

OPEN SPACE AND RECREATION

Open space is essential to the quality of life within Pepperell and should be viewed as the “green infrastructure” that supports and links the built and natural environments. Open space consists of a network of waterways, wetlands, woodlands and forests, parks, conservation lands, and working farms. It provides ecological, social, economic, and health benefits that can be described as follows: ¹

- **Ecological benefits:** Open space provides natural water filtration, drinking water protection, flood and erosion control, wildlife habitat, migration stopovers, and biodiversity. Biodiversity includes genetics, species, ecosystems and ecological processes.
- **Social benefits:** Open space contributes to residents’ quality of life by providing opportunities for recreational, civic, social and educational interactions. It contributes to community identity and sense of place, by connecting residents to their natural and cultural heritage, and by linking neighborhoods to the larger community.
- **Economic benefits:** Open space is important for attracting and maintaining businesses in a community and a region. Proximity to open space often increases land values, and recreation and leisure activities can make significant economic contributions. In addition, natural water filtration is much less expensive than engineered alternatives such as water treatment plants.
- **Health benefits:** Access to parks, greenways and trails creates recreational opportunities and encourages a physically active lifestyle. Open space helps to ensure

OPEN SPACE AND RECREATION GOALS

- Protect Pepperell’s public and private water supplies.
- Continue to acquire open space, as opportunities arise and resources allow
- Connect Pepperell’s open space and recreation lands to enhance wildlife corridors, improve habitat areas and to create additional recreation opportunities.
- Provide for long-term sustainability of open space protection and recreation opportunities by identifying funding resources to meet needs.
- Increase access to Pepperell’s Open Space and Recreation lands and programs for people of all demographic groups.
- Promote a cooperative and regional approach to open space and recreation planning.

¹ American Planning Association, “Seven Principles of Green Infrastructure”.

clean and safe water supplies and food production resources. It also mitigates air, water and noise pollution, and the impacts of climate change.

Pepperell's green infrastructure should be managed and enhanced on an ongoing basis, in order to support natural systems, protect groundwater, minimize flooding, build community, and increase the well-being of its residents. This section of the Master Plan provides an overview of the Town's lands of conservation and recreation interest, and articulates the needs of the community based on input received during the public input and plan development processes.

HISTORY OF OPEN SPACE AND RECREATION PLANNING IN PEPPERELL

Pepperell has engaged in Open Space and Recreation Planning since the completion of its first Open Space and Recreation Plan (OSRP) in 1969. Updates to the OSRP were prepared in 1976, 1982, 1988, 1997, 2005, and 2016, and every version stressed the importance of protecting open space for water protection, wildlife habitat, recreational opportunities, agriculture, and preservation of the Town's rural character.

Since the 2005 Plan, Pepperell has adopted a Right to Farm Bylaw which established an Agricultural Advisory Board; completed a Forest Management Plan for the Town Forest; created management plans for the Heald Street Orchard and Pepperell Springs Conservation Area; established a new municipal public water supply well off Nashua Road; published a trail guide created by the Conservation Commission and Nashoba Conservation Trust; updated an inventory of lands of conservation and recreation interest; constructed a skateboard park and several new athletic fields; and achieved designation as a Green Community. Pepperell has continued to protect open space by working with state and non-profit partners and landowners. Since the 2005 Plan was produced, an additional sixty-one parcels totaling almost 985 acres have been protected, bringing the Town's total acreage of protected open space to over 3,074 acres. Approximately 20% of the town's land area is protected from future development.

The development of the 2016 OSRP was undertaken as a community project by volunteers, rather than utilizing consultant services. Representatives from several town departments provided their expertise, and additional input was gathered from non-profit organizations and through a written survey. Public outreach was specifically targeted toward seniors, with a focus on opportunities for active, healthy living. The 2016 update stressed the importance of preserving open space, natural resources and outdoor recreational opportunities. Toward this end, the Town continues its efforts to preserve the rolling hills, winding country lanes, and fields lined by stone walls that were so common in earlier days. Protecting farmland has

been the focus of many land protection projects within Pepperell, and will continue into the future.

EXISTING CONDITIONS

For purposes of the Master Plan, open space is defined as land that, for the most part, is free of structures. As shown in Table 1 below, approximately 5,200 acres within Pepperell are classified as open space, of which 2,985.20 acres are considered to be permanently protected. Permanently protected lands include state lands and municipal properties subject to Article 97², a conservation restriction or other deed restriction, as well as private properties subject to a conservation restriction, agricultural preservation restriction, or a deed restriction. Unprotected lands of conservation and recreation interest include those that are held by public, non-profit and private owners for open space, historic, or recreation purposes, but are not permanently protected. Parcels that are under a Chapter 61, 61A or 61B agreement are considered to have limited protection. Additional information on Chapter 61, 61A and 61B can be found on page __.

Table 1: 2019 Open Space Acreage by Ownership/Category

Ownership/Category	Acreage
Commonwealth of Massachusetts	583.50
Town of Pepperell Conservation Commission	964.36
Town of Pepperell Water Division	205.75
Town of Pepperell Town Forest Committee	92.10
Town of Pepperell - Other Protected	93.80
Land Trusts (LTs)	485.19
Private with Conservation Restrictions (CRs)	167.14
Agricultural Preservation Restrictions (APRs)	413.62
Cemeteries (public and private ownership)	42.10
Chapter 61	557.06
Chapter 61A*	1,082.23
Chapter 61B	229.68
Mixed Parcels with Chapter 61 & Chapter 61A	49.80
Mixed Parcels with Chapter 61A & Chapter 61B	115.92
Town Owned Playing Fields and School Property**	149.27
Total	5,231.52

*Five Chapter 61A parcels have APRs and are counted in the APR acreage.

**Includes parcels with school buildings.

Source: *Pepperell Open Space Inventory updated as of July 2019*

² Article 97 of the Articles of Amendment to the Massachusetts Constitution, approved by the Legislature and ratified by Massachusetts voters in 1972, provides that “lands and easements taken or acquired” for conservation purposes “shall not be used for other purposes or disposed of” without the approval of two-thirds roll call vote of each branch of the legislature. Article 97 is intended to be a legislative ‘check’ to ensure that lands acquired by state entities and municipalities for conservation purposes are not converted to other uses.

As part of the Master Plan process, the Town's inventory of lands of conservation and recreation interest was updated through an analysis of the Assessor's database, through updating of the 2016 OSRP inventory, and using input from Town staff and officials. The open space and recreation parcels are shown on Map 1 on the following page.

PERMANENTLY PROTECTED OPEN SPACE

Pepperell is fortunate to have large parcels of open space. Agricultural fields, forests, trails, and waterways all contribute to the town's rural character. Whether these lands remain in their natural state or are farmed and managed, protection plays an important role in maintaining the quality of life for residents. Protected open space provides a number of benefits to the community, including water supply protection, flood prevention, reducing the impacts of climate change, preservation of natural resources and wildlife habitat, and the creation of recreational opportunities.

TOWN-OWNED LANDS

The Conservation Commission holds 964.4 acres composed of sixty-six (66) parcels, as shown in Table 2. These parcels have been acquired through various means including by donation, town budget appropriations, state grants, private funding, and by tax title.³ Properties held by the Conservation Commission are protected under Article 97 of the state constitution. Article 97 provides that land held for conservation and natural resource purposes may not be transferred, disposed of, or used for other municipal or private purposes without all of the following: a majority vote of the Board of Selectmen, a two-thirds vote of Town Meeting, a two-thirds roll call vote of both houses of the state legislature, and the governor's signature.

³ A tax sale occurs when a property owner does not keep up with payment of property taxes and the tax collector sells the property to satisfy the tax debt. Alternatively, the town may "take" the property rather than holding a sale. The purchaser from the tax sale (or the town in the case of a taking) must then foreclose the homeowner's right to redeem in order to get actual title to the property (Mass. Gen. Laws ch. 60, § 64). A city or town may begin foreclosure proceedings immediately if a home is abandoned, the redemption amount exceeds the assessed value of the property, or the property owner consents in writing to the foreclosure (Mass. Gen. Laws ch. 60, § 65). In Massachusetts, the property owner generally has six months (called a redemption period) after the sale or the taking to pay off the tax debt and keep the property. This is because the purchaser (or the Town) must wait six months before filing a petition with land court to foreclose the owner's right to redeem (Mass. Gen. Laws ch. 60, § 65).

