA3
TWD	13.11	Maplewood St	53B-194A-0	Witches Brook Water Supply	Water Supply Protection/NONE	wooded	Muni	Yes	No	No	RA3
TWD	0.464	Spruce St	53B-42-0	Witches Brook Water Supply	Water Supply Protection/NONE	wooded	Muni	Yes	No	No	RA3
TWD	12.23	14 Ash St	53B-999-0	Witches Brook Pumping Stations	Water Supply/NONE	wooded with water dept bldgs	Muni	No	No	No	RA3
TWD	1.5	Off Hickory Dr	53C-994-0	Witches Brook Water Supply	Access thru 25-5-1/NONE	wooded	Muni	No	No	No	RA3
TOT	1.3	Main St	3-6-0	TOT undeveloped	Habitat Protection/NONE	wooded, steep slope		Yes	No	No	RA3
TOT	69.5	Greenville Rd	6-8-0	Landfill, Recycling Center	Capped landfill, Recycling center/Potential recreation area	covered landfill, wooded	Muni	Partial	No	No	RA3
TOT	4.19	139 Lunenburg Rd	8-15-0	TOT undeveloped	Future Water Tank site/NONE	wooded		Yes	No	N/A	RB2
TOT	18.6	Old Battery Rd	10-3-0	TOT undeveloped	Water Supply Protection/NONE	wooded	Muni	Yes	No	No	RA3
TOT	2.5	New Fitchburg Rd	10-20-0	TOT undeveloped	Possible trails	wooded			No	No	RA3
TOT	39.9	512 Main St	11-13-0	Main Street Pumping Station	Water Supply/NONE	pumping station/ wooded	Muni	No	No		RA3
TOT	5.9	Old Tumpike Rd	12-17-0	TOT undeveloped	Forest, Habitat Protection Abuts State land/possible trails	wooded		yes	No	No	RA3
TOT	2.3	West Elm St	10-52-0	TOT undeveloped	Natural resource preservation, habitat protection/NONE	wooded		Yes	No	No	RB2
TOT	4.7	Blood Road	10-70-0	TOT undeveloped	Natural resource preservation, habitat protection/NONE	wooded		Yes	No	No	RB2
TOT	4	Off Horseshoe Dr	11-32-0	Squannacook Meadows	Squannacook River Public Access, Soccer Fields, Rare Species Habitat	partially developed into soccer fields	OSPD	Yes	No	No	RA3
TOT	23.58	Off Horseshoe Dr	11-35-0	Squannacook Meadows	Squannacook River Public Access, Soccer Fields, Rare Species Habitat	partially developed into soccer fields	OSPD	Yes	No	No	RA3
TOT	4.65	Off Horseshoe Dr	11-35-21	Squannacook Meadows	Squannacook River Public Access, Soccer Fields, Rare Species Habitat	partially developed into soccer fields	OSPD	Yes	No	No	RA3

Table 5.2 Public and Nonprofit Parcels

MANAGEMENT AGENCY	ACRES	LOCATION	ASSESSOR'S MAP	AREA NAME	CURRENT USE/ POTENTIAL RECREATION USE	CONDITION	FUNDING	PUBLIC ACCESS	TRAILS	ADA COMPLIANT	ZONING
TOT	7.67	Off Horseshoe Dr	11-35-22	Squannacook Meadows	Squannacook River Public Access, Soccer Fields, Rare Species Habitat	partially developed into soccer fields	OSPD	Yes	No	No	RA3
TOT	0.27	Dudley Rd	11-51-0	Across from Riverside Cemetery	Cemetery/NONE	cleared for cemetery		Yes	No	No	RA3
TOT	5	Dudley Rd	11-64-0	Riverside Cemetery	Squannacook River Public Access, Cemetery Expansion	cleared for cemetery		Yes	No	No	RA3
TOT	5.5	Dudley Rd	11-65-0	Riverside Cemetery	Cemetery/NONE	cemetery		Yes	No	No	RA3
TOT	1	264 Dudley Rd	11-67-0	West Townsend Reading Room	Squannacook River Public Access, Meeting Place/NONE	grassy with bldg		Yes	No	No	RA3
TOT	0.69	Fitchburg Rd	16-29-0	TOT undeveloped	Water tank/NONE	wooded		Yes	No	No	RB2
TOT	7.5	Off Cherry Dr	16-44-0	TOT undeveloped	Wetlands/possible playground	wooded		Yes	No	No	RA3
TOT	0.46	Cherry Drive	16-49-114	TOT undeveloped	Wetlands/NONE	wooded		Yes	No	No	RA3
TOT	0.464	Cherry Drive	16-49-115	TOT undeveloped	Wetlands/NONE	wooded		No	No	No	RA3
TOT	0.473	Laurel Lane	16-49-130	TOT undeveloped	Wetlands/NONE	wooded		Yes	No	No	RA3
TOT	0.46	Laurel Lane	16-49-131	TOT undeveloped	Wetlands/NONE	wooded		Yes	No	No	RA3
TOT	0.478	Laurel Lane	16-49-132	TOT undeveloped	Wetlands/NONE	wooded		Yes	No	No	RA3
TOT	0.46	Tamarack Lane	16-49-140	TOT undeveloped	Wetlands/NONE	wooded		Yes	No	No	RA3
TOT	0.948	Willow Dr	16-50-103	TOT undeveloped	Vernal Pool/NONE	water/shrubby		Yes	No	No	RA3
TOT	0.459	Sumac Dr	16-50-52	TOT undeveloped	Wetlands/NONE	wooded		Yes	No	No	RA3
TOT	0.459	Sumac Dr	16-50-53	TOT undeveloped	Wetlands/NONE	wooded		Yes	No	No	RA3
TOT	0.459	Sumac Dr	16-50-54	TOT undeveloped	Wetlands/NONE	wooded		Yes	No	No	RA3
TOT	0.459	Sumac Dr	16-50-55	TOT undeveloped	Wetlands/NONE	wooded		Yes	No	No	RA3
TOT	0.459	Sumac Dr	16-50-56	TOT undeveloped	Wetlands/NONE	wooded		Yes	No	No	RA3
TOT	0.402	Elm St	17-105-0	TOT undeveloped	Squannacook River Public Access, utility easement/NONE	shrubby		Yes	No	No	RA3
TOT	0.145	Pheasant Ridge Rd	17-109-0	TOT undeveloped	Natural resource preservation, habitat protection/NONE	wooded	N/A	Yes	No	N/A	RB2
TOT	0.557	Pheasant Ridge Rd	17-24B-0	TOT undeveloped	Natural resource preservation, habitat protection/NONE	wooded	N/A	Yes	No	N/A	RB2
TOT	5.3	Off Worcester Rd	17-66-0		Squannacook River Public Access-trails, Habitat Protection	trails not maintained but used frequently		Yes	Yes	No	RA3
TOT	2	Riverbank Terrace	18-27-0	Adams Dam	Squannacook River Public Access with trails	wooded with trails		Yes	Yes	No	RA3
TOT	5	Off Main St	19-44-0	TOT undeveloped	landlocked/NONE	wooded		No	No	No	RA3

Table 5.2 Public and Nonprofit Parcels

MANAGEMENT AGENCY	ACRES	LOCATION	ASSESSOR'S MAP	AREA NAME	CURRENT USE/ POTENTIAL RECREATION USE	CONDITION	FUNDING	PUBLIC ACCESS	TRAILS	ADA COMPLIANT	ZONING
TOT	0.309	Barker Hill Rd	19-49-0	TOT undeveloped	Natural resource preservation, habitat protection/NONE	wooded	N/A	Yes	No	N/A	RA3
TOT	2.8	Off Dudley Road	19-81-0	Howard Park	Passive Recreation-trails Squannacook River Public Access	wooded trails maintained		Yes	Yes	No	RA3
TOT	0.15	Brookline Rd	21-7-2	TOT undeveloped	Natural resource preservation, habitat protection/NONE	wooded		Yes	No	N/A	RB2
TOT	19.3	South Row Rd	25-5-1	TOT undeveloped	Potential for affordable housing	wooded		yes	No	No	RA3
TOT	4.19	177 Main St	26-31-2	Highway Garage Driveway	Natural resource preservation, habitat protection, retention pond/ NONE	wooded		Yes	No	N	RB2
TOT	15.74	Cross St	27-14-0	Cross Street Well	Water Supply/NONE	pumping station/ wooded	Muni	No	No	No	RA3
TOT	1.7	Highland St	27-21-0	Cemetery	Cemetery	cemetery	Muni	Yes	No	No	RA3
TOT	1.2	Adams Rd	27-33-0	TOT undeveloped	Stormwater treatment/NONE	swale area		Yes	No	No	RA3
TOT	0.46	Adams Rd	27-34-0	TOT undeveloped	Natural resource preservation, habitat protection/ NONE	grassy, mowed		Yes	No	No	RA3
TOT	24.7	Main St	27-48-0	Highway Garage	Highway Garage/ possible active recreation	highway bldgs on portion of parcel with the remainder wooded	Gift	Yes	No	Yes	RB2/ RA3
TOT	38	Off Dudley Road	27-5-0	Howard Park	Passive Recreation-trails Squannacook River Public Access	wooded trails maintained		Yes	Yes	No	RA3
TOT	14.6	Off Highland St	27-56-0	TOT undeveloped/Behind Highway G	Forestland/possible active recreation area	wooded, some trails	Gift	Yes	No	No	RA3
TOT	0.45	Highland St	27-57-1	TOT undeveloped/Behind Highway G	Forestland, natural resource preservation, habitat protection/NONE	wooded		Yes	No	No	RA3
TOT	0.23	Old Meetinghouse Rd	27-68-0	Site of First Meetinghouse	Historic Marker; Entrance to OMP/parking	end of cul-de-sac		Yes	Yes	No	RA3
TOT	51	Meadow Rd	28-12-0	TOT undeveloped	Forestland/NONE	wooded		Yes	No	No	RA3
TOT	1.5	Meadow Rd	28-38-0	TOT undeveloped	Wetlands, Habitat Protection/NONE	swampy area		Yes	No	No	RA3
TOT	0.918	Meadow Rd	28-49-6	TOT undeveloped	Stormwater treatment/NONE	swampy area		Yes	No	No	RA3

