

Table of Contents

List of Figures	6
Section 1: Plan Summary	1
Section 2: Introduction	2
2A. Statement of Purpose.....	2
2B. Planning Process and Public Participation	3
2C. Enhanced Outreach and Public Participation	5
Section 3: Community Setting	6
3A. Regional Context.....	6
3A.1 Regional Governance	6
3A.2 Surrounding Communities	8
3A.3 Natural Setting	8
3A.4 Transportation	9
3B. History of the Community	10
3C. Population Characteristics	12
3C.1 Past, Present and Future Population.....	12
3C.2 Population Density	13
3C.3 Housing Characteristics	15
3C.4 Age of Residents.....	16
3C.5 Income, Occupation, and Education	17
3C.6 Environmental Justice and Equity	19
3D. Growth and Development Patterns.....	21
3D.1 Patterns and Trends.....	21
3D.2 Infrastructure	22
3D.3 Long-Term Development Patterns.....	26
3D.4 Recent and Projected Growth.....	31
Section 4: Environmental Inventory and Analysis	34
4A. Geology, Soils and Topography.....	34
4A.1 Geology	34
4A.2 Soils	37
4A.3 Topography	39
4B. Landscape Character	39
4C. Water Resources	41
4C.1 Watersheds	41
4C.2 Surface Water.....	43
4C.3 Aquifer Recharge Areas.....	48
4C.4 Flood Hazard Areas	48
4C.5 Wetlands	51
4D. Vegetation	52
4D.1 General Inventory	52
4D.2 Forest Land	53
4D.3 Public Shade Trees	53
4D.4 Agricultural Land	54
4D.5 Wetland Vegetation	54
4D.6 Endangered, Threatened, and Special Concern Species	54
4D.7 Sites That Have Unique Natural Resources.....	56
4D.8 Vegetation Mapping	56

4E. Fisheries and Wildlife.....	56
4E.1 Inventory	56
4E.2 Vernal Pools.....	58
4E.3 Wildlife Corridors	60
4E.4 Endangered, Threatened, and Special Concern Animal Species	60
4F. Scenic Resources and Unique Environments	62
4F.1 Scenic Landscapes	62
4F.2 Major Characteristics or Unique Geological Features	63
4F.3 Cultural, Archaeological and Historic Areas	63
4F.4 Unique Environments	65
4G. Environmental Challenges	66
4G.1 Hazardous Waste Sites	66
4G.2 Landfills	67
4G.3 Erosion	67
4G.4 Chronic Flooding	67
4G.5 Sedimentation.....	68
4G.6 New Development	68
4G.7 Ground and Surface Water Pollution.....	69
4G.8 Impaired Water Bodies	71
4G.9 Invasive Species	72
4G.10 Invasive Species Photo Gallery	75
4G.11 Forestry Issues	85
4G.12 Environmental Equity	87
Section 5: Inventory of Lands of Conservation and Recreation Interest.....	88
5A. Private Parcels	91
5A.1 – 5A.2 Agricultural and Forested land (Chapter 61, 61A and 61B)	92
5A.3 Water Resources	92
5A.4 Priority Areas for Biodiversity	93
5A.5 Conservation Restrictions and Historic Property	94
5A.6 Private Recreation Land	95
5A.7 Estates.....	96
5A.8 Major Institutional Holdings	97
5A.9 Other Resources.....	97
5B. Public and Nonprofit Parcels.....	98
5B.1 Public Conservation and Recreation Resources	98
5B.2 Nonprofit Conservation Land	109
5B.3 Other Public Land	110
Section 6: Community Vision	115
6A. Description of Process	115
6A.1 First Public Workshop	115
6A.2 Online Survey	119
6A.3 Second Public Workshop.....	121
6A.4 Public Committee Meetings.....	126
6A.5 Key Findings	126
6B. Statement of Open Space and Recreation Goals	127
6B.1 New Goal: Communication	127
6B.2 Primary Goals	127

Section 7: Analysis of Needs	128
7A. Summary of Resource Protection Needs	128
7A.1 Open Space	128
7A.2 Water Quality	130
7A.3 Environmental Impacts of Development	132
7A.4 Sustainability and Responding to Climate Change	132
7A.5 Wildlife and Vegetation	133
7A.6 Scenic Areas	135
7B. Summary of Community’s Needs	136
7B.1 Statewide Comprehensive Outdoor Recreation Plan (SCORP)	136
7B.2 Community Input	137
7C. Management Needs, Potential Change of Use	142
7C.1 Staffing and Administrative Capacity Needs	143
7C.2 Regulatory and Policy Needs	145
7C.3 Land Acquisition and Funding	148
Section 8: Goals and Objectives	152
Natural Resource Protection, Stewardship, Restoration, and Enhancement	152
Recreation Area Planning and Maintenance	153
Land Acquisition, Funding, and Management	154
Communication	154
Section 9: Five-Year Action Plan	155
Natural Resource Protection, Stewardship, Restoration, and Enhancement	156
Recreation Area Planning and Management	160
Land Acquisition, Funding and Management	164
Communication	167
Section 10: Public Comment	169
10A. Letters of Review	169
10B. Comments from Municipal Review Period	178
Section 11: References	183