Map 1: Pepperell Open Space and Recreation Lands

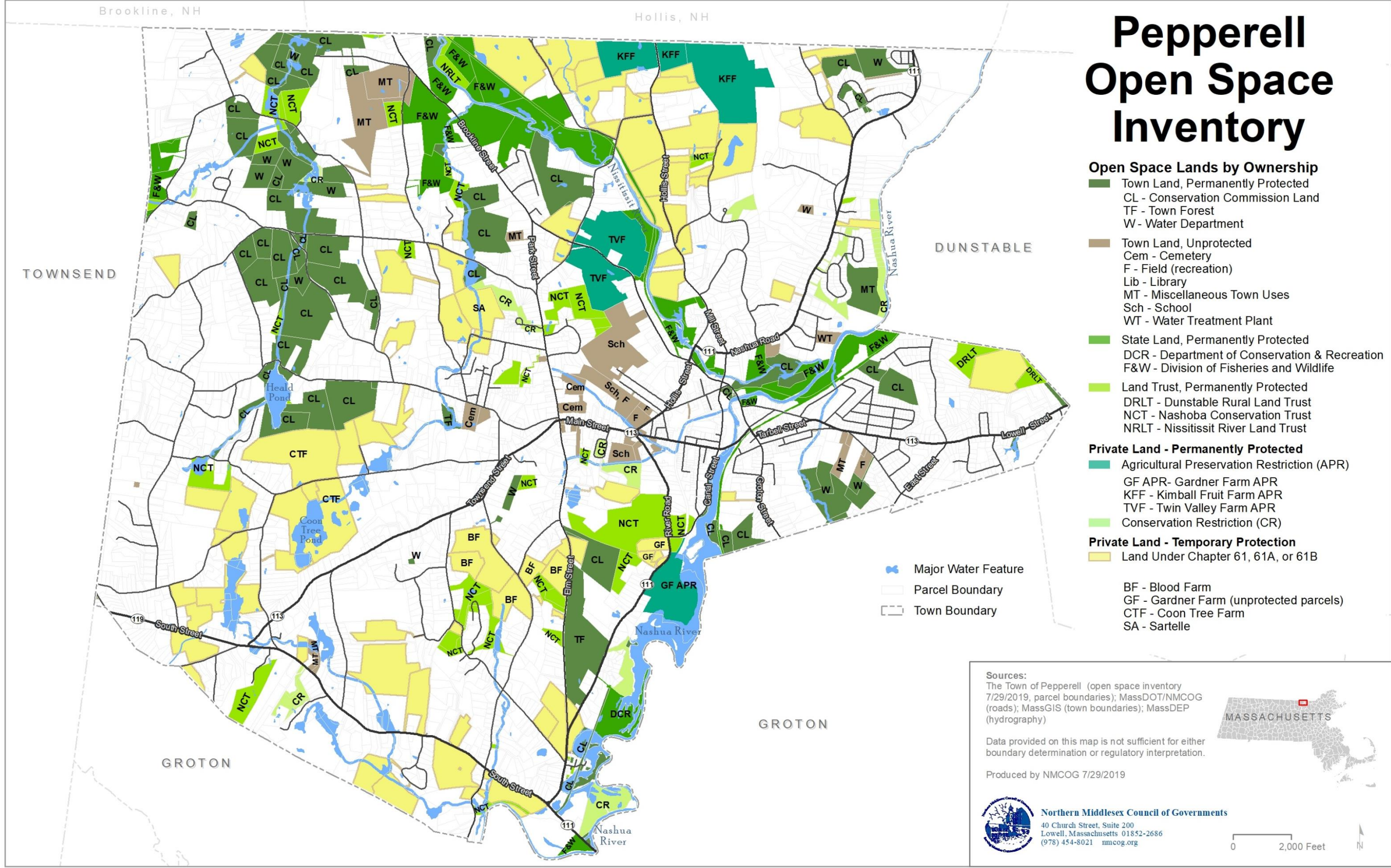


Table 2: Town-Owned Land Managed by the Pepperell Conservation Commission⁴

Site Name	Location	Acreage
Bemis Road Well	Off Bemis Road	19.9
Stewart Brook	Lawrence Street	13.9
Stewart Brook	Lawrence Street	28.9
Bemis Road Well	Off Bemis Road	11.1
Bemis Road Well	Off Bemis Road	41.2
Bemis Road Sand Pit	Off Bemis Road	30.9
Nissitissit River	Off Brookline Street	11.7
Bemis Road Sand Pit	Off Bemis Road	5.3
Shattuck Estates Donation	24 Ridge Rd.	19.4
Shattuck Estates Donation	9 Longmeadow Lane	0.8
Shattuck Estates Donation	11 Longmeadow Lane	0.7
Shattuck Estates Donation	9-23 Ridge Road	6.8
Cranberry Woods	Off Cranberry Street	1.0
Gulf Brook	Off Lawrence Street	6.3
Pepperell Springs	74 80 Chestnut	14.6
Pepperell Springs	43-53 Bayberry	15.2
Cranberry Woods	Off Cranberry Street	4.8
Gulf Brook	81 - 99 Oak Hill Street	43.9
Pepperell Springs	Oak Hill Road and Chestnut Street	31.3
Pepperell Springs	Oak Hill Road	4.1
Pepperell Springs	Chestnut Street	26.9
Pepperell Springs	Chestnut Street	7.6
Sucker Brook	Off Brookline Street	4.4
Nissitissit Meadows	Prescott Street	62.0
Keyes Parker	Off Brookline	19.8
Twohig	36 Oak Hill	12.0
Nissitissit Meadows	Prescott Street	0.5
Sucker Brook	31 Oak Hill Street	50.2
Pepperell Springs	29 41 Bayberry	30.8
Heald Pond	128 Heald	8.3
Heald Pond	128 -144 Heald Street	8.3
Heald Pond	125 -127 Heald Street	26.3
Pepperell Springs	Chestnut Street	6.3
Pepperell Springs	Chestnut Street	43.7
Pepperell Springs	Maple Street	10.6
Pepperell Springs	Chestnut Street	63.7
Boy Scout Parcels	Off June Street and Pine Street Extension	9.5
Boy Scout Parcels	172A Lowell Road and Pine Street Extension	16.1
Unkety Brook Watershed	137A Lowell Road	2.6
Unkety Brook Watershed	148 Lowell Road	4.3
Heald Pond	129 Jewett Street	10.3
Heald Pond	Off Jewett Street	24.0
Heald Street Orchard	11A Heald Street	29.3
Heald Street Orchard	88 - 180 Heald Street	49.7
Pepperell Pond; Nashua River	Canal Street	0.2
Pepperell Pond; Nashua River	Canal Street	1.1

⁴ Some conservation areas are comprised of more than one tax parcel.

Table 2 (cont'd): Town-Owned Land Managed by the Pepperell Conservation Commission⁵

Site Name	Location	Acreage
Pepperell Pond; Nashua River	10 Canal Street	0.0
Pepperell Pond; Nashua River	6 Canal Street	0.2
Land beside Covered Bridge	Mill Street	3.4
Lorden	East Street	2.0
Lorden	Off Crawford Way	0.3
Keyes Farm	52 Elm Street	40.2
Nashua River shoreline	Rail Trail frontage at Groton line	12.9
Anderson	115A Groton Street	18.0
Pepperell Pond; Nashua River	Off River Road	30.8
Pepperell Pond; Nashua River	Off River Road	0.1
9 Harvard Lane	9 Harvard Lane	0.1
Pepperell Pond; Nashua River	9 Yale Road	0.4
Pepperell Pond; Nashua River	Off River Road	0.4
Pepperell Pond; Nashua River	13 - 15 Yale Road	4.1
Pepperell Pond; Nashua River	South Road	0.8
Pepperell Pond; Nashua River	South Road	0.6
B & M R.O.W.	21 South Road	7.9
Walent	146 River Road	0.8
Pepperell Pond; Nashua River	Off River Road	1.0
Shattuck Estates Donation	Discontinued road, Longmeadow to Brookdale	0.2
Total		964.4

Source: Pepperell Open Space Inventory updated as of July 2019

In addition to land managed by the Conservation Commission, the Pepperell Water Division manages 205.8 acres, the Pepperell Town Forest Committee oversees 92.1 acres, and the Board of Selectmen has custody of 93.8 acres. Other Town-owned lands that are unlikely to be developed in the future include the cemeteries (42.1 acres) and the Town-owned playing fields and school properties (149.3 acres).

STATE LANDS

The Commonwealth of Massachusetts owns 43 parcels of open space in Pepperell, comprising 583.5 acres. These lands are permanently protected, and most are controlled by the Division of Fisheries and Wildlife (DFW), with the exception of the Nashua River Rail Trail right-of-way and the J. Harry Rich State Forest, which are controlled by the Department of Conservation and Recreation (DCR). As shown in Table 3, the largest areas include the Nissitissit River Wildlife Management Area (314.1 acres), the DFW property (44.2 acres) off of Shawnee Road, and the Nashua River Rail Trail (40.2 acres).

⁵ Some conservation areas are comprised of more than one tax parcel.