Table 5.2 Public and Nonprofit Parcels

MANAGEMENT AGENCY	ACRES	LOCATION	ASSESSOR'S MAP	AREA NAME	CURRENT USE/ POTENTIAL RECREATION USE	CONDITION	FUNDING	PUBLIC ACCESS	TRAILS	ADA COMPLIANT	ZONING
TOT	8.01	12 Dudley Rd	28-56-0	Townsend Public Library/Senior Center/Meeting Hall	Library, Senior Center, Meeting space/potential recreation location	grassy area, mowed	Gift	Yes	No	Yes	RA3
TOT	11.85	Dudley Rd	28-57-0	Atwood Property	Designated for affordable housing	wooded	Gift	Yes	No		RA3
TOT	1.78	47 Main St	33-51-1	Harbor Fire Station	Fire Station, water supply protection/NONE	wooded with woods and wet on side of		Yes	No	No	OCD
TOT	9.14	Off Fordway Rd	34-54-40	Townsend Conservation Land	Passive Recreation/possible trail location	wooded possible trail location		Yes	No	No	RA3
TOT	31.4	Wallace Hill Rd/ Haynes Rd	34-74-0	TOT undeveloped	Forestland/possible passive recreation with trails	wooded		Yes	No	No	RB2
TOT	3	Haynes Rd	34-80-0	TOT undeveloped	Vacant/possible trails	wooded		Yes	No	No	RB2
TOT	4.18	Highland St	35-22-1	Highland Street Water Tank	Water Supply/NONE	wooded/water tank	Muni	No	No	No	RB2
TOT	0.15	Brookline Rd	37-33-0	TOT undeveloped	Natural resource preservation, habitat protection/NONE	wooded	N/A	Yes	No	N/A	RA3
TOT	0.18	Off Shirley Rd	39-18-0	TOT undeveloped	Landlocked and vacant. Natural resource preservation, habitat protection/NONE	wooded		Yes	No	N/A	RB2
TOT	9	Shirley Rd	40-2-0	TOT undeveloped	Landlocked and vacant. Natural resource preservation, habitat protection/NONE	wooded		No	No	No	RA3
TOT	0.499	Edward Rd	42-1-54	TOT undeveloped	vacant/Potential playground	wooded		Yes	No	No	RA3
TOT	5	Wamer Rd	44-9-0	TOT undeveloped	landlocked/NONE	wooded		No	No	No	RB2
TOT	2.87	New Fitchburg Rd	47-23C-0	Craven Field	Ball Field	groomed baseball	Gift	Yes	No	No	RA3
TOT	1.001	Worcester Rd	49-20-0	TOT undeveloped	possible affordable house lot/NONE	wooded		Yes	No	No	RA3
TOT	6.85	Off Elm St	49-28-0	TOT undeveloped	Squannacook River Public Access with trails	wooded with trails		Yes	Yes	No	RA3
TOT	0.65	Tumpike Rd	50-49-0	Across from Spaulding School	Public system for Spaulding School/NONE	grassy mowed with woods		Yes	No	No	RA3
TOT	8.8	Main St	50-50-0	Spaulding Memorial School	School, ball fields, playground	grassy area, mowed, playground maintained with donations	Muni	Yes	No	No	RA3
TOT	2	Main St	50-56-0	TOT undeveloped	Parkland-Fire Dept/NONE	grassy, mowed		Yes	No	No	RA3
TOT	0.26	274 Main St	51-12-0	Bank Annex	Municipal functions, exercise classes	grassy, mowed		Yes	No	No	DCD
TOT	0.62	5 Jefts St	51-15-0	Field behind Town Hall	Open municipal parking, informal sports	grassy, mowed		Yes	No	No	DCD
TOT	21	Highland St	51-107-0	Hillside Cemetery	Cemetery	cemetery	Muni	Yes	No	No	RA3
TOT	0.758	Riverbank Terrace	51-39-0	Public Parking Area	Squannacook River Public Access/NONE	gravel parking area		Yes	No	No	DCD
TOT	2.5	Main St	51-90-0	Town Common	Town Common	grassy, mowed		Yes	No	Yes	RA3
TOT	0.06	Brookline St	52-81-0	Gilson Park	and with memorial stone and flag pole	grassy, mowed		Yes	No	No	RA3

Table 5.2 Public and Nonprofit Parcels

MANAGEMENT AGENCY	ACRES	LOCATION	ASSESSOR'S MAP	AREA NAME	CURRENT USE/ POTENTIAL RECREATION USE	CONDITION	FUNDING	PUBLIC ACCESS	TRAILS	ADA COMPLIANT	ZONING
TOT	2.3	South Harbor Rd	53A-1-0	TOT undeveloped	Habitat Protection, Flood Control/NONE	wooded		Yes	No	No	RA3
TOT	0.79	Maplewood Dr	53B-194B-0	Witches Brook Water Supply	Water Supply Protection/NONE	wooded	Muni	Yes	No	No	RA3
TOT	0.464	Spruce St	53B-41A-0	Witches Brook Water Supply	Water Supply Protection/NONE	wooded	Muni	Yes	No	No	RA3
TOT	0.459	Spruce St	53B-43A-0	Witches Brook Water Supply	Water Supply Protection/NONE	wooded	Muni	Yes	No	No	RA3
TOT	0.459	Spruce St	53B-44A-0	Witches Brook Water Supply	Water Supply Protection/NONE	wooded	Muni	Yes	No	No	RA3
TOT	2.13	Off Ash Street	53C-444A-0	TOT undeveloped	Wetlands/NONE	wooded		Yes	No	No	RA3
TOT	0.205	Hickory Dr	53C-995-0	TOT undeveloped	Access to 25-5-1/NONE	wooded		Yes	No	No	RA3
TOT	0.189	Ponderosa Dr	53D-997-0	TOT undeveloped	Wetlands/NONE	wooded		Yes	No	No	RA3
TCC	34.67	West Meadow Rd	4-20-1	Townsend Conservation Land	Passive Recreation/possible trail location	wooded	OSPD	Yes	No	No	RA3
TCC	2.7	Lunenburg Rd	9-3-1	Basbanes Trails	Passive Recreation-trails	wooded, trails maintained	Gift	Yes	Yes	No	RB2
TCC	2.5	Lunenburg Rd	9-3-2	Basbanes Trails	Passive Recreation-trails	wooded, trails maintained	Gift	Yes	Yes	No	RB2
TCC	2.6	Lunenburg Rd	9-3-3	Basbanes Trails	Passive Recreation-trails	wooded, trails maintained	Gift	Yes	Yes	No	RB2
TCC	3.7	Lunenburg Rd	9-3-4	Basbanes Trails	Passive Recreation-trails	wooded, trails maintained	Gift	Yes	Yes	No	RB2
TCC	0.3	Vinton Pond Rd	1-2-6	Undeveloped Townsend Conservation	Forest, Habitat Protection Abuts State land/possible trails	wooded		yes	No	No	RA3
TCC	6.12	Off Locke Brooke Rd	4-19-7	Townsend Conservation Land	Passive Recreation/potential for trails to state land	wooded	OSPD	No	No	No	RB2
TCC	3.27	353 Main St	18 8 2	Undeveloped Townsend Conservation	Natural resource preservation, habitat protection/possible trails	half wooded, half cleared		Yes	No	N/A	RA3
TCC	25.6	Dudley Road	19-80-0		Passive Recreation-trails Squannacook River Public Access	wooded, trails maintained	OSPD	Yes	Yes	No	RA3
TCC	55	Main St	26-37-0	Old Meetinghouse Park	Passive Recreation-trails	wooded, trails maintained	Self-Help Grant	Yes	Yes	No	RB2
TCC	1.6	Main St	26-38-0	Old Meetinghouse Park	Passive Recreation-trails	wooded, trails maintained	Self-Help Grant	Yes	Yes	No	RA3
TCC	28.02	Old Meetinghouse Rd	27-47-0	Old Meetinghouse Park	Passive Recreation-trails	wooded, trails maintained	Self-Help Grant	Yes	Yes	No	RB2