Table 3: State-Owned Open Space in Pepperell

Map-Block-Lot	Site Name	Agency	Location	Acreage
41-2-0	J. Harry Rich State Forest	DCR	130 River Road	23.34
16-11-0	Nashua River Rail Trail	DCR	Lowell Road downstream from Main Street dam	30.11
26-208-0	Nashua River Rail Trail	DCR	Groton Street to Lowell Road	2.20
27-1-0	Nashua River Rail Trail	DCR	Groton line north to Groton Street	7.90
40-46-0	DFW Car-Top Boat Launch	DFW	2 - 8 South Road/Route 119	10.10
10-24-0	Division of Fisheries and Wildlife	DFW	Brookline Street	12.00
10-43-0	Division of Fisheries and Wildlife	DFW	47 Brookline Street	1.84
10-44-0	Division of Fisheries and Wildlife	DFW	47A Brookline Street	5.70
10-45-0	Division of Fisheries and Wildlife	DFW	47B Brookline Street	12.30
15-33-0	Division of Fisheries and Wildlife	DFW	13 Theodore Lane	6.39
15-33-12	Division of Fisheries and Wildlife	DFW	78 Hollis Street	1.15
15-33-13	Division of Fisheries and Wildlife	DFW	80 Hollis Street	0.89
16-8-0	Division of Fisheries and Wildlife	DFW	off Shawnee Rd	44.20
22-34-0	Division of Fisheries and Wildlife	DFW	49 Hollis Street	2.10
22-45-0	Division of Fisheries and Wildlife	DFW	9 Nashua Road	3.50
22-46-0	Division of Fisheries and Wildlife	DFW	6 - 8 Groton Street	1.00
25-22-11	Division of Fisheries and Wildlife	DFW	35 Nashua Rd. (Senior Center Land Between the Rivers)	15.50
25-30-0	Division of Fisheries and Wildlife	DFW	40 Mill Street	2.30
25-44-1	Division of Fisheries and Wildlife	DFW	20A Groton St. (Senior Center Land Between the Rivers)	21.30
25-54-0	Division of Fisheries and Wildlife	DFW	20 1/2 Groton Street	7.70
35-2-0	Division of Fisheries and Wildlife	DFW	Off Groton Street	0.53
7-43-0	Former Darling Property	DFW	63 Wheeler Street	0.88
9-119-0	Former Griffis Property	DFW	58A Prescott Street	0.90
9-120-0	Former Griffis Property	DFW	58 60 Prescott Street	0.55
7-5-1	Former Levi Backland Property	DFW	Wheeler Street	13.38
7-1-1	Former South Property	DFW	29 Wheeler Street	14.34
7-1-2	Former South Property	DFW	Behind 27 Wheeler Street	6.39
3-15-0	Nissitissit River Wildlife Management Area	DFW	169 -175 Brookline Street	15.50
3-20-0	Nissitissit River Wildlife Management Area	DFW	Accessed from Brookline Street	52.20
3-39-0	Nissitissit River Wildlife Management Area	DFW	142 Brookline Street	7.10
4-1-0	Nissitissit River Wildlife Management Area	DFW	Off Hollis Street	22.60
4-25-0	Nissitissit River Wildlife Management Area	DFW	4 - 14 North Street	12.30
8-10-0	Nissitissit River Wildlife Management Area	DFW	25 Boynton Street	28.75
9-7-0, 4-5-0, 4-6-0, 4-14-0, 4-15-0, 4-16-0, 4-23-0, 4-24-0	Nissitissit River Wildlife Management Area	DFW	Prescott Street and North Street	175.67
26-3-0	Prudence Wright Overlook	DFW	2 Lowell Street	3.60
15-40-0	Turner Dam Property	DFW	56 Hollis Street	17.29
Total				583.50

Source: Pepperell Open Space Inventory as of July 2019

CONSERVATION RESTRICTIONS (CRs)

A Conservation Restriction is a voluntary and legally binding document through which a land owner agrees to limit the use of his or her property for the purpose of protecting the conservation value of the land. The land owner receives an immediate tax deduction, and the grantee, usually a non-profit or municipal entity, receives legal assurance that the land will not be developed. In addition to the conservation restrictions on Town-owned land discussed previously, there are 25 privately-owned parcels that are partly or entirely subject to CRs, as outlined in Table 4. Collectively, these parcels total 167.14 acres.

Table 4: Conservation Restrictions on Private Land in Pepperell

Site Name	Location	Acreage
Cranberry St.	Lot 12/Cranberry Woods	2.03
Babin/Abele	34, 38 and 40 Lawrence Street (3 parcels)	8.00
Beaver Creek	Beaver Creek	10.40
Merrimac	Deerfield Drive	2.30
Merrimac	Deerfield Drive	7.10
Nursery	7 Nursery	3.20
Nursery	10 Nursery	3.80
Merrimac	Deerfield Drive (sections of 8 parcels)	7.61
Countryside	23 Countryside Road	18.22
Countryside	24 Countryside Road	3.05
Countryside	25 Countryside Road	0.63
Merrimac	75 Nashua Road	10.00
Ferrero	146 South Rd.	15.20
Ferrero	148 South Rd.	2.20
Yapp	South Road/Rt. 119	33.80
Former Kemp Race Track	116 River Road	18.34
Independence Rd. Trust	Independence Road	4.02
Wooltop Trust	Independence Road	17.24
Total		167.14

Source: Pepperell Open Space Inventory as of July 2019

LAND TRUST PARCELS

As shown in Table 5, the Nashoba Conservation Trust (NCT) owns 46 parcels in Pepperell totaling 432.2 acres. The largest properties held by the NCT include the multi-parcel Keyes Farm, Gulf Brook-Stewart Brook area and the Mount Lebanon areas. The mission of the NCT is to preserve and protect Pepperell's rural character and its natural resources. In addition, the Dunstable Rural Land Trust (DRLT) owns two (2) parcels totaling 32.0 acres within Pepperell; and the Nissitissit River Land Trust (NRLT) owns four (4) parcels totaling 21.0 acres. The Wooltop Trust owns a 17.2-acre parcel and the Independence Road Trust owns a 4-acre parcel, although access to the lands owned by both these private trusts is restricted.

Table 5: Pepperell Lands Held by Land Trusts

Site Name	Location	Owner	Acreage
Tully	97A Off East Street	Dunstable Rural Land Trust	21.6
Tully	148 Lowell Road	Dunstable Rural Land Trust	10.4
Dunstable Rural Land Trust Subtotal			32.0
Gulf Brook – Stewart Brook	15A Bayberry Road	Nashoba Conservation Trust	7.5
Burnham Lot	56 – 62 Boynton Street	Nashoba Conservation Trust	11.0
Eaton Lot	Off Brookline Street	Nashoba Conservation Trust	3.0
Keyes Farm	28 and 32 Canal Street	Nashoba Conservation Trust	4.0
Keyes	33 and 39 Canal Street	Nashoba Conservation Trust	2.1
Holmes Donation	48 Elliott Street	Nashoba Conservation Trust	3.9
Holmes Donation	50 Elliott Street	Nashoba Conservation Trust	3.1
Linkel	Elm Street	Nashoba Conservation Trust	8.1
Anderson Lot	83 Elm Street	Nashoba Conservation Trust	7.9
Anderson Lot	89 Elm Street	Nashoba Conservation Trust	5.6
Foley Lot	Off Harbor Street	Nashoba Conservation Trust	1.7
Kemp Donation	7 Harvard Lane	Nashoba Conservation Trust	0.2
Bisson	120A Heald Street	Nashoba Conservation Trust	0.1
Sue's Ramble	138 Jewett Street	Nashoba Conservation Trust	23.9
Kirin Crossing	Off Kirin Crossing	Nashoba Conservation Trust	5.3
Gulf Brook – Stewart Brook (Day Woods)	59 – 67 Lawrence St.	Nashoba Conservation Trust	15.0
Gulf Brook – Stewart Brook	60 – 64 Lawrence St.	Nashoba Conservation Trust	2.8
Gulf Brook – Stewart Brook	Off Lawrence Street	Nashoba Conservation Trust	11.9
Gulf Brook – Stewart Brook (Day Woods)	Lawrence Street	Nashoba Conservation Trust	17.9
Susan Smith Lot	21A Main (behind Library)	Nashoba Conservation Trust	4.0
Mount Lebanon	32 – 34 Mt. Lebanon Street	Nashoba Conservation Trust	17.5
Stromsted	42 Mt. Lebanon	Nashoba Conservation Trust	1.3
Mount Lebanon	46 Mt. Lebanon Street	Nashoba Conservation Trust	7.9
Mount Lebanon	48 Mt. Lebanon Street	Nashoba Conservation Trust	2.3
Mount Lebanon	55 Mt. Lebanon Street	Nashoba Conservation Trust	7.4
Stromsted	55 Mt. Lebanon Street	Nashoba Conservation Trust	5.1
Mount Lebanon	58 Mt. Lebanon Street	Nashoba Conservation Trust	11.6
Shattuck	109 Nashua Rd.	Nashoba Conservation Trust	1.8
Burnham Lot	43B Oak Hill Street	Nashoba Conservation Trust	14.5
Merrill Lot	66–72 Oak Hill Street	Nashoba Conservation Trust	7.2
Egan Lot	Off Plainfield Road	Nashoba Conservation Trust	11.6
Village Rd.	47-49 Park Street	Nashoba Conservation Trust	22.0
Seminatore Lot	59 A Park Street	Nashoba Conservation Trust	18.8
Keyes Farm Ext.	Off River Road	Nashoba Conservation Trust	16.1
Keyes Farm	35-53 River Road	Nashoba Conservation Trust	85.5
Keyes Farm	44 River Road	Nashoba Conservation Trust	10.8
Parker Lot	172 River Road	Nashoba Conservation Trust	0.3
Susan Smith Lot	2A Sartelle Street	Nashoba Conservation Trust	4.3
Bon	67 Shirley Street	Nashoba Conservation Trust	3.9
VCR (Visniewski)	106 Shirley	Nashoba Conservation Trust	0.9
Hopkins Donation	130 Shirley Street	Nashoba Conservation Trust	4.3
Friends' Land	Off South Road	Nashoba Conservation Trust	30.1
Old Rail Corridor	South Road	Nashoba Conservation Trust	2.0

Table 5 (cont'd): Pepperell Lands Held by Land Trusts

Site Name	Location	Owner	Acreage
Village Rd.	Off Village Road	Nashoba Conservation Trust	2.2
Levi Lot	55-61 Wheeler Road	Nashoba Conservation Trust	3.5
Kemp Donation	4 Yale Lane	Nashoba Conservation Trust	0.6
Nashoba Conservation Trust Subtotal			432.2
Nissitissit River Land Trust	Off Brookline Street	Nissitissit River Land Trust	4.2
Nissitissit River Land Trust	Off Brookline Street	Nissitissit River Land Trust	1.1
Nissitissit River Land Trust	Off Brookline Street	Nissitissit River Land Trust	4.4
Nissitissit River Land Trust	Off Brookline Street	Nissitissit River Land Trust	11.3
Nissitissit River Land Trust Subtotal			21.0
Total			485.19

Source: Pepperell Open Space Inventory as of July 2019

AGRICULTURAL PRESERVATION RESTRICTIONS

High real estate values have increased pressure to develop what remains of agricultural lands in Pepperell and in neighboring communities. These lands are generally clear of forest and have topography well suited to a variety of uses. Furthermore, while communities have a right of first refusal under existing Chapter 61 programs, they frequently lack the funds to purchase large tracts of valuable open space. As a result, farmlands often become residential subdivisions at the expense of open space, local agricultural production and community character.