Table 5.2 Public and Nonprofit Parcels

MANAGEMENT AGENCY	ACRES	LOCATION	ASSESSOR'S MAP	AREA NAME	CURRENT USE/ POTENTIAL RECREATION USE	CONDITION	FUNDING	PUBLIC ACCESS	TRAILS	ADA COMPLIANT	ZONING
TCC	17.28	Alyssa Dr	32-6-0	Townsend Conservation Land	Passive Recreation/possible trail location	wooded, one stormwater structure	OSPD	Yes	No	No	RA3
TCC	2.5	Off South Harbor Rd	33-36-0	Access to Harbor Pond	Passive Recreation/potential for picnic area	wooded	Gift	Yes	No	No	RA3
TCC	32	Off Wallace Hill Rd	34-72-0	Old Meetinghouse Park	Passive Recreation-trails	wooded, trails maintained	Self-Help Grant	Yes	Yes	No	RB2
TCC	27	Off Wallace Hill Rd	34-73-0	Old Meetinghouse Park	Passive Recreation-trails	wooded, trails maintained	Self-Help Grant	Yes	Yes	No	RB2
TCC	7.73	Highland St	35-11-0	Old Meetinghouse Park	Passive Recreation-trails	wooded, trails maintained	Self-Help Grant	Yes	Yes	No	RB2
TCC	36.5	Wallace Hill Rd	35-4-0	Old Meetinghouse Park	Passive Recreation-trails	wooded, trails maintained	Self-Help Grant	Yes	Yes	No	RB2
TCC	30	Highland St	35-5-0	Old Meetinghouse Park	Passive Recreation-trails	wooded, trails maintained	Self-Help Grant	Yes	Yes	No	RB2
TCC	30	Off Wallace Hill Rd	35-6-0	Old Meetinghouse Park	Passive Recreation-trails	wooded, trails maintained	Self-Help Grant	Yes	Yes	No	RB2
TCC	30	Old Meetinghouse Rd	35-7-0	Old Meetinghouse Park	Passive Recreation-trails	wooded, trails maintained	Self-Help Grant	Yes	Yes	No	RB2
TCC	0.485	Proctor Rd	42-1-29	Wetlands/Bog	Habitat Protection/NONE	bog area-natural		Yes	No	No	RA3
TCC	0.494	Proctor Rd	42-1-30	Wetlands/Bog	Habitat Protection/NONE	bog area-natural		Yes	No	No	RA3
TCC	0.494	Proctor Rd	42-1-31	Wetlands/Bog	Habitat Protection/NONE	bog area-natural		Yes	No	No	RA3
TCC	0.494	Proctor Rd	42-1-32	Wetlands/Bog	Habitat Protection/NONE	bog area-natural		Yes	No	No	RA3
TCC	0.494	Proctor Rd	42-1-33	Wetlands/Bog	Habitat Protection/NONE	bog area-natural		Yes	No	No	RA3
TCC	0.503	Proctor Rd	42-1-34	Wetlands/Bog	Habitat Protection/NONE	bog area-natural		Yes	No	No	RA3
TCC	15.8	130 Haynes Rd	44-4-0	Townsend Conservation Land	Passive Recreation/ potential for trails	wooded	OSPD	Yes		No	RA3
TCC	20.58	Off Haynes Rd	44-4-11	Townsend Conservation Land	Passive Recreation/possible trail location	wooded	OSPD	Yes	No	No	RB2
TCC	57.27	Off Ponderosa Dr	53D-990-0	Townsend Conservation Land	Habitat Protection Water Supply Protection/ possible trail location	wooded		Yes	No	No	RA3
TCC	5.18	Off Ash Street	53E-991-0	Townsend Conservation Land	Habitat Protection Water Supply Protection/NONE	wooded		Yes	No	No	RA3

Table 5.2 Public and Nonprofit Parcels

MANAGEMENT AGENCY	ACRES	LOCATION	ASSESSOR'S MAP	AREA NAME	CURRENT USE/ POTENTIAL RECREATION USE	CONDITION	FUNDING	PUBLIC ACCESS	TRAILS	ADA COMPLIANT	ZONING
NCLT	14.81	Off West Meadow Rd	4-5-0	NCLT land	Natural resource preservation, habitat protection/trails	wooded	N/A	Yes	No	N/A	RB2
NCLT	43	Off Greenville Rd	6-7-1	NCLT land	Natural resource preservation, Habitat protection, landlocked/NONE	wooded	N/A	No	No	N/A	RB2
NCLT	12.65	Greenville Rd	6-5-2	NCLT land	Natural resource preservation, Habitat protection, landlocked	wooded	N/A	No	No	N/A	RB2
NCLT	1.17	Clement Rd	15-11-3	NCLT land	Natural resource preservation, habitat protection/NONE	wooded	N/A	Yes	Yes	N/A	RB2
NCLT	14.48	Off Clement Rd	15-11-4	Miko, Gavin & John Aho Nature Walk	Habitat Protection, Access via 15-11-3/trails	wooded	N/A	Yes	Yes	N/A	RB2
NCLT	1.2	Fitchburg Rd	16-14-0	Veno & Arvo Aho Memorial Park	Natural resource preservation, habitat protection/NONE	wooded	N/A	Yes	No	N/A	RB2
NCLT	20	Old Meetinghouse Rd	26-33-0	Howard Stein Memorial Park	Natural resource preservation, habitat protection/possible trails	wooded	N/A	Yes	No	N/A	RB2
NMRSD	40.75	Brookline St	27-4-0	North Middlesex Regional High School	School, Ball fields	grassy, mowed					
NMRSD	49.42	Main St	41-10-0	Hawthorne Brook Middle School Squannacook Elementary School	School, ball fields, playground	grassy, mowed					
THS	0.67	72 Main St	34-1-0	Reed Homestead							
THS	0.46	Off Main St	33-45-0	Main Street Land							
THS	0.23	2 South St	33-67-0	South Street							
THS	0.32	1 South St	33-43-0	South Street House							
MADPW	1.8	26 New Fitchburg Rd	47-17-0	State Highway Garage							
F/W	56.8	West Meadow Rd	4-21-0	Squannacook River State WMA							
F/W	28	Mason/Greenville Road	5-9-0	Squannacook River State WMA							
F/W	50	Greenville Rd	6-1-0	Squannacook River State WMA							
F/W	9.94	Main St	11-24-0	Squannacook River State WMA							
F/W	94.6	West Meadow Rd	5-4-1	Squannacook River State WMA							
F/W	0.06	Greenville Rd	6-1-1	Squannacook River State WMA							
F/W	40.37	Pheasant Ridge Rd	17-24C-0	Squannacook River State WMA							
F/W	12.3	Tumpike Rd	19-40-0	Squannacook River State WMA							
F/W	16.13	Tumpike Rd	19-43-1	Squannacook River State WMA							
F/W	4.8	Scott Rd	19-7-0	Squannacook River State WMA							
F/W	49	Dudley Road	19-79-0	Squannacook River State WMA							
F/W	0.918	Dudley Road	19-79-1	Access thru 19-79-0							
F/W	5.7	Tumpike Rd	19-87-0	Squannacook River State WMA							
F/W	4.3	Tumpike Rd	19-87-1	Squannacook River State WMA							

Table 5.2 Public and Nonprofit Parcels

MANAGEMENT AGENCY	ACRES	LOCATION	ASSESSOR'S MAP	AREA NAME	CURRENT USE/ POTENTIAL RECREATION USE	CONDITION	FUNDING	PUBLIC ACCESS	TRAILS	ADA COMPLIANT	ZONING
F/W	32	South Row Rd	25-3-0	Squannacook River WMA							
F/W	53.5	Elm St	26-19-0	Squannacook River State WMA							
F/W	23	Warren Rd	30-13-0	Hunting Hills State WMA							
F/W	177.03	Turner Rd	30-5-0	Hunting Hills State WMA							
F/W	5	Pierce Rd	31-19-0	Hunting Hills State WMA							
F/W	26.12	Pierce Rd	31-19-1	Hunting Hills State WMA							
F/W	41	Shirley Rd	31-2-0	Bertozzi/Squannacook WMA							
F/W	35	Warren Rd	31-34-0	Hunting Hills State WMA							
F/W	17.6	Shirley Rd	32-27-0	Bertozzi/Squannacook WMA							
F/W	125	Shirley Rd	32-28-0	Bertozzi/Squannacook WMA							
F/W	57	Old Meetinghouse Rd	33-31-1	Squannacook River State WMA							
F/W	29	South Harbor Rd	33-33-0	Squannacook River State WMA							
F/W	45.59	Warren Rd	33-97-4	Squannacook River State WMA							
F/W	18	Off Main St	34-22-0	Squannacook River State WMA							
F/W	25	Off Old Meetinghouse Rd	34-25-0	Squannacook River State WMA							
F/W	1.59	Warner Rd	36-23-4	Townsend Hill State WMA							
F/W	113.13	Townsend Hill Rd	36-31-0	Townsend Hill State WMA							
F/W	28.97	241 Wallace Hill Rd	36-31-2	Townsend Hill State WMA							
F/W	28.96	237 Wallace Hill Rd	36-31-3	Townsend Hill State WMA							
F/W	2.1	Ball Rd	37-31-0	Townsend Hill State WMA							
F/W	22.11	Shirley Rd	39-1-0	Squannacook River State WMA							
F/W	96.75	Main St	41-9-0	Bertozzi/Squannacook WMA							
F/W	31.82	Off Trophy Ave	42-8-0	Townsend Hill State WMA							
F/W	16.26	Off Trophy Ave	43-17-14	Townsend Hill State WMA							
F/W	33	Haynes Rd	43-5-0	Townsend Hill State WMA							
F/W	3	Warner Rd	44-10-1	Townsend Hill State WMA							
F/W	37.9	Haynes Rd	44-11-1	Townsend Hill State WMA							
F/W	83.94	Haynes Rd	44-13-2	Townsend Hill State WMA							
F/W	40	Ball Rd	44-15-2	Townsend Hill State WMA							
F/W	13	Warner Rd	44-8-0	Townsend Hill State WMA							
F/W	38	Ball Rd	45-3-0	Townsend Hill State WMA							
F/W	38.88	155 North End Rd	46-3-2	Townsend Hill State WMA							
F/W	29.1	North End Rd	46-3-3	Townsend Hill State WMA							
F/W	4.1	Tumpike Rd	50-39-0	Squannacook River State WMA							
F/W	11	Tumpike Rd	50-40-0	Squannacook River State WMA							
F/W	0.42	Main St	51-135-0	Bertozzi/Squannacook WMA							
DCR	21.18	Off Vinton Pond Rd	1-3-0	Willard Brook State Forest							
DCR	46	Vinton Pond Rd	1-6-0	Willard Brook State Forest							
DCR	600	Vinton Pond Rd	1-10-0	Willard Brook State Forest							
DCR	75.76	45 Vinton Pond Rd	2-1-0	Willard Brook State Forest							