As discussed in the Land Use chapter, 0.51% of Pepperell's land area was in agricultural use in 2016, a 41.7% reduction since 1971. The Agricultural Preservation Restriction (APR) Program is designed to protect productive agricultural lands by establishing permanent deed restrictions, thereby protecting them from any use that might diminish the area's agricultural potential.

In Massachusetts, the APR Program is a voluntary program intended to offer a non-development alternative to farmers and other owners of "prime" and "state important" agricultural land who are faced with a decision regarding future use and disposition of their farms. Towards this end, the program offers to pay farmland owners the difference between the "fair market value" and the "agricultural value" of their farmland, in exchange for a permanent deed restriction that precludes any use of the property that will have a negative impact on its agricultural viability. The deed restrictions are purchased with state funds that can be matched by municipal and federal funding. As shown in Table 6 on the following page, 413.62 acres of land within Pepperell have been protected through the APR program.

Table 6: Agricultural Preservation Restrictions in Pepperell

APR Lands	Location	Acreage
Kimball Fruit Farm (3 parcels)	Hollis Street	173.89
Twin Valley Farm (3 parcels)	Brookline Street	137.19
Gardner Farm	River Road	69.93
Town of Pepperell - BOS	Land Between the Rivers/Senior Center	32.6
Total		413.62

Source: Pepperell Open Space Inventory as of March 2019

UNPROTECTED LANDS AND LANDS WITH LIMITED PROTECTION

Unprotected and limited protection lands include public lands currently held as open space, cemeteries, schools, parks, or recreation land without legal permanent protection, as well as private parcels with limited or no restrictions on development. Limited protection open space includes land covered by revocable restrictions against development or a change in use. A farm that is under a Chapter 61A agreement is an example of temporarily protected open space. Similarly, school athletic fields, or other open space on school grounds, could be converted to another use and are included within this category.

SCHOOL LANDS AND PLAYING FIELDS

There are fifteen parcels, totaling 149.3 acres, of school property and playing fields in Pepperell that are not permanently protected, as shown in Table 7. These properties include land with school buildings and other structures. The largest parcels are the Nissitissit Middle School property (77.9 acres) and the Varnum Brook Elementary School (28.9 acres).

Table 7: School Lands and Playing Fields in Pepperell

Parcel ID	Site Name	Location	Acres
21-75-0	Varnum Brook Elementary School	Hollis Street	28.90
21-75-A	Varnum Brook Middle School	Hollis Street	1.24
22-4-0	Nissitissit Middle School	33 Chace Av	77.91
20-48-0	Fitzpatrick School	Main Street	12.90
23-147-0	Fitzpatrick School	Main Street	2.60
23-150-0	Fitzpatrick School	Main Street	3.40
32-20-0	North Middlesex Regional High School	Route 119	0.24
23-47-0	Town Field	4 Hollis Street	9.01
23-162-0	Kennedy Field	Off River Road and Main Street	0.24
23-163-0	Kennedy Field	Off River Road and Main Street	2.20
23-219-0	Comisky Field	Hollis Street	3.06
31-14-0	Bartelson Fields	9 Jersey Street	6.57
31-73-0	Bartelson Fields	Off Jersey Street	1.00
14-240-A	Miscellaneous Town Owned	Abuts Varnum Brook Middle School playing fields	0.25
14-241-0	Miscellaneous Town Owned	Abuts Varnum Brook Middle School playing fields	10.80
Total			149.27

Source: Pepperell Open Space Inventory as of March 2019

WATER SUPPLY LANDS

Town-owned land managed by the Pepperell Water Division is protected from development as long as the associated water supply is in use. It is important to note, however, that development of facilities related to water treatment, distribution and maintenance are allowed on these parcels, and should a drinking water source be decommissioned, the land could be sold and developed. Of the sixteen Town-owned parcels managed by the Water Division, only one, the 10.7-acre Pepperell Springs lot, has a conservation restriction. The remaining fifteen parcels, accounting for 195.1 acres, are protected by the requirements of Article 97 for as long as the properties are associated with the Town's drinking water supply.

CEMETERIES

There are four cemeteries in Pepperell composed of five parcels totaling 42.1 acres. These burial grounds include the municipally-owned Walton Cemetery and Woodlawn Cemetery, the Pepperell Cemetery, owned by the Pepperell Cemetery Association, and the church-owned St. Joseph's Cemetery. Burial grounds and cemeteries are important public spaces that link us with our past. Pepperell's cemeteries contain gravestones, monuments, memorials and tombs that commemorate the lives of many generations of residents, including founding members of the community, soldiers from the Revolutionary War and Civil War, veterans from other wars and conflicts, settlers, farmers and immigrants who helped build the community and the nation. As open space becomes developed in the future, these places will remain as a haven for quiet and reflection.

Table 8: Pepperell Cemeteries

Cemetery	Location	Acreage
Woodlawn Cemetery (2 parcels)	Heald Street	14.6
Walton Cemetery	Park Street	8.6
Pepperell Cemetery	Park Street	4.3
St. Joseph's Cemetery	Jersey Street	14.6
Total		42.1

Source: Pepperell Open Space Inventory as of March 2019

Colonel William Prescott, who was the commander at the Battle of Bunker Hill, is the most famous Revolutionary War figure buried in Pepperell. On June 16, 1775, he was ordered by General Israel Putnam to move a number of militia companies encamped in Cambridge to occupy the heights of Charlestown overlooking Boston Harbor. Initially directed to occupy Bunker Hill, Prescott believed nearby Breed's Hill, while lower in elevation, was closer to the harbor. Prescott is remembered for calmly ordering his men to conserve ammunition and make every shot count: "Aim low, boys. Fire at their waistbands, and wait 'till you see the whites of their eyes."

Also buried in Pepperell is the town's first pastor and notable patriot, Reverend Joseph Emerson, Jr. He was known for his powerful patriotic sermons and urged his assembly to join the patriot cause. Reverend Emerson sacrificed his life ministering to the men of Pepperell in the camps of the colonial army of the American Revolution and died in 1775 after becoming ill in Cambridge.

OTHER PUBLIC AND PRIVATE LANDS WITH UNPROTECTED OR UNKNOWN STATUS

As shown in Table 9, there are thirty-nine Town-owned properties, totaling 223.3 acres, that are either unprotected or for which the protection status is unknown at this time. In addition, there are four lots totaling 14.0 acres that are unprotected and under the ownership of the Boston and Maine Railroad. The Pepperell Airport contains 35.9 acres, is privately owned, and is unprotected from future development.

Table 9: Other Public and Private Lands with Unprotected or Unknown Status

Parcel Description	Address	Owner	Acreage
B&M Right of Way	Off June Street	B&M Railroad	8.00
B&M Right of Way	Hollis Street to Brookline Street	B&M Railroad	1.50
B&M Right of Way	Tucker Street to Hollis Street	B&M Railroad	0.96
B&M Right of Way	Main Street to Mill Street	B&M Railroad	3.50
B&M Right of Way	41 Canal Street	MASS Electric	4.30
D.A.R Prudence Wright Chapter Property	Townsend Street	Prudence Wright NSDAR Chapter 430	0.55
Airport	165 Nashua Road	Shattuck	35.91
Civil Defense Building	Off Groton Street	Town of Pepperell	0.02
Dog Pound	Heald Street	Town of Pepperell	0.02
Fire Station	38 Park Street	Town of Pepperell	1.46
Fire Station	47 Lowell Road	Town of Pepperell	1.80
Highway Department Garage	Lowell Road	Town of Pepperell	10.40
Lawrence Library	Main Street	Town of Pepperell	1.60
Lawrence Library	Main Street	Town of Pepperell	4.50
Miscellaneous Town-owned	Corner of Boynton and Bemis Streets	Town of Pepperell	32.00
Miscellaneous Town-owned	64 Boynton Street	Town of Pepperell	2.20
Miscellaneous Town-owned	Off North Street	Town of Pepperell	0.14
Miscellaneous Town-owned	Nashua Road	Town of Pepperell	1.88
Miscellaneous Town-owned	42 Ridge Road	Town of Pepperell	0.89
Miscellaneous Town-owned	90 Park Street	Town of Pepperell	5.12
Miscellaneous Town-owned	163 Lowell Road	Town of Pepperell	0.24
Miscellaneous Town-owned	40 West Street	Town of Pepperell	0.85
Miscellaneous Town-owned	Tucker Street	Town of Pepperell	0.87
Miscellaneous Town-owned	31 Groton Street	Town of Pepperell	0.09
Miscellaneous Town-owned	56 Groton Street	Town of Pepperell	0.26
Miscellaneous Town-owned	53 Leighton St	Town of Pepperell	0.30

Table 9 (cont'd): Other Public and Private Lands with Unprotected or Unknown Status

Parcel Description	Address	Owner	Acreage
Miscellaneous Town-owned	137 South Road	Town of Pepperell	4.83
Miscellaneous Town-owned	139 South Road	Town of Pepperell	3.33
Miscellaneous Town-owned	168 River Road	Town of Pepperell	0.28
Miscellaneous Town-owned	9 Dartmouth Lane	Town of Pepperell	0.16
Miscellaneous Town-owned	174 River Road	Town of Pepperell	0.11
Monument	Main Street	Town of Pepperell	0.47
Nissitissit Hill	Off Nashua Road	Town of Pepperell	2.70
Public Safety Complex	Main Street; former Shattuck School	Town of Pepperell	0.94
Senior Center	37 Nashua Road	Town of Pepperell	5.34
Sewer Division Property	18 Sheffield Road	Town of Pepperell	0.12
Sewer Division Property	4 Adam Street	Town of Pepperell	0.06
McGrath Community Center	1 Hollis Street	Town of Pepperell	1.00
Town Hall	Main Street	Town of Pepperell	0.48
Town Hall	Elm Street	Town of Pepperell	1.00
Town Hall	1 Main Street	Town of Pepperell	0.16
Transfer Station	Off Boynton Street	Town of Pepperell	4.40
Transfer Station	Off Boynton Street	Town of Pepperell	2.40
Transfer Station	65 Boynton Street	Town of Pepperell	66.05
Wastewater Treatment Plant	Off Nashua Road	Town of Pepperell	8.16
Total			278.02

Source: Pepperell Open Space Inventory as of March 2019

CHAPTER 61, 61A AND 61B PROPERTIES

Under Chapters 61, 61A and 61B of the Massachusetts General Laws (M.G.L.), a land owner who has ten (10) contiguous acres being actively used as forest (Chapter 61), or five (5) contiguous acres in active agriculture (Chapter 61A), or five (5) contiguous acres of open space/ recreational land (Chapter 61B), is entitled to certain local tax abatements. These abatements are given in exchange for the property owner retaining the land in its current use as agriculture, forest, recreation or open space. The landowner needs to exclude their residence, other structures, and any land used in connection with those buildings. The structures and excluded land continue to be taxed at the full assessment. Should the current landowner decide to sell or develop property covered under these programs, the Town of Pepperell will have an opportunity to exercise its right-of-first-refusal, or may alternatively elect to assign this right to a non-profit conservation organization or the Commonwealth of Massachusetts. Table 10 lists the parcels classified under Chapters 61, 61A and 61B at this time.

Table 10: Chapter 61, 61A and 61B Parcels

Chapter 61-Forest		
Parcel location	Map Block Lot	Acreage
33 North St	4-11-0	13.20
9 Farrar St	4-20-2	27.82
68 Prescott St	4-21-0	9.70
Off North St	4-32-0	17.20
133 Hollis St	10-2-0	17.80
22 Sheffield St	13-9-0	29.90
46 Blood St	13-62-0	35.02
Sartelle St	14-111-0	68.60
27 Sartelle St	14-113-0	3.00
26 Sartelle St	14-136-0	10.30
Off Lowell Rd	17-1-0	53.50
Off Jewett St	18-30-0	20.70
6 Ames St	19-24-0	22.70
Ames St off Jewett St	19-63-0	23.93
19 Harbor St	32-11-0	5.20
64 Harbor St	32-39-0	12.90
Off South Rd	32-50-0	30.87
4 Sirius Ln	37-3-0	22.17
46 Bancroft St	37-8-0	59.00
83 South Rd	37-23-0	30.60
143 River Rd	38-23-0	5.00
121 Elm St	38-31-0	29.90
148 River Rd	38-32-0	8.10
Total Chapter 61		557.06
Chapter 61A-Agriculture		
Parcel location	Map Block Lot	Acreage
41 North St	4-10-0	41.00
163 Hollis St	5-9-0	16.50
169 Hollis St	5-10-0	10.22
78 Prescott St	5-12-0	15.27
162 Hollis St	5-12-1	1.84
75 Prescott St	5-21-0	54.25
41 Elliott St	5-25-0	31.84
11 Dow St	6-3-0	23.06
18 Boynton St	8-14-0	11.42
17 Lawrence St	8-16-0	4.40
2 Blue Herons Way	8-73-0	6.97
14 Prescott St	9-144-0	7.50
40 Oak Hill St	9-152-0	20.46
74 Brookline St	9-154-0	1.31
49 Brookline St	9-179-0	77.32
128 Hollis St	10-1-0	28.40
112 Hollis St	10-10-0	18.20
101 Hollis St	10-11-0	15.00
95 Hollis St	10-17-0	10.00
96 Hollis St	10-19-0	11.00
137 Hollis St	10-25-0	4.50
52 Elliott St	10-39-0	3.48
99 Nashua Rd	11-12-0	8.60

Table 10 (cont'd): Chapter 61, 61A and 61B Parcels

Chapter 61A-Agriculture (cont'd)		
9 Maple St	13-112-0	19.66
90 Hollis St	15-73-0	23.00
76 Heald St	19-22-0	13.33
67 Jewett St	19-29-0	97.05
12 Harbor St	32-42-0	15.90
18 Shattuck St	32-49-0	22.07
84 Jewett St	33-4-0 and 33-6-0	129.80
13 Mason St	34-13-0	51.21
18 Mason St	34-14-0	1.40
51 Elm St	34-19-0	8.45
54 Elm St	34-22-A	9.48
65 Elm St	34-23-0	21.80
24 Shirley St	34-24-0	12.50
20 Mt Lebanon St	34-25-0	18.00
27 Shirley St	34-32-0	31.92
87 Elm St	34-35-3	1.86
32 Shirley St	34-35-10	1.06
51 Mt Lebanon St	34-45-0	3.60
63 River Rd	35-13-0 (with 35-14-A)	19.20
67 River Rd	35-15-0	2.50
96 Mt. Lebanon St	38-24-0	12.00
75 South Rd	38-60-0	9.74
17 Powhatan Rd	39-6-0	28.26
70 South Rd	39-9-0	39.37
127 Shirley St	39-11-0	4.20
11 Powhatan Rd	39-30-0	28.06
20 South Rd	40-49-0	34.40
Total Chapter 61A		1,082.23
Chapter 61B-Recreation		
Parcel location	Map Block Lot	Acreage
87 Lawrence St	2-11-10	12.03
150 Nashua Rd	6-18-0	60.00
Off Dow St	6-18-2	9.54
26 Prescott St	9-127-0	21.80
32 Elliott St	10-3-0	5.68
40 Elliott St	10-3-10	5.68
117 Chestnut St	12-114-0	14.25
74 Nashua Rd	15-24-0	9.74
34 Elm St	20-98-0	17.60
93 Groton St	27-50-0	14.40
41 Shattuck St	33-5-0	18.42
26 Lakin St	36-18-0	6.49
7 Lakin St	36-25-0	26.59
143 South Rd	37-76-0	7.50
Total Chapter 61B		229.68

Table 10 (cont'd): Chapter 61, 61A and 61B Parcels

Mix of Chapter 61 with Chapter 61A or Chapter 61A with Chapter 61B		
Parcel location	Map Block Lot	Acreage
48 North St	4-7-0	74.43
141 Hollis St	5-22-0	41.50
11 Harbor St	18-16-0	34.51
201 South Rd	32-54-0	15.30
Total Mixed		165.73
Total Chapter 61, 61A and 61B		2,034.69

Source: Pepperell Open Space Inventory as of March 2019

Pepperell currently has 2,034.69 acres of private land enrolled in the Chapter 61, 61A and 61B tax abatement programs. Over 53% of this land is in agricultural use and is enrolled in the Chapter 61A program.

A landowner who has his property classified under Chapter 61, 61A or 61B, must notify the Chief Elected Official (Board of Selectmen Chairman), the Board of Assessors, the Planning Board, the Conservation Commission, and the State Forester, when all or a portion of the land is being sold or converted to a disqualifying use. Unfortunately, small towns in high growth areas have found that when a strong housing market drives up the value of land, farm and forest landowners have little incentive to retain their Chapter 61 or 61A status. For this reason, Chapter 61 and Chapter 61A lands are particularly vulnerable to development. DCR has a very informative publication on the Chapter 61 programs that can be accessed online at:

<http://masswoods.org/sites/masswoods.net/files/Ch-61-Web.pdf>

RECREATION FACILITIES AND PROGRAMS

The 2016 Open Space and Recreation Plan includes goals related to open space, natural resources and recreation. The goals primarily addressing recreation include the following:

- Provide for long-term sustainability of open space protection and recreation efforts.
- Increase access for people of all demographic groups to Pepperell's Open Space and Recreation lands and programs.
- Promote a cooperative and regional approach to open space and recreation planning.

Most of Pepperell's outdoor recreation areas are owned and maintained by the Town, the State and local land trusts. Pepperell's municipal conservation properties are open for passive recreation, and there are many opportunities within Pepperell for hiking, bicycling, and other trail-related activities. Pepperell's Recreation Commission oversees the scheduling of use at the Community Center, Town Field, Sean Wellington Basketball courts, and the surrounding fields.

Of the 185 respondents to the Community Survey undertaken for the Open Space and Recreation Plan, 68% of residents stated acquiring more land for recreation needs was very important. The survey lists tennis courts, swimming areas, boating areas, and additional conservation lands as the top four items that residents most desire.

RECREATION PATHS AND TRAILS

Pepperell has an extensive network of trails throughout its protected conservation properties. The eight-mile Jeff Smith Trail, which runs from Pepperell to Hollis, NH, is included in the Appalachian Mountain Club's Trail Guide. The town's trail systems have been mapped using GPS and trails maps are available on the Town of Pepperell and Nashoba Conservation Trust websites. In addition, the 12-mile DCR-owned Nashua River Rail Trail provides a paved trail for biking, walking, in-line roller skating, and other activities. The Rail Trail extends from Ayer, MA to Nashua, NH, with approximately two miles running through Pepperell. Parking for the Rail Trail is available in Railroad Square adjacent to where the trail crosses Groton Street.