Table 5.2 Public and Nonprofit Parcels

MANAGEMENT AGENCY	ACRES	LOCATION	ASSESSOR'S MAP	AREA NAME	CURRENT USE/ POTENTIAL RECREATION USE	CONDITION	FUNDING	PUBLIC ACCESS	TRAILS	ADA COMPLIANT	ZONING
DCR	660	Hamilton Hill Rd	3-4-0	Willard Brook State Forest							
DCR	22	585 Main St	3-7-0	Willard Brook State Forest (Ranger Station)							
DCR	2.3	Mason Rd	5-8-0	Squannacook River State WMA							
DCR	14	Lunenburg Rd	7-5-0	Willard Brook State Forest							
DCR	18	New Fitchburg Rd	9-12-0	Willard Brook State Forest							
DCR	0.501	Off Old Battery Rd	10-2-0	Willard Brook State Forest							
DCR	2.3	New Fitchburg Rd	10-11-0	Willard Brook State Forest							
DCR	9	Main St	11-19-0	Squannacook River State Park							
DCR	125	Mason Rd/ Old Tumpike Rd	12-2-0	Townsend State Forest							
DCR	29.65	Hamilton Hill Rd	3-1-1	Willard Brook State Forest							
DCR	50	Dudley Rd	11-57-0	Townsend State Forest							
DCR	12	Off Canal St	11-76-0	Squannacook River State Park							
DCR	21	Off Tumpike Rd	18-26-0	Townsend State Forest							
DCR	0.689	Tumpike Rd	19-45-0	Townsend State Forest							
DCR	52	Dudley Road	19-70-0	Townsend State Forest							
DCR	1900	Barker Hill Rd	21-7-0	Townsend State Forest							
DCR	21	Off Pierce Rd	23-19-0	Squannacook River State Park							
DCR	229	Vinton Pond Rd	2-49-0	Pearl Hill State Park	Campground, passive recreation, Habitat protection						
DCR	160	Old Meetinghouse Rd	25-12-0	Squannacook River State Park							
DCR	1.68	Vinton Pond Rd	2-53-0	Willard Brook State Forest							
DCR	37	Off Vinton Pond Rd	2-55-0	Willard Brook State Forest							
DCR	120	Old Meetinghouse Rd	26-45-0	Squannacook River State Park							
DCR	42.6	Dudley Road	28-2-0	Squannacook River State Park							
DCR	52	Brookline Rd	28-20-0	Townsend State Forest							
DCR	4.9	Dudley Rd	28-6-0	Townsend State Forest							
DCR	14.4	Brookline St	29-1-0	Townsend State Forest							
DCR	11	Old Meetinghouse Rd	33-30-0	Squannacook River State Park							
DCR	11.5	Brookline Rd	37-4-0	Townsend State Forest							
DCR	51	Brookline Rd	38-8-0	Townsend State Forest							
DCR	0.23	Shirley Rd	40-1-0	Squannacook River State Park							
DCR	4.75	West Elm St	47-17-1	Willard Brook State Forest							

SECTION VI: COMMUNITY VISION

6.1 DESCRIPTION OF PROCESS

The Town of Townsend Open Space and Recreation Plan (OSRP) Committee was formed in and was comprised of members representing the following Town boards: Planning Board, Conservation Commission, Historic District Commission, Recreation Commission, Board of Health, and Water Commission. Additionally, there were three designated Citizen-at-large membership positions, however, one remained unfilled. The Town's Land Use Coordinator was assigned to assist the Committee and the Montachusett Regional Planning Commission with facilitating the planning process and with preparation of the Plan. The Land Use Coordinator assumed the role of coordinating all postings in accordance with the Open Meeting Law (this role was assumed by the Administrative Assistant to the Land Use Department upon a vacancy in the coordinator's position). Committee members reside throughout town and have been residents of the town for a variety of years, including some members who are new residents and others who are lifelong residents of Townsend. The committee members represented a diversity of interests and possessed equally diverse knowledge and viewpoints that were beneficial and informative to the Plan and many of the current issues under discussion in town. The Open Meeting Law ensured that minutes and agendas were posted as part of the public process and the diverse representative membership of the Committee ensured that the various Town Boards and the general public were well-represented and informed, and that their interests were considered within the review and update of the Plan.

Public participation is an important part of any planning process, especially the establishment and representation of a community's Open Space & Recreation Plan (OSRP) vision, goals, objectives, priorities, and action plan. There are several ways to involve members of the community in the public planning process. For example, the most common approach involves the development and implementation of a public outreach campaign that includes meeting with relevant stakeholders and members of target audiences and hosting public input and information sessions to gather and share information. Another important and common method is public surveys. A well-advertised and widely promoted community survey is a valuable, often successful tool for reaching a broad, representative portion of the population to gather information that is reflective of the entire community.

Public surveys, and the results they produce, help to identify, understand, and describe community needs, desires, expectations, and visions. As part of the planning process for the update of the current Townsend Open Space & Recreation Plan, a public survey was prepared, advertised, and conducted to gather public input to inform and guide the development of the plan. Development of the survey, in coordination with the Montachusett Regional Planning Commission, was the first major activity of the Committee. Throughout the spring of 2022 a survey was developed and refined. It was released on-line on June 1st and responses were collected until June 31st, 2022. Many avenues of advertising were utilized. In addition, paper copies were available at the Library, Senior Center and Town Hall for those residents preferring to record their opinion manually. The survey resulted in 317 responses from mostly Townsend residents with a wide range of years of residency, age of respondent, and family household types.

The survey had twenty-one (21) questions. These questions explored opinions about: the degree to which respondents value open space and recreation, opinions on the importance of certain open space and recreation characteristics, location, frequency, and type of open space activities, recreation facility satisfaction and need, open space goals and priorities, the importance of natural,

manmade features and wildlife habitat, financing open space acquisition and maintenance, bicycle and pedestrian infrastructure, outreach and education, maintenance of open space and recreation areas, volunteerism, and basic respondent demographics. Though the survey consisted mostly of multiple choice, rank- or value-based questions, many questions included a place for comments. After the survey was completed, the information was summarized by planning staff from the Montachusett Regional Planning Commission and the survey results, the comments and the summaries were presented to the Open Space Committee in a recorded virtual public meeting.

Results of the 2022 Open Space Public Survey indicated that more than 99% of all respondents valued open space in Townsend to some degree. Most respondents also considered the various aspects of open space and recreation (passive and active) to be important to the character of Townsend's natural landscape and community resources. In general, the public indicated that they visited and utilized open space and recreational resources and facilities to varying degrees and that they were generally satisfied with outdoor recreational facilities related to hiking, biking, and organized athletic activities (sports fields), but that they were less satisfied with the general condition/maintenance of recreational facilities, and age-specific recreational opportunities (for children, adults, and seniors). Respondents indicated the greatest levels of need for bike paths or greenways, a recreation center, multi-use trails, environmental education areas/nature trails, an accessible hiking trail, neighborhood parks and playgrounds, a nature-like lean & play area for youth, a disability friendly youth play area, a boat/canoe/kayak launch, and open recreation fields for general use.

Regarding Open Space goals, respondent indicated that maintaining high quality drinking water was of the greatest importance to the community. In addition they felt it was important to protect the Squannacook River as a natural and recreational resource, to protect and maintain surface waters and wetlands, to protect additional conservation lands for recreation, habitat, and water supply protection, to retain the natural character and cultural heritage of the Town, promote increased access and awareness of open space lands, develop and improve recreation facilities and amenities, improve public outreach and information related to outdoor open space and recreation, and improve linkages between recreational open space and existing neighborhoods and commercial areas. (The preceding expressions of importance are listed in the order of importance indicated by respondents. At least 70% of respondents indicated some level of importance for all categories.)

At least 50% of respondents indicated that they felt the Town should acquire additional open space lands for conservation and water supply protection and that they should encourage the state and local land trusts to acquire open space conservation lands. Most respondents indicate that open space goals should be funded by state and Federal grant programs and through use of the Conservation Commission's Conservation Fund account, while just under 50% felt that the Town should contribute to that fund annually at Town meeting. Approximately 50% felt that the Town should adopt the Community Preservation Act, while another 30% were neutral or had no opinion, and the remaining 20% disagreed or strongly disagreed. A full summary of the survey questions, results, and comments can be found within **Appendix A**.

The second major activity of the Committee, to gather public input on the Town's Open Space and Recreation needs, was hosting a Public Forum which was held on June 22, 2023. A flyer and public notice were distributed and posted, and the forum was well advertised through the Town's email list, at Town Hall, and at the library and Senior Center. There were **XX people in attendance**. The agenda for the meeting included a review of the previously presented survey results, an overview of the OSRP planning process, and an overview of Townsend's Open Space and Recreation Resources.