Efforts to connect Pepperell's trail system to trails in the neighboring communities of Dunstable, Groton, Brookline and Hollis are ongoing. Use of off-road vehicles and snowmobiles is not allowed on public land, but often occurs, indicating local interest in the activity.

In response to a request from older residents, benches are being added along trails and in the downtown section of Pepperell, to provide resting places for those walking to their destinations. An ADA-accessible trail⁶ has been installed behind the Lawrence Library, which can be used by all residents, including those who utilize a wheelchair or have visual impairments. Benches, provided by an Eagle Scout, have been installed along the trail.

Pepperell maintains 11.5 miles of sidewalks, which are located in the downtown section of Town. Sidewalks also extend along portions of Route 113, from Pepperell Town Hall almost to the Dunstable town line. The Town's effort to incorporate "Complete Streets"⁷ into future

⁶ Many aspects of the built environment are covered by United States Access Board's Architectural Barriers Act (ABA) of 1968, and the U.S. Department of Justice's Americans with Disabilities Act (ADA) of 1990. The Access Board also maintains guidelines for non-federal facilities covered by the ADA. These guidelines serve as the basis for ADA Standards issued by the Department of Justice (DOJ) and, in the case of facilities used to provide designated public transportation, such as trails, the Department of Transportation (DOT). In 2004, the Access Board jointly updated its ADA and ABA guidelines to make them more consistent. As a result, the current ABA Standards and ADA Standards are very similar.

⁷ Complete Streets are streets designed and operated to enable safe use and support mobility for all users, including people of all ages and abilities, regardless of whether they are travelling as drivers, pedestrians, or bicyclists. The concept of Complete Streets encompasses many approaches to planning, designing, and operating roadways and rights of way with all users in mind to make the transportation network safer and more efficient. Complete Street policies are set at the state and local levels and are frequently supported by MassDOT roadway design guidelines.

planning projects will improve connectivity between neighborhoods, recreational facilities and conservation properties.

BOATING AND FISHING

Excellent boating and fishing can be found in Pepperell's rivers and streams as well as at Heald Pond. The Nissitissit River is considered one of the best trout streams in the eastern part of the state. The Nashua River, Unkety Brook, Gulf Brook, Sucker Brook, and Heald Pond are other favored fishing spots. The Division of Fisheries and Wildlife stocks brook trout in the Nissitissit River, Unkety Brook, and Sucker Brook. The Nashua River is a popular destination for bass fishermen, many of whom practice a "catch and release" policy.

There are currently three canoe/kayak launch sites on the Nashua River, one (1) canoe/kayak launch on the Nissitissit River, and one canoe/kayak launch site on Heald Pond. The Nashua River locations are on Canal Street, off River Road, and on Route 119 at the Groton line. The Nissitissit River launch is located off Hollis Street, and the Heald Pond site is on Heald Street.

Known for its recreational and scenic values, the 36-mile Nashua River provides boating, fishing, and nature observation opportunities. Pepperell Pond is a favorite location for bass fishing tournaments. The Town of Pepperell Conservation Commission continues to partner with the Nashua River Watershed Association (NRWA) to identify land along its banks for protection. To date, nearly 200 miles of riverfront have been protected within the Nashua River watershed.⁸ The Massachusetts Division of Fisheries and Wildlife advises humans not to eat fish from the Nashua River due to elevated mercury levels.

A 10.5-mile cold-water fishery, the Nissitissit River travels through Hollis, NH where it enters Pepperell before it empties into the Nashua River just downstream of Pepperell's Covered Bridge on Groton Street. The Nissitissit is used for canoeing, kayaking and nature observation and attracts fishermen, especially fly fishermen, from around the region. Known as one of the cleanest rivers in Massachusetts, groups like Trout Unlimited have focused their efforts on improvements to the Nissitissit. Such efforts include financial support for the installment of three-sided or bottomless culverts and the removal of the Turner Dam on Hollis Street. Much of the land along the river has been protected by the DFW, which often works with the Nissitissit River Land Trust, the NRWA, and the Pepperell Conservation Commission. Under the Squannacook and Nissitissit River Sanctuary Act (MGL Chapter 132A, Section 17), the Nissitissit River and associated named tributaries are recognized as

⁸ Provided by the Nashua River Watershed Association, August 2019

Outstanding Resource Waters of the Commonwealth and new point-source discharge⁹ are limited by the Act. Pepperell has four miles of frontage on the River.



EQUESTRIAN ACTIVITIES

Pepperell is known for its many equestrian enthusiasts and the number of horses within its borders. Some equestrian facilities include indoor arenas, and the Pepperell Horse Owner's Association uses both public and private trails for its annual trail ride. Due to their popularity in Pepperell, horses are often encountered on conservation property trails.



Farm off Heald and Willow Streets

⁹ The U.S. Environmental Protection Agency (EPA) defines point source pollution as “any single identifiable source of pollution from which pollutants are discharged, such as a pipe, ditch, ship or factory smokestack”. Some factories discharge their effluent directly into a waterbody.

HUNTING AND TRAPPING

Hunting is another popular activity in Pepperell. A list of Conservation Commission managed parcels that are open to hunting is available on the Conservation Commission webpage. The list includes DFW properties, all of which allow both hunting and trapping.

YOUTH SPORTS PROGRAMS

Youth sports programs currently offered in Pepperell are listed below:

- Pepperell Soccer
- Pepperell Youth Baseball and Softball
- TAP Basketball
- Pepperell Summer Basketball League
- PAT Hockey
- North Middlesex American Youth Football & Cheerleading
- North Middlesex Pop Warner Football
- North Middlesex Youth Lacrosse
- Pepperell Ski Club

Many of these activities are run by non-profit organizations and are available to students in Pepperell, Ashby and Townsend. The Recreation Commission also offers “Trips and Tours”, where residents from Pepperell and other communities enjoy bus tours to various destinations.

RECREATIONAL FACILITIES AND RESOURCES

The Sis McGrath Community Center is a public facility where residents can hold meetings, rent space for functions, and attend a number of community events. The Center is also used for a number of recreation programs, such as the fitness programs, babysitting and “home alone” preparation courses, children’s playgroups and dance classes, and quilting. Non-profit groups, such as Scouts, Friends of the Lawrence Library, and folk dancers, use the space for regular gatherings or fundraisers.

The Pepperell Senior Center offers a number of educational, recreational, exercise and fitness opportunities for Town and area residents, including yoga, Zumba, Bone Builders, Zengevity, line dancing, folk dancing, nature talks and walks.

The Recreation Commission manages a number of the Town fields, including those located at the schools. Table 11 lists the fields and the types of facilities and equipment located at each site.

Table 11: Recreation Fields

Field Name	Location	Features
Town Field	Hollis Street	Playground, Shawn Kinsley Skate Park, two softball fields, gazebo and two lighted basketball courts
Kennedy Field	Main Street behind the Public Safety Complex	One multi-purpose field
Comiskey Field	Along driveway to Varnum Brook Elementary School	Multi-purpose fields configured onto two 6 v.6 or 8 v. 8 soccer fields
Glow Field	End of Tucker Street	Multi-purpose fields that are configured into two 8 v. 8 and one 11 v. 11 soccer fields
Leao Field	Behind Varnum Brook Elementary School	Multi-purpose fields that are configured into two 11 v. 11 soccer fields
Bartelson Fields	Jersey Street	Two 60'/70' baseball diamonds, one 70'/90' baseball diamond and one t-ball field
Nissitissit Middle School	33 Chace Avenue	One 90' baseball diamond and multi-purpose field
Varnum Brook	Behind Varnum Brook Elementary School	Two softball fields and an enclosed set of tennis courts

Source: 2016 Open Space and Recreation Plan

In December 2018, the Pepperell Fields and Hard Courts Master Plan was completed. This document profiles the conditions of athletic fields and facilities, quantifies field demand, and details the need for upgrades or new facilities. Lack of ADA compliance was found at most town recreation facilities, and many were deemed in need of improved parking, drainage, turf condition, and irrigation. The demand study¹⁰ found that town fields are accommodating 12,027 team events per year. Eleven fields were found to experience more than 600 uses per year. A well-maintained and irrigated natural turf field that is properly rested can sustain 200-250 uses per year.

The study concluded that additional fields are needed to allow for expansion of youth leagues, rest fields, and reduce schedule constraints. Using accepted standards, it was determined that seven baseball diamonds, three softball diamonds, and fourteen multi-purpose fields are needed. Alternatively, some synthetic fields could be developed which

¹⁰ Rates of visitation to recreation sites, rates of participation in various recreation activities, economic values, the needs of providers and users of resources, and public opinion are factors in measuring demand. Although each of these measures contribute to an understanding of recreation demand, each presents an incomplete picture of demand if considered in isolation. The specific methodology for measuring demand can be found on page 6 of the Pepperell Fields and Hard Courts Master Plan prepared by Gale Associates, Inc., December 2018.

could sustain 750 uses per year. Developing these facilities is estimated to cost \$13 million in total. The Master Plan lays out a five-phase implementation plan.

LOCAL CAPACITY

Pepperell has several organizations working to preserve open space and enhance recreation within the community. The various Town departments, boards and organizations work together to ensure that these resources are protected for future generations. Joint leadership is important; each of the parties listed below has a role to play and represents different interests.