The second half of the Public Forum included public info session, consisting of a review of the Draft Plan and Maps prepared for the Plan, with a focused presentation of the proposed Community Vision (Section 6), identified Community Needs (Section 7), and proposed Goals & Objectives (Section 8). The Forum also included a public input session providing an opportunity for the public in attendance to ask questions and provide comments. This public info and input session provided attendees with an opportunity to express their opinions on the Community Vision and proposed goals and objectives, and a chance to inform the Open Space & Recreation Committee of other goals and objectives or open space considerations and priorities that are most important to them. A 14-day Public Comment period was conducted in association with the Public Forum beginning 1-week prior to the Forum and lasting 1-week after the presentation. A copy of the Draft Plan was made available for review on the Town website for the entirety of the public comment period. Public comments received in writing and those given as part of the Public Forum were documented, summarized, and included within Section 10 (Public Comments) of the Plan. (See **Appendix D** for an agenda, flyer, and PowerPoint presentation of the public forum – to be added after Public Forum.)

As part of the planning process, the Open Space & Recreation Committee indicated that it was their desire to make the OSRP more accessible, interesting, and functional to the Community. It was noted by members of the Committee that while the OSRP is essentially intended to be a Vision & Action Plan, its contextual components and framework are structured as more of a research report than an implementation tool. The Committee expressed that it was important that this update aimed to enhance the appearance and functionality of the plan in such a way that it would be of greater general interest to the public and more usable as an implementation and guidance tool by those charged with carrying out the Plans overall mission and specific goals, objectives, and actions. To this end, the development of a 2023 OSRP Update “Story Map” was recommended as a follow-up to the development of this Plan. Such a Story Map would serve as a compendium to this Plan update and provide an interesting, informative, and interactive way for the public to interact with this Plan. It would focus on summarizing the current Plan’s intended purposes, accomplishments achieved since the previous iteration of the Plan (2013), and provide an interactive, user-friendly, visual, presentation-style summary of the Plan’s Vision, Goals & Objectives, and Actions. Such an experience is more appealing than that offered by a traditional plan and would be more enjoyable and convenient to read and view. As such, Story Maps have become a common way to synthesize and share such information, especially for Plans that already have a geo-spatial focus, like an OSRP. Hopefully, the expression of the Open Space and Recreation Committee’s desire to provide such a resource will be an impetus for its successful creation.

6.2 STATEMENT OF OPEN SPACE AND RECREATION GOALS – COMMUNITY VISION

The paramount, broad-scale goals of this Open Space and Recreation Plan reflect the vision of the community, with respect to existing and potential open space conservation and recreation opportunities, as well as the need to protect the Town’s valuable natural resources and scenic, rural town character. Accordingly, the community vision statements presented below were established based on community input from the 2022 OSRP survey, and input from the Open Space and Recreation Committee and representatives of other Town boards, commissions, and committees, members of the public, and relevant stakeholders. Additionally, the unique community characteristics, or “Community Setting” documented within the preceding sections of this Plan were also taken into consideration. The Community Vision is an expression of the community desire to maintain ecological, historical, recreational, and aesthetic values and benefits provided by protected, public, open space lands.

The broad-scale community goals, or Open Space and Recreation Community Vision statements for the Town of Townsend are:

- I. Maintain high quality drinking water.**
- II. Protect the Squannacook River as a natural and recreational resource.**
- III. Protect and maintain surface waters and wetlands.**
- IV. Protect additional lands for recreation, habitat, and water supply protection.**
- V. Retain the natural character and cultural heritage of the Town.**
- VI. Promote increased access to and awareness of public open space lands.**
- VII. Develop and improve recreational facilities and amenities.**
- VIII. Improve linkages between recreational open space, neighborhoods, and commercial areas.**

To achieve that overall vision, the specific needs of the community, regarding open space and recreation, must be understood. The following information, presented within **Section 7** of this plan, provides a description of those Community Open Space and Recreation “Needs”.

SECTION VII: ANALYSIS OF NEEDS

7.1 SUMMARY OF RESOURCE PROTECTION NEEDS

The Open Space and Recreation Plan (OSRP) Committee identified three Resource Protection Needs. They are:

- A. Protection of quality drinking water. Protection of the Town's aquifer for both public and private wells is enhanced by the continued strategic acquisition of key parcels. Additionally, other measures can protect and enhance water quality without purchasing land. These include maintaining water volume by preventing draw down by requiring hydrologic studies as part of development plans; implementing water conservation and water ban measures; improvements to septic system functioning through more aggressive monitoring by the Board of Health and improved education to homeowners about proper care of their systems; improved surface water quality through low salt districts along state highways and proper maintenance of the stormwater catch basins.
- B. Protection, enhancement, and improved maintenance of our surfaces water. Strategic acquisition of parcels, especially in conjunction with the State Fisheries and Wildlife's commitment to protect the Squannacook River and its tributaries and supporting the Nashua River Watershed Association's management plan for these waterways are essential. Several of the strategies mentioned under Protection of quality drinking water are also relevant for surface waters. These include improvements to septic system functioning and improved surface water quality. Additional strategies are the control of invasive exotics through public education and outreach and promotion of Low Impact Development (LID) by the Planning Board in review of development projects.
- C. Promotion of wildlife habitat underrepresented in town and the linkage of those habitats into a greenway network. Several key parcels have been identified that complete large, protected areas and the purchase of these parcels should be promoted. Underrepresented habitats in town are the open fields and farmlands. Promoting Townsend's farm heritage could be accomplished through support of local farmers, development of weekly farm markets and further homeowner education about the importance of this type of wildlife habitat.

7.2 SUMMARY OF COMMUNITY'S NEEDS

The Open Space and Recreation Plan (OSRP) Committee identified five Community Needs. They are:

- A. Improved Access to Recreational Lands. Improved access is both physical improvements and improvements in communication and outreach. There is a need to provide parking and safe access along the Squannacook River and at the Harbor Pond for fishing, boating, and swimming. Grant funding for these improvements is a viable option. Our communication can be improved on the Town's website where information about our many hiking trails can be posted showing access points for trails and the entire network within the town. Signage at these access points is needed and so is access for those with disabilities.
- B. Enhancement of our three Historic Districts. These three districts have protected status but are in need of restoration, parking and interpretation. A cohesive community landscape and Villages at the Harbor concept is needed, including landscaping enhancements and walkway connections.
- C. Improvement to pedestrian and bicycle mobility through the town and especially to the schools. Opportunities for the development of new sidewalks, widened roadways, and rail trails could be pursued through grant writing.
- D. New Neighborhood Recreation Facilities in underserved areas of town. New housing developments

should be encouraged during the planning board review process to include tot lots and ball fields within new neighborhoods.

E. Improvement to the quality of Recreation facilities for field sports. Proper maintenance and usage of town owned, and school district owned fields is a concern to users and at times is in conflict with environmental protection of these areas. An analysis of Town Recreation User Needs and existing Facilities is proposed so better management and maintenance of these fields can occur.

F. Community Center and Multipurpose Park & Recreation Complex. A community center and multipurpose park and recreation complex is needed to improve the quality of life and recreational access and opportunities for Townsends residents of all ages, abilities, and interests. Such a complex would alleviate pressure on existing fields located within ecologically sensitive areas and would provide facilities for a wide variety of uses, some of which are currently in need of additional facilities and others that do not currently exist due to a lack of necessary facilities and amenities. This would provide increased accessibility as well as increased opportunities. focus recreational and community-life activities in a common location,

7.3 MANAGEMENT NEEDS, POTENTIAL CHANGE OF USE

The Open Space and Recreation Plan (OSRP) Committee identified three Resource Management Needs. They are:

- A. A review by the town of current Rules, Regulations and Bylaws. Some areas where stringent rules are developed and/or enforced include Board of Health Septic System Monitoring; Planning Board review of changes to subsurface Hydrology during permitting; State Highway Department conversion to Low Salt usage in critical water supply areas.
- B. Develop a maintenance and improvement plan for the fields and grounds on town and school district recreation areas playgrounds and fields that is sustainable throughout the year and year to year. Infilling, reseeding, and irrigation improvements are needed throughout.
- C. Create two new town positions to implement the goals and objectives of the OSRP; a volunteer coordinator to work with the many people interested in helping their town; and a grant writer to pursue funding for the suggested acquisitions, the site improvements, and the outreach programs suggested in the report.

7.4 COMMUNITY NEEDS IN RELATION TO SCORP

According the 2012 Draft Massachusetts SCORP, the location of a home near conservation and recreation areas increases its value in Massachusetts. This is true in Townsend as homes near conservation land sell for approximately 10% more than a home than other homes. Goal #1 of the SCORP calls for increased availability of all types of trails for recreation. Townsend has plenty of hiking and walking trails but is lacking in biking trails. In addition, Townsend needs to connect all our trails to create a town-wide trail system, just as the State would like to do. Goal #2 of the SCORP calls for increased availability of water-based recreation. Townsend has plenty of access to the Squannacook River for fishing and canoeing but lacks the size of water bodies for bigger boats and power boating. In addition, Townsend does not have many swimming opportunities. Goal #3 of the SCORP calls for investment in recreation/conservation areas close to home for short visits. Townsend's extensive areas of State-owned open space throughout the town allows residents to

hike or walk very close to home. There is also a camping area and many picnic areas in the State parks. Other types of recreation areas are needed in Townsend such as skate parks and bike trails. Goal #4 of the SCORP calls for investment in racially, economically and age diverse neighborhoods. Most of Townsend's neighborhoods are mixed economically and age wise, but there is a lack of racial diversity. There are many activities for the young and middle-aged, but not much for the senior citizen group. There is a senior center for indoor activities, but no outdoor activities except for band concerts on the common, which are passive. As one of our objectives, we would like to build trails from the senior center to the major senior living areas which are relatively close to each other. There are two areas along the Squannacook River that are suitable for handicapped access for fishing, however, none of our trail areas have access for the disabled.

More recently, the current updated version of the Massachusetts Statewide Comprehensive Outdoor Recreation Plan (SCORP)¹, 2017, cites four goals:

Goal 1. Access for Underserved Populations

Goal 2. Support the Statewide Trails Initiative

Goal 3. Increase the Availability of Water-based Recreation

Goal 4. Support the Creation and Renovation of Neighborhood Parks

The Goals of the 2017 Massachusetts SCORP are, in many ways, a logical, next-step to the previous goals of the 2013 SCORP, and well-aligned with the current Community Vision and Needs identified within this Plan. Similar to the progression of the State-wide needs and goals, Townsend's Community Needs, have evolved in a consistent manner that builds upon the past improvements and successes related to trails and bike and pedestrian accommodations, water-based recreational opportunities, and conservation and recreation opportunities close to home, and recognizes the need for increased attention on equity, accessibility, connectivity, and improvements and investments in new and existing neighborhood parks and playgrounds.

¹ *Massachusetts Statewide Comprehensive Outdoor Recreation Plan 2017*, Executive Office of Energy and Environmental Affairs, December 2017.

SECTION VIII: GOALS AND OBJECTIVES

The following goals and objectives were created from information gathered from the 1999 and 2013 Open Space and Recreation Plans, the 2001 Master Plan, the 2004 EO418 Community Development Plan, the 2020 MVP Climate Resiliency and Hazard Mitigation Plan, Shared Streets & Spaces Project and Presentations, and goals and accomplishments of the Squannacook River Greenways/Squannacook River Rail Trail proponents, 2021 Townsend Walkability Report, input from the Open Space and Recreation Committee, a recent citizen survey, and a public forum.

Goal A: Maintain high quality drinking waters both now and in the future for the residents of Townsend.

Objectives:

1. Protect private wells from contamination and drawdown.
2. Improve septic systems.
3. Review and update water conservation and water ban bylaw.
4. Investigate instituting low salt areas in critical water supply protection areas and for sensitive areas such as wetlands and stream crossings.
5. Educate residents on the water cycle and how they get their drinking water.
6. Acquire parcels or purchase Conservation Restrictions within Mass DEP designated Wellhead Protection Areas Zones I and II of Public Water Supply Wells.

Goal B: Ensure the quality, vibrancy, and continued usage of the Squannacook River and its tributaries.

Objectives:

1. Improve public access to Squannacook River for fishing, canoeing, picnicking, etc.
2. Improve beach areas for swimming.
3. Protect land abutting Squannacook River.
4. Protect Squannacook from excessive road salt and sand.
5. Reduce/prevent contaminated stormwater from entering waterways.
6. Keep River and tributaries clear of trash and debris.
7. Assist the Nashua River Watershed Association in accomplishing the goals and priorities set by *The NRWA 2023-2028 Strategic Plan*.
8. Develop a plan for promoting a balance between recreation, habitat, and ecology of the Squannacook River to ensure long-term sustainability of all uses, values, and functions such as those identified by the Nashua River Wild and Scenic River Study (National Park Service, 2019).
9. Produce education and outreach materials focused on responsible recreational use and watershed protection.
10. Produce a Squannacook River paddling, fishing, hiking, and exploring guidebook with maps and suggested activities, including a youth-focused companion guide.
11. Produce and post Squannacook River Blue Trail signage and related promotional and informational materials.

Goal C: Protect and maintain the quality of all surface waters in Townsend, including wetlands.

Objectives:

1. Investigate grant opportunities for management of invasive species in Harbor Pond and other waterbodies townwide.
2. Review location of storm drains and outfalls draining to sensitive areas such as wetland

- buffer zones, riverfront areas, and waterbodies.
- 3. Review Planning Board regulations to ensure Low Impact Development techniques are implemented by developers when planning, designing, and developing subdivisions to reduce/prevent contaminated stormwater from entering waterways.
- 4. Evaluate and consider the use of Conservation Restrictions as a tool for protecting lands within Wetland Resource Areas, Resource Area Buffer Zones, Coldwater Fish Resource Areas, and lands draining directly to surface water resources.
- 5. Prioritize the protection of riparian buffers and lands abutting or draining directly to designated Cold-water Fish Resource Areas.
- 6. Conduct a town-wide stream crossing and culvert inventory and assessment, including development of a GIS inventory and map.

Goal D: Retain the natural character and natural heritage of Townsend.

Objectives:

- 1. Continue to develop the three “village areas” in the 3 historic districts including parking, in a manner consistent with its designated purpose and to promote visitorship and community engagement.
- 2. Develop replanting and maintenance plan for the Common to preserve its character.
- 3. Consider a project to bury utilities in historic districts.
- 4. Protect vernal pools by certifying all located in public areas and purchasing strategic parcel(s) which contain these important wildlife habitats.
- 5. Improve pedestrian mobility around town. (See Goal F)
- 6. Protect and maintain farmland.
- 7. Promote the use of nature-based solutions, low-impact design & development standards, and sustainable development principles in all new open space and recreation facility projects and renovations.

Goal E: Provide increased access to state and town owned lands deemed to hold a conservation value.

Objectives:

- 1. Increase public access to Harbor Pond.
- 2. Publicize trails and parking for open space.
- 3. Maintain existing access points.
- 4. Mark boundaries of conservation lands whenever and wherever possible and feasible

Goal F: Develop and maintain active recreation facilities and maintain conservation lands.

Objectives:

- 1. Develop Volunteer Coordinator position for maintenance of recreation and conservationlands.
- 2. Continue to improve safe walking and biking around town in a manner consistent with the goals of the Complete Streets Policy and Prioritization Plan and the Safe Routes to School Program partnership.
- 3. Review and update Complete Streets Prioritization Plan relative to recent improvements
- 4. Evaluate and inventory town-owned properties suitable for recreation opportunities, including a recreation center.
- 5. Develop recreation facilities for all ages of residents.

6. Encourage developers to include land for recreation or construct recreation facilities in subdivisions and conservation
7. Seek opportunities to improve accessibility within Town-owned Open Space and Recreation lands.
8. Investigate opportunities for winter sports programs and collaborations..
9. Seek, allocate, and appropriate funds for a new multi-purpose Park and Community Recreation Center.

Goal G: Promote habitat connectivity and establish a linked system of open space & recreation areas available to all town residents.

Objectives:

1. Protect and restore riparian areas and other wildlife habitat corridors to increase connectivity, facilitate wildlife passage and migration, and encourage linking of natural areas and critical habitat features.
2. Prioritize parcels critical to connectivity with a focus on those identified within the North County Land Trust Conservation Connections workshops and maps.
3. Pursue opportunities to protect areas important to natural and recreational connectivity and link trail systems together.
4. Build up monies in the Conservation Land Fund for strategic parcel purchase.
5. Improve access to scenic areas of Townsend.

Goal H: Provide information to the public regarding recreation facilities and open space.

Objectives:

1. Create digital downloadable maps of public Open Space and Recreation Areas including access to the Squannacook River, Squannacook River Rail Trail, Historical Districts, parks, playgrounds, recreational fields, and other public gathering places and associated amenities and associated parking areas. Create corresponding signage and QR codes where they do not already exist.
2. Educate the community about the importance of protecting wildlife habitat.
3. Develop a page on the Town's website devoted to open space and recreation.
4. Create trail guides for all town-owned conservation lands.

Goal I: Generate revenue from recreation facilities and open space to offset loss of tax monies.

Objectives:

1. Develop Forestry Management Plans for all town-owned forested Open Space properties.
2. Consider the use of funds from the sale of unusable town properties to fund the acquisition and development of a multipurpose Park and Community Recreation Center.
3. Reinvestigate adopting the Community Preservation Act to support open space, affordable housing, historic assets and recreation and provide additional information to increase public understanding of the program and its actual costs and benefits.
4. Continue to fund a town grant writer position to benefit all departments and committees.

Goal J: Protect and enhance the suburban forest canopy and street shade trees.

Objectives:

1. Promote the planting of native trees and shrubs and a diversity of genera to increase resistance and resiliency and provide educational materials to homeowners and business owners.
2. Conduct a shade-tree inventory and develop a climate resilience planting plan and conduct an inventory of invasive plants on Town right-of-ways and develop an invasive species management plan for Town trails, and open-space-roadway-edge interfaces, and particularly for the Squanacook River Greenway Bike Trail.

Goal K: Promote and pursue opportunities for the protection and acquisition of farmlands to support local agriculture and improve, enhance, or increase food production, distribution, and access within the community.

Objectives:

1. Create a Farmers Market, Community Gardens, Local Food Co-op, and CSA program
2. Convene the Agricultural Commission to promote this goal
3. Pursue opportunities for collaborations between the Town and the local 4-H organization

Goal L: Enhance Community Climate Resiliency.