- The Pepperell Conservation Commission is the steward for Town-owned conservation land and local administrator of Massachusetts' Wetlands Protection Act. Working with land owners, the Commission ensures that Pepperell's natural resources are protected and that construction and environmental alterations are accomplished in compliance with state laws. The Commission also works with and advises other Town bodies, including the Planning Board, Board of Health, and the Building Inspector's Office on natural resources issues and potential land conservation. The Commission has one staff person who administers the permitting process and oversees day-to-day activities.
- The Planning Board is responsible for implementing the Town's Zoning Bylaw and working with developers to ensure that important conservation land and natural resources are protected during the development process.
- The Recreation Commission is responsible for recreation activities and facilities. Pepperell's Recreation Commission oversees the scheduling of use at the Community Center, Town Field, Sean Wellington Basketball courts, and the surrounding fields. The Recreation Commission also offers a variety of activities including community events, adults' and children's classes, and group trips. The Pepperell Recreation Commission uses a regional approach to expand the programs they offer.
- The Nashoba Conservation Trust is a non-profit land trust, founded in 1969, which focuses on land preservation in Pepperell. The Trust works with local landowners in an effort to determine appropriate ways to preserve the Town's remaining undeveloped properties and open areas.
- The Nissitissit River Land Trust is a non-profit organization, founded in 1968, which focuses on conservation and protection of the natural, unpolluted habitats along the Nissitissit River and its surrounding lands in Massachusetts and New Hampshire.

- Dunstable Rural Land Trust (DRLT) was founded in 1974 with the intent of “preserving, conserving, and educating people about the rural landscape...” The Dunstable Rural Land Trust owns two parcels in Pepperell totaling 31.99 acres
- The Nashua River Watershed Association is a non-profit organization, founded in 1969, whose goal is to ensure a healthy ecosystem with clean water and open spaces for human and wildlife communities in the Nashua River watershed.
- The Friends of Pepperell Recreation is a non-profit organization that works to promote community involvement for the betterment of the town, its citizens and its recreational facilities. The Friends holds multiple fundraising activities each year, such as a bike sale and the town-wide yard sale.

PUBLIC INPUT

On April 19, 2018, the first public Visioning Session for the Master Plan was held at the Senior Center, where residents participated in a Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis. The following priorities related to Open Space and Recreation were identified through the exercise:

- Strengths
 - Senior Center
 - Open space/rural character
 - Conservation Land
 - Pedestrian trail network
 - Water quality
 - Community events
 - Youth programs
 - Agriculture
 - Two land trusts
 - Conservation Commission
 - Bucolic character
 - Rail Trail
 - Waterways/Nashua River
 - Large equestrian population
 - Regional organizations and non-profits
 - Garden Club
- Weaknesses
 - Lack of water resource protection/declining water quality
 - Not taking enough action to protect rural, historical and cultural resources
 - No discussion of or preparation for climate change
 - Loss of wetlands and wildlife, and weak protection for these resources
 - No Community Preservation Act adoption

- Lack of sidewalks along Route 111
- Too few recreational opportunities
- Lack of outdoor recreation for disabled residents
- Pedestrian safety/lack of crosswalks in Railroad Square
- Opportunities
 - Set preservation target for open space at 25%
 - Expand Pepperell Community Arts
 - Redevelop mill site as open space
 - Community farming
 - Remain a small town
 - Market bird watching
- Threats
 - Overdevelopment
 - Expansion of recreational facilities in neighboring towns results in disinvestment in local facilities
 - Climate change
 - Shortage of farmland
 - Lack of walkability on Main Street
 - Angle parking at rail trail is unsafe
 - Development is destroying biodiversity

The input received at the February 7, 2019 Visioning Session on Open Space and Recreation indicated that the Town's greatest strengths lie in:

- The Town's extensive conservation land and trail systems
- Pepperell Springs property
- The Nissitissit and Nashua Rivers
- Popular and well-used outdoor recreational facilities
- The Nashua River Rail Trail
- Diversity of habitats
- Beautiful scenery and vistas
- Agricultural lands
- ADA accessible trail behind the Library
- Cemeteries
- Online trail maps
- Wild and Scenic River designation
- Heald Orchard
- Strong community groups and volunteers dedicated to conservation and recreation
- Indoor equestrian riding arena

Weaknesses and vulnerabilities of Pepperell's Open Space and Recreation assets and programs identified by participants included the following:

- Need more recreational programs for school age children
- Need to better protect the water supply
- Pepperell needs to better market its recreational areas and expand recreational programs
- The Open Space Redevelopment Development zoning regulations need updating
- There needs to be better access to recreational land for youth and elderly who do not drive
- Pepperell lacks proper tourist amenities such as lodging (e.g. Bed and Breakfasts)
- Loss of farms and agricultural land is a threat/farmers need help to stay in business
- An all-season indoor farmers market and other support and promotion of local farms would be beneficial
- Invasive species are increasing and invasive water chestnuts are clogging Pepperell's waterways
- Pepperell has litter and dog waste problems
- The Nashua Road Soil Reclamation Project remains a threat
- Better balance between recreation and open space

Needed improvements for Pepperell's Open Space and Recreation programs and properties were identified by participants, and included the following:

- The Town needs a pool
- The Town needs an activities center
- A skating rink/pond is needed
- There should be a town history museum
- There ought to be a covered outdoor area suitable for picnics and barbecues
- The properties abutting the Nashua River ought to be beautified
- Children's recreational facilities/playgrounds need to be upgraded
- The Town should adopt the Community Preservation Act

Parks and recreational facilities and services identified to support Pepperell's changing demographics (e.g. aging population) included:

- Benches and pocket parks conveniently located around town
- More ADA-accessible trails
- The Town will need more places for people to congregate
- The Town will need more recreational facilities for an aging population
- An indoor pool
- Better transportation options for seniors
- Expansion of the senior center
- Improved street and sidewalk lighting
- Succession of agricultural operations from one generation to the next generation

The most threatened resources and the steps that Pepperell can take to address them included the following:

- Wildlife diversity is diminishing and threatened by development
- Native trees are threatened and more native trees and plants should be planted
- The Town's dark nighttime sky needs to be preserved
- Farmland is threatened by severe weather
- Landscape assistance would help with the Town's appearance
- The Town should include tips about protecting native species on its website
- The Community Preservation Act should be adopted
- There needs to be more regional cooperation on habitat and natural resource issues
- NMCOG ought to work with other RPAs¹¹ to address environmental concerns
- Public education is needed relative to littering and stormwater management
- The Town ought to use its website to inform the public about environmental concerns.
- Strategically locate benches across town

Participants at the session also identified a number of properties worthy of future protection. The properties included a number of farms, and are described in more detail in the Natural and Cultural Resources chapter. Appendix __ includes maps depicting these locations.

In addition to the public Visioning Sessions, a written survey was widely distributed seeking resident's input on a wide variety of issues relative to the development of the overall Master Plan. Over the course of three months, 525 responses were received. Approximately 82% of the respondents indicated that they choose to live in Pepperell because of the community's character and rural setting. Over half (54%) of the respondents indicated that the number of recreation facilities and programs is excellent or good, while about 6% indicated that it is poor. Similarly, approximately 49% of the respondents indicated that the mix and type of recreational facilities and programs is excellent or good, while 27% indicated that it is fair, and nearly 7% stated that it is poor. Over 67% of the respondents felt that the amount of open space protected is excellent or good, and only 2 % that it is poor. In listing the ~~three~~ most critical issues facing Pepperell over the next ten years, respondents ranked overdevelopment/population growth as number 4, open space preservation as number 5, and maintaining the rural character/small town feel as number 10.

¹¹ Regional planning agencies are governmental bodies that serve the local municipalities and residents within their planning districts by addressing issues and needs that cross municipal boundaries through planning, policymaking, communication, coordination, advocacy, education, analysis, and technical assistance. The thirteen regional planning agencies in Massachusetts are advisory bodies to their member communities, private business groups, and state and federal governments. With the exception of the Cape Cod Commission, the state's regional planning agencies do not have regulatory powers.

ISSUES AND OPPORTUNITIES

Pepperell adopted its first Open Space and Recreation Plan in 1969 to guide policy and decision-making in a way that offers permanent protection of natural resource areas and recreation assets. Over the years, the Town has regularly updated the document and pursued opportunities to acquire and protect additional properties throughout town. Throughout the input process for the Master Plan, it was evident that the Town sees the preservation of rural and agricultural landscapes, environmental resources, historical resources, wildlife, forests and other habitat areas as high priority.

The Town's priorities are also articulated in the 2016 Pepperell Open Space and Recreation Plan goals which are outlined as follows:

- Preserve Pepperell's public and private water supplies;
- Protect sensitive natural resources and the rural character of the town;
- Provide for long-term sustainability of open space protection and recreation efforts;
- Increase access for people of all demographic groups to Pepperell's open space and recreation lands and programs; and
- Promote a cooperative and regional approach to open space and recreation planning.

Much of Pepperell's protected open space surrounds the Nashua and Nissitissit Rivers and their tributaries, is clustered in the northwest and north central sections of town, and coincides with the Water Resources Protection Overlay District (WRPOD). Future land acquisition initiatives should focus on connecting these parcels in order to establish an open space network, protect water quality, and create wildlife corridors.

Pepperell has a tradition of protecting important open space properties, as evidenced by the acquisition of Pepperell Springs and Keyes Farm. Nonetheless, land acquisition and protection is expensive and challenging. Acquisition of undeveloped land requires the following steps: (1) identification available open space; (2) prioritization of parcels; and (3) acquisition. The Town should establish criteria for determining which town board of commission is given care and custody of lands that are acquired in fee, through donation, or by tax title foreclosure. Given the town's fiscal challenges, funding for such land purchases may not be possible without a dedicated revenue source. Adoption of the Community Preservation Act would provide a dependable source of funding that would benefit open space and recreation, as well as affordable housing and historic preservation. Protecting additional open space at little to no cost may also be possible by strengthening the Open Space Residential Design Bylaw, as discussed previously in the Land Use and Zoning chapter.