Objectives:

1. Continue to implement and evolve the goals of the 2020 MVP & HMP Plan

The 2023 OSRP recommends the following strategies for implementing the proposed Goals & Objectives given above:

- 1. Protect watersheds to maintain water quality of surface waters and subsurface waters including public and private water supplies.**
- 2. Protect Wildlife Habitat, especially those which are currently underrepresented or sensitive, such as open fields, unique plant communities, priority or estimated habitats of rare and endangered species, BioMap Core Habitat and Critical Natural Landscapes, and areas of high ecological integrity.**
- 3. Improve access to protected public lands and to communicate opportunities for passive recreation to the public.**
- 4. Improve access, awareness, and condition of our three historic districts.**
- 5. Continue to provide and improve links specifically for pedestrian and bicycle trail and pathway networks, but also for open space habitat corridors and greenways through strategic purchases of land between existing areas of open space and recreation lands.**
- 6. Improve the quality, quantity and diversity of recreation facilities, opportunities, and programs.**
- 7. Provide for improved maintenance of protected municipal open space lands, including parks, playgrounds, and recreation areas.**

These strategy-statements are directly related to the *Community Vision* statements presented previously within Section 6, and guided the development of purposeful Action, provided in the proceeding section (Section 9), and intended to aid in the implementation of these strategies in a focused, prioritized, and meaningful manner.

SECTION IX: SEVEN-YEAR ACTION PLAN

(See Map 13: Action Plan)

Goal A: Maintain high quality drinking waters both now and in the future for the residents of Townsend.

OBJECTIVE #	ACTION(S)	RESPONSIBLE PARTY	POSSIBLE PARTNERS	FUNDING SOURCE	TIME FRAME
1. Protect private wells from contamination and drawdown	a. Investigate Planning Board rules for hydrologic study when subdivisions are constructed to prevent inadvertent drawdown of surrounding wells.	Planning Board		Operating budget	Ongoing
2. Evaluate and improve septic systems and the approval process	a. Develop template plan for residents to manage their septic systems	Board of Health Nashoba BOH	DEP	Grant, Operating budget	ongoing
	b. Ensure “Your Septic System” brochure is distributed to all residents	Board of Health Nashoba BOH		Operating budget	ongoing
	c. Investigate other septic system alternatives that are more environmentally friendly	Board of Health	Nashoba BOH	Operating budget	2023-24
3. Investigate instituting low salt areas in critical water supply areas and within wetlands and waterway buffer zones.	a. Research procedure and discuss with State Highway Dept. regarding Rt. 119	Water Dept., Highway Dept., Selectmen	HW Dept. DEP, MADOT	Operating budget	2023-24
4. Educate residents on the water cycle and how they get their drinking water	a. Develop brochure for residents and put info on town website, cable access channel and distribute in schools.	Water Dept., Conservation Commission NMRSD	DEP	Operating budget	Ongoing
5. Acquire parcels within public water supply Zones I and II that become available	a. Continue contributing to Conservation Land Fund by increasing public awareness of importance of land protection	Conservation Commission, Water Dept.		Town meeting appropriation	Ongoing
	b. Apply for grants to purchase parcels	Water Dept., Land Use Dept.	DEP	LAND grant	Ongoing

Goal B: Ensure the quality, vibrancy, and continued usage of the Squannacook River and its tributaries.

OBJECTIVE #	ACTION	RESPONSIBLE PARTY	POSSIBLE PARTNERS	FUNDING SOURCE	TIME FRAME
1. Protect land abutting Squannacook River	a. Continue contributions to Conservation Land Fund at Town Meetings to fund strategic land parcel purchase	Conservation Commission	MADFW, DCR, Squanna-Tissit Trout Unlimited	Town meeting appropriation	Ongoing
	b. Secure interests in land as well as conservation and agriculture restrictions, or development rights.	Conservation Commission	MADFW, DCR, USDA	Conservation land fund	Ongoing
2. Protect Squannacook from excessive road salt and sand	See Goal A-4	Highway Dept. ConCom	NRWA DFW	Operating budget	Ongoing
3. Reduce/Prevent contaminated stormwater from entering waterways.	Review MVP Plan, Planning Board and Conservation Commission regulations to ensure Low Impact Development techniques are evaluated by developers when planning for subdivisions.	Planning Board, Conservation Commission, Land Use Dept.	DEP	Operating budget	Ongoing
4. Keep Rivers clear of trash and debris	a. Encourage and develop stream clean-up teams	Conservation Commission	NRWA	Operating budget,	Ongoing

				volunteers	
5. Assist the Nashua River Watershed Association in accomplishing the goals and priorities set by <i>The 2023-2028 NRWA Strategic Plan</i>	Continue collaboration and membership with the NRWA, including forestry, stormwater, land protection and conservation issues	Conservation Commission	NRWA	Volunteers, operating budget (dues)	Ongoing

Goal C: Protect and maintain the quality of all surface water in Townsend, including wetlands.

OBJECTIVE #	ACTION	RESPONSIBLE PARTY	POSSIBLE PARTNERS	FUNDING SOURCE	TIME FRAME
1. Remove and/or reduce invasive species from waters of Townsend	a. Inventory and monitor surface areas with noxious species.	Conservation Commission	DEP, Lakes and Ponds Program	Senior tax work off, Operating budget	Ongoing
	b. Investigate grant opportunities to assist in removal of invasive species, especially from waterways.	Conservation Commission, Land Use Dept.	DEP, Lakes and Pond Program	Possible grant	Ongoing
2. Remove/repair stormwater outfalls that could potentially contaminate our surface waters.	a. Inventory and map stormwater structures town wide and fix any problems that arise	Land Use Dept., Highway Dept.	DEP	Operating budget, possible intern	Ongoing
	b. Investigate grant opportunities to fund improvements to outfalls leading directly to surface waters.	Land Use Dept	DEP	Operating budget	Ongoing
	c. Contact State Highway Dept to improve stormwater runoff along Route 119.	Conservation Com., Highway Dept.	District 3 Highway Dept.	Operating budget	Ongoing
3. Ensure developers evaluate Low Impact Development (LID) techniques and Nature-based Solutions when designing subdivisions to reduce stormwater impacts.	Review Planning Board regulations to include LID evaluation early in design process for subdivisions.	Land Use Dept., Planning Board		Operating budget	Ongoing

Goal D: Retain the natural character and natural heritage of Townsend.

OBJECTIVE #	ACTION	RESPONSIBLE PARTY	POSSIBLE PARTNERS	FUNDING SOURCE	TIME FRAME
1. Continue to improve the three “village areas” in the three historic districts.	a. Investigate ways to allow more parking in the districts.	Historic District Comm, Selectmen, Land Use Dept., Historical Society	Mass Historical Commission (MHC)	Operating budget	2023-27 (ongoing)
	b. Investigate grants for access, kiosk, redevelopment of historic areas	Historical Society		Operating budget	2023-26
2. Develop replanting and maintenance plan for the Town Common to preserve its character.	a. Develop plan and evaluate town properties and Town road ROWs for areas needing replacement trees.	Cemetery & Parks, HDC, Tree Warden Historical Society	MHC, DCR	Operating budget, MHC Grant	2024-27
	Develop pathway and landscape design plans for Historic Districts.		MHC, DCR	Operating budget, MHC Grant	2024-27

Goal D continued: Retain the natural character and natural heritage of Townsend.

OBJECTIVE #	ACTION	RESPONSIBLE PARTY	POSSIBLE PARTNERS	FUNDING SOURCE	TIME FRAME
3. Bury utility lines in town with a prioritization of Historic Districts and new development.	a. Investigate feasibility and scope of this project.	HDC, Selectmen, Historical Society	MHC, SPNEA	Operating budget	2023-2030
4. Protect vernal pools as important wildlife habitats.	a. Certify all pools located on public property and on private property with permission.	Conservation Commission	NHESP, DCR, Boy Scouts & Girl Scouts, Schools	Volunteers, possible intern	Ongoing
	b. Purchase strategic parcels containing potential and certified vernal pools or consider Conservation restrictions, Agricultural restrictions, interest in land, easements, purchase of development rights	Conservation Commission, Selectmen	MADFW, NHESP	Conservation Land Fund, appropriation at town meeting	Ongoing

5. Protect and maintain agricultural lands.	a. Continue contributions to Conservation Land Fund at Annual Town Meeting so money is available when right of first refusal is submitted for Chapter 61 lands.	Conservation Commission, Selectmen, AG Comm	DCR, MADFW, USDA, MDAR, Landowners	Town meeting appropriation	Ongoing
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	b. Convene the Townsend Agricultural Commission	Selectmen	USDA, NRWA	Volunteers	2024
	c. Use acquisition of interests in land, conservation restrictions, agricultural restrictions, easements, purchase of development rights as ways to preserve land.	Conservation Commission, Selectmen, Town Properties Committee	DEP, MADFW, USDA	Conservation Land Fund	Ongoing
6. Ensure pride of place	a. Encourage formation of local “Make Townsend Beautiful” Chapter under the Make Massachusetts Beautiful organization to beautify areas around town. (Possible senior tax work off program activity)	Selectmen, Board of Assessors	Townsend Business Association, residents, garden clubs	Senior Tax work program, volunteers	2023-24

Goal E: Provide increased access to state and town owned lands deemed to hold a conservation or recreation value.

OBJECTIVE #	ACTION	RESPONSIBLE PARTY	POSSIBLE PARTNERS	FUNDING SOURCE	TIME FRAME
1. Publicize trails and parking for open space and recreation facilities.	Use website for public to print trail maps and open space and recreation areas and create interactive digital maps and QR codes.	Conservation Commission, MIS, Cemetery & Parks, Recreation Comm., Water Dept. (GIS)	DCR, MADFW, MRPC	Operating budget	Ongoing
2. Maintain existing access points.	Ensure areas are clear and debris free	Citizen volunteers, Cemetery & Parks, Conservation Com.	DCR, MADFW	Volunteers	Ongoing

Goal F: Develop and maintain active recreation facilities and acquire and maintain conservation lands.

OBJECTIVE #	ACTION	RESPONSIBLE PARTY	POSSIBLE PARTNERS	FUNDING SOURCE	TIME FRAME
1. Establish a formal approach to Open Space stewardship volunteering.	b. Investigate organizing a Friends Group to coordinate the program.	ConCom, Recreation Commission		Volunteers	2023-24
OBJECTIVE #	ACTION	RESPONSIBLE PARTY	POSSIBLE PARTNERS	FUNDING SOURCE	TIME FRAME
2. Continue to improve safe walking and biking around town in accordance with the Complete Streets Policy and Plan and the Safe Routes to Schools partnership.	a. Reevaluate the need for sidewalks from the high school to the Towncenter in light of new rail trail connections and update Complete Streets Plan accordingly.	Selectmen, Highway Dept.	Mass DOT, MRPC	Grant, state highway funds	2023-24
	b. Continue development of rail trail and promote connections and spurs to Open Space and Recreation areas and other important public spaces.	Selectmen, Squannacook Greenways, Inc.	DCR	No cost	Ongoing
	c. Continue to assess and minimize any potential impacts on wildlife, wetlands and private property for the rail trail.	Selectmen, Conservation Commission	MADFW	Operating budget	Ongoing
3. Evaluate town properties for recreation suitability opportunities, including a Multipurpose park and Community Recreation Center.	a. Establish a committee to investigate suitable sites and develop a concept plan and strategy.	Select Board, Recreation Commission		Operating budget	2023-24
	b. Identify a suitable site for a multipurpose park and Community Recreation Center	Community Recreation Center Steering Committee, Land Use Department		Operating budget	2024-25

	c. Identify funding source and apply for grants to acquire and develop a multipurpose park and Community Recreation Center	Community Recreation Center Steering Committee, Town Grant Writer		Operating budget	2026
	d. Acquire and develop multipurpose park and Community Recreation Center	Select Board, Planning Board, Con Com, Recreation Committee, Land Use Department, Town Grant Writer		Grants gifts, and other raised and allocated funds	2027-2030
4. Continue to develop and administer a variety of high quality recreational programs for all ages and abilities.	a. Create, renovate, and maintain new and existing recreational facilities to ensure continued use and benefit to meet current public interests and needs. Top 5 Recreational Needs identified within the Survey:	Recreation Comm., Highway Dept.	DCR	Possible grants to acquire, renovate or	Ongoing

	1. Bike trails, 2. Recreation Center, 3. Multi-use trails, 4. Environmental Education areas/Nature trails, 5. Accessible Hiking Trail 4	Selectmen, Town Properties, Cemetery & Parks		Construct facilities	
	b. Encourage developers to use OSRD Bylaw and include land for recreation or construct recreation facilities in subdivisions.	Planning Board, Recreation Comm.		Operating budget	Ongoing
5. Identify parcels of interest and suitability for Open Space and Recreation with a focus on Town-owned parcels and parcels of “unknown ownership”	Develop list of parcels that are of interest and suitable for recreational uses and potential development of a multipurpose park and Community Recreation Center.	Town Properties Committee, Community Recreation Center Committee; Assessors, Tax Collector, ConCom		Operating budget	Ongoing

Goal G: Promote habitat connectivity and establish a linked system of open space/recreation available to town residents.

OBJECTIVE #	ACTION	RESPONSIBLE PARTY	POSSIBLE PARTNERS	FUNDING SOURCE	TIME FRAME
1. Protect wildlife corridors and encourage linking of habitat areas.	a. Encourage and work with MADFW to purchase strategic parcels with a focus on those identified by the North County Land Trust Conservation Connections workshops and map.	Conservation Commission	MADFW; DCR, NCLT	Operating budget	Ongoing
	b. Continue contributions to Conservation Land Fund at Annual Town Meetings	Conservation Commission, Selectmen		Town meeting appropriation	2023-30
	c. Purchase final remaining parcel to protect Old Meetinghouse Park from fragmentation and development.	Conservation Commission, Selectmen	LAND Grants from EOEEA	Conservation Land Fund, Grants	2023-26
	d. Purchase strategic parcel(s) to protect lands connecting State property with town property.	Conservation Commission, Selectmen	LAND Grants from EOEEA	Conservation Land Fund, Grants	Ongoing

	e. Use acquisition of interests in land, conservation and agricultural restrictions, easements, purchase of development rights as ways to preserve land.	Conservation Commission, Selectmen	MADFW, DEP	Conservation Land Fund	Ongoing
2. Link municipal buildings and properties via trails.	a. Encourage trail creation between senior housing and senior center/library complex. This could be a good site for State listed “Heart Healthy Trail”	Conservation Commission, Selectmen, Council on Aging, Future Citizen Committee	DCR, Trailwrights	volunteers	2024-26 (Ongoing)
	b. Link trail systems together by purchasing strategic parcels to create easier access.	Conservation Commission		Conservation Land Fund, Grants	Ongoing
	c. Use acquisition of interests in land, conservation and agricultural restrictions, easements, purchase of development rights as ways to preserve land.	Conservation Commission, Selectmen		Conservation Land Fund	Ongoing
3. Link State and Town trail systems together.	a. Purchase strategic parcels to create links.	Conservation Commission, Selectmen	DCR, MADFW, Land Trust	Conservation Land Fund	Ongoing
	b. Use acquisition of interests in land, conservation and agricultural restrictions, easements, purchase of development rights as ways to preserve land.	Conservation Commission, Selectmen		Conservation Land Fund	Ongoing
	c. Continue to develop and seek connections to regional trails that could be linked to Townsend trails such as Squannacook Rail Trail	Conservation Commission, Recreation Commission, Squannacook Greenways, Inc.	Groton, Ashby, Pepperell, Lunenburg, Mason, Shirley	Possible grants	Ongoing

Goal H: Provide information to the public regarding recreation facilities and open space.

OBJECTIVE #	ACTION	RESPONSIBLE PARTY	POSSIBLE PARTNERS	FUNDING SOURCE	TIME FRAME
1. Educate the community about the importance of protecting wildlife.	a. Develop brochure for inclusion on website.	Conservation Commission, Land Use Dept	NHESP	Operating budget	Ongoing
2. Develop page on town website devoted to open space and recreation.	a. Develop map of recreation locations, list the appropriate uses and communicate on town’s website in a printable format.	Land Use Dept., Recreation Commission		Operating budget	2023-25
	b. Develop map of open spaces in town including trails and points of access and put on website in a printable format.	Land Use Dept., Conservation Commission	MassGIS, DCR, MADFW	Operating budget	2023-25
3. Ensure transparency for projects involving development of town owned facilities and properties.	a. Keep website updated and encourage use by residents.	Selectmen, Land Use Boards		Operating budget	Ongoing

Goal I: Generate revenue from recreation facilities and open space to offset loss of tax monies.

OBJECTIVE #	ACTION	RESPONSIBLE PARTY	POSSIBLE PARTNERS	FUNDING SOURCE	TIME FRAME
1. Develop Forest Management Plans for town properties.	a. Investigate appointing town forester to manage logging of town properties.	Conservation Commission, Town Properties Committee, Selectmen, Cemetery and Parks		Operating budget, Conservation Land Fund	Ongoing
2. Adopt Community Preservation Act to support open space, recreation, affordable housing and historic assets	a. Consider fourth attempt of petition at Town Meeting to pass Community Preservation Act to support the goals of this plan. Provide informational materials and outreach in advance to show true benefits and costs of CPA for property owners.	Finance Committee, Selectmen, Land Use Boards		Operating budget, volunteers	2023-24
3. Investigate grants to develop and repair recreation facilities.	a. Continue to fund and utilize grant writer to seek and pursue funding opportunities and pursue additional departmental grant writing capabilities and training.	Selectmen, Recreation Commission, Land Use Department	DCR, MA EOEEA, MRPC	Operating budget	Ongoing

Goal J: Protect and enhance the suburban forest canopy and street shade trees.

OBJECTIVE #	ACTION	RESPONSIBLE PARTY	POSSIBLE PARTNERS	FUNDING SOURCE	TIME FRAME
1. Promote the planting of native trees and shrubs and a diversity of genera and species to increase resistance and resilience to disease, blight, and climate change.	a. Provide educational materials to homeowners, businesses and developers.	Tree Warden, Planning Board, Con Com	USDA, MDAR, DCR	Operational budget, grants	Ongoing

	a. Conduct a shade tree inventory of Town-owned RoWs and develop a Town-wide climate-resiliency planting plan.	Tree Warden, Planning Board, Con Com; Consultant Arborist or Planner	USDA, MDAR, DCR	Grants, MVP Action Grant	Ongoing
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Goal K: Promote and pursue opportunities for the protection and acquisition of farmlands to support local agriculture and improve, enhance, or increase food production, distribution, and access within the community.

OBJECTIVE #	ACTION	RESPONSIBLE PARTY	POSSIBLE PARTNERS	FUNDING SOURCE	TIME FRAME
1. Protect and promote agricultural resources in Townsend.	a. Convene the Agricultural Commission established by the Town for its intended intents and purposes.	Select Board	USDA, MDAR, Growing Places	Operational budget, grants	Ongoing

Goal L: Enhance Community Climate Resiliency.

OBJECTIVE #	ACTION	RESPONSIBLE PARTY	POSSIBLE PARTNERS	FUNDING SOURCE	TIME FRAME
1. Continue to increase community resiliency and sustainability.	a. Continue to implement and evolve the Goals and Actions of the 2020 Townsend MVP&HMP Plan.	Select Board, Land Use Department; Con Com	EOEEA, MRPC, MEMA/FEMA	MVP grants, FEMA grants	Ongoing