The Town should continue to expand protected open space on an ongoing basis. Pepperell's Open Space Inventory map shows that important connections remain unprotected. As

outlined in the 2016 Open Space and Recreation Plan, the most important areas include the protection of remaining farmland; extension of protected corridors along the Nissitissit River, Sucker Brook, and Mine Brook; additions to the west bank of the Nashua River greenway, from the Nissitissit confluence to the NH line; connections between protected areas on Lawrence Street and Boynton Street, and between Hollis Street and Brookline Street; and connections to other protected parcels in neighboring towns, including The Throne, Reedy Meadow Brook, and Unkety Brook. Communications with the owners of these properties is ongoing. A dialogue has also been established with land protection organizations to help with protecting the parcels when they become available.

Encouraging landowners of forested parcels to enroll in Chapter 61 would benefit open space preservation. The community should be educated about forestry practices that create forest openings for wildlife, leave dead trees for nests and dens, and provide hedgerows for small mammals and birds. Owners of forested lands should also be made aware of available assistance from the Conservation District and the New England Forestry Foundation.

In an era of global warming, open space protection will be key to implementing climate mitigation and adaptation, while also achieving other environmental, social, and economic benefits, by:

- Mitigating the urban heat island effect;
- Conserving habitat and facilitating habitat connectivity;
- Managing surface water and riverine flood risk (e.g., increasing permeable surface area, allowing for groundwater recharge, reducing rate and volume of runoff);
- Enhancing water quality by filtering and removing sediment and pollutants; and
- Sequestering and storing carbon in vegetation and soils (e.g., protecting and restoring forests and wetlands, increasing the carbon content of soils).

Through a grant provided by the Executive Office of Energy and Environmental Affairs (EOEEA), the Town is currently preparing a Municipal Vulnerability Preparedness (MVP) Plan. The MVP process is the first step in planning for climate resiliency through the future implementation of priority projects. Once the Plan is complete, Pepperell will be certified as an MVP community and will be eligible for MVP Action Grant funding from the State.

The Conservation Commission recently updated the Conservation Land Rules and Regulations, and has an effective trail monitoring and maintenance program using volunteers. Most of the large town-owned conservation areas are part of a management plan or a forest management plan. As resources permit, management plans should also be developed for the remaining conservation areas.

Most of the town's open space areas and recreation facilities are not accessible to those with disabilities. In 2018, an ADA compliant trail was created behind the Lawrence Library. The Town should develop a transition plan to ensure that other properties and facilities are brought into compliance. Funding to prepare a transition plan is available through the Massachusetts Office on Disability's Municipal Americans with Disabilities Act Improvement Grant Program.

While the Conservation Commission and the Nashoba Conservation Trust have developed a trail guide that is available online and in hardcopy, more could be done to promote the Town's conservation and recreation areas and programs. The Open Space and Recreation Plan suggests publicizing these facilities, programs and events in the Recreation Commission's quarterly flyer, in the Senior Center newsletter, and by posting flyers at conservation land kiosks, on social media, and at the library and Community Center. The Town could also consider developing its own newsletter, newspaper or informational bulletin to get the word out. Given the many rich natural and historic resources available in Pepperell, the town could promote these assets to outdoor enthusiasts and history buffs residing in other communities. Any future publications should include information on recreation, conservation and historic sites and programs of interest available within the community.

The need to link Pepperell's conservation areas through an integrated trail system has been discussed at some of the public meetings. As development occurs, some of the opportunities for future linkages may be lost. To ensure that such linkages remain a possibility, the Conservation Commission, Planning Board, and the Recreation Commission should formulate a strategy for establishing a town-wide network. The local permitting boards should then work with proponents of future development projects on preserving the easements/rights-of-way needed for these connections.

The Recreation Commission has worked to expand recreational opportunities in spite of the town's fiscal challenges. The preparation of the Pepperell Fields and Hard Courts Facilities Master Plan in 2018 helped to evaluate the current condition of recreational facilities and projected the anticipated demand for playing fields based on current usage and projected trends. The study determined that seven baseball diamonds, three softball diamonds, and fourteen multi-purpose fields are needed. Developing these facilities is estimated to cost \$13 million in total.

Currently, user fees assist in covering some of the maintenance costs for recreation facilities. Youth baseball and youth soccer organizations maintain the fields that they utilize, while other entities contribute a small portion of their registration fees to the Recreation Department in order to help offset the costs associated with maintenance and

improvements. However, given the significant cost of implementing the 2018 Fields and Hard Courts Master Plan, other revenue sources will be needed. As previously mentioned, the adoption of CPA would be beneficial. CPA funds may not be spent on routine maintenance or operating expenses, but they can be used for only capital improvements. CPA funds may be used for the acquisition of land that is to be used for recreation, or for the creation of new recreational facilities on land that the Town already owns. CPA is designed to fund recreational activities that take place in outdoor, open, and natural settings, such as parks, playgrounds, and athletic fields, as well as community gardens, hiking and biking trails. In addition to CPA funds, the use of business/corporate donations and sponsorships could also be considered.

The 2018 Fields and Hard Courts Master Plan suggests that adding artificial turf fields would allow for higher usage levels than natural turf fields. Most of the synthetic turf fields contain crumb rubber infill along with padding and drainage systems. Crumb rubber fields are made of the following materials:

- A bottom layer composed of plastic sheeting.
- Middle layers composed of crushed stones with plastic tubing for drainage and rubber padding for shock absorbance
- A top layer composed of plastic mesh with soft, plastic strands that resemble blades of grass
- Crumb rubber infill, made from recycled tires, is added to the top layer to provide extra padding and keep the grass upright. Sand is sometimes mixed with the crumb rubber.

Other synthetic fields are made of carpet-style materials and do not use crumb rubber. The carpet-style fields resemble a flat carpet and may have nylon carpet fibers. The carpet-style fields are used primarily in the conversion of asphalt fields to synthetic fields.

There are three possible ways for people to have contact with chemicals on artificial turf fields:

- Accidentally ingesting small amounts of crumb rubber by putting fingers in the mouth or not washing hands before eating after playing on the fields
- Breathing in dust and vapors while playing on the fields. Crumb rubber may become dust as it wears and the rubber may give off some vapors.
- Direct skin contact with the crumb rubber.

Several scientific research studies carried out in the United States and Europe have assessed potential exposures and health risks for people using turf fields containing crumb rubber. There is no scientific consensus on the risks. The federal government has commissioned a study to address the issue, but results could be years away. The Pepperell Recreation Commission and the Board of Health should evaluate the most recent research to determine

whether utilizing artificial turf represents an unacceptable health risk for residents, particularly for children.

RECOMMENDATIONS

- Implement the Seven-Year Action Plan outlined in the 2016 Pepperell Open Space and Recreation Plan.
- Establish criteria for determining which town board or commission is given care and custody of lands acquired in fee, through donation, or by tax title foreclosure.
- Adopt the Community Preservation Act (CPA) as a means of funding open space preservation and recreation initiatives. Business/corporate donations and sponsorships should also be explored as a means of supporting conservation and recreation projects.
- Protect additional open space on an ongoing basis, prioritizing the following:
 - parcels located in the WRPOD;
 - remaining farmland;
 - lands that extend protected corridors along the Nissitissit River, Sucker Brook, and Mine Brook;
 - additions to the west bank of the Nashua River greenway;
 - the remaining gaps in the open space network located between Lawrence Street and Boynton Street, and between Hollis Street and Brookline Street;
 - open space network connections to protected parcels in neighboring towns;
 - historical sites, areas and landscapes;
 - important habitat areas; and
 - forested lands.
- Continue to pursue Agricultural Preservation Restrictions (APR) and Conservation Restrictions (CR) for acquired farmland, forest land, riparian corridors, and water supply areas.
- Establish trail linkages between conservation areas and pursue easements needed for future linkages. Work with proponents of future development projects on preserving the easements and rights-of-way needed for these connections. Coordinate with neighboring communities on linkages at the town boundaries in order to establish a regional network.
- Continue to develop and update management plans for all conservation areas and town-owned forests as resources permit.
- Encourage forest landowners to enroll in Chapter 61 and provide information on available assistance from the Conservation District and the New England Forestry Foundation.

- Promote the conservation and recreation areas and programs through the Town's website, social media, the Recreation Commission quarterly flyer, the Senior Center newsletter, and by posting flyers and notices at the Library, Community Center, at conservation area kiosks, and at the North Central Massachusetts Regional Visitor's Center. Future publications should incorporate information on recreation, conservation and historic sites, programs and events that are available or planned in Pepperell.
- Continue to expand upon the work undertaken by the Conservation Commission, Recreation Commission and Nashoba Conservation Trust by further integrating recreation and environmental protection through initiatives, such as nature walks, establishment of an environmental education center, fitness trails and interpretative trails.
- Prepare an ADA Transition Plan for town-owned conservation and recreation properties. Apply for grant funding from the Massachusetts Office on Disability implement needed accessibility improvements.
- To address climate change and resiliency, complete the Municipal Vulnerability Preparedness (MVP) designation process and plan, and apply for state action grant funding to implement the recommendations contained within the plan.
- Implement the recommendations outlined in the Pepperell Fields and Hard Courts Facilities Master Plan as resources permit. The Recreation Commission and Board of Health should assess whether the use of artificial turf presents an unacceptable health risk based on the latest available research.