List of Maps

Map 1 – Regional Context	7
Map 2 – Environmental Justice.....	20
Map 3A – Zoning Districts	27
Map 3B – Overlay Workshop	30
Map 6.1 – Bedrock Geology	35
Map 6.2 – Surficial Geology	36
Map 4 – Soils	38
Map 5 – Unique Features.....	1180
Map 6A – Surface Water Features.....	49
Map 6B – Groundwater	50
Map 7 – Open Space Inventory	89
Map 8 – Action Plan	99

List of Tables

Table 3.1 – Household Composition, 1990 – 2015	13
Table 3.2 – Dedham’s Neighborhoods: Population, Housing Units and Density	15
Table 3.3 – Population by Age Group as a Percentage of Total Population.....	16
Table 3.4 – Employment by Industry	18
Table 3.4 – Dedham Buildout Analysis Summary, 2001	32
Table 4.1 – Endangered, Threatened, and Special Concern Vascular Plants	55
Table 4.2 – Rare Birds Observed in Dedham (Recent and Historic)	57
Table 4.3 – Rare Insects and Reptiles Observed in Dedham (Historic)	58
Table 4.4 – Common Invasive Plants in Dedham.....	73
Table 5.1 – Private and Nonprofit Open Space	92
Table 5.2 – Chapter 61, 61A, and 61B Land.....	93
Table 5.3 – Dedham-Westwood Water District Properties.....	93
Table 5.4 – Conservation Restrictions in Dedham.....	95
Table 5.5 – Dedham Historical Society and Museum Properties	95
Table 5.6 – Private Recreation Properties	97
Table 5.7 – Major Institutional Property	98
Table 5.8 – Town Conservation Land.....	99
Table 5.9 – Mother Brook Waterfront Open Space.....	103
Table 5.10 – Town Parks and Recreation Land.....	104
Table 5.11 – Dedham Public School Property.....	107
Table 5.12 – Memorandum of Understanding Properties	107
Table 5.13 – County, State, and Federal Land in Dedham.....	108
Table 5.14 – Dedham Land Trust Properties	111
Table 5.15 – Town Cemeteries	113
Table 6.1 – What could the Town do better?.....	118
Table 6.2 – What is the Town not doing?	118
Table 6.3 – Level of Satisfaction with Facilities for Age Groups*	121
Table 6.4 – Goals: Natural Resource Protection, Stewardship, Restoration and Enhancement	124
Table 6.5 – Goals: Recreation Area Planning and Maintenance	125
Table 6.6 – Goals: Land Acquisition, Funding and Management	126
Table 9.1 – List of Abbreviations used in Section 9	156

List of Figures

Figure 1.1 – Stone Wall in Dedham Town Forest	1
Figure 2.1 – Dedham’s Open Space and Recreation Plans (1991, 1998, 2004, 2010).....	2
Figure 3.1 – The Dedham Grant, circa 1637	100
Figure 3.2 – Dedham Station circa 1890.....	111
Figure 3.3 – Dedham Neighborhoods.....	144
Figure 3.4 – Providence Highway Development District	29
Figure 4.3 – Lower Neponset River Trail Map	422
Figure 4.4 – A View of the Charles River (circa 1897).....	43
Figure 4.5 – The Charles River from Riverdale Park	444
Figure 4.6 – A view of the Neponset River (circa 1897)	46
Figure 4.7 – <i>Viola pectinata</i> , a rare species found in Dedham.....	555
Figure 4.8 – Great Egret at Wigwam Pond	57
Figure 4.9 – Certified Vernal Pool at Whitcomb Woods.....	59
Figure 4.10 – Vernal Pool Obligate Species (spotted salamander, fairy shrimp, wood frog)	59
Figure 4.11 – Wetlands Flora of Fowl Meadow	61
Figure 4.12 – Historic Districts in Dedham	633
Figure 4.13 – Volunteers remove purple loosestrife flower heads in Fowl Meadow	744
Figure 4.15 – Asian longhorned beetle.....	855
Figure 4.16 – Emerald Ash Borer	86
Figure 4.17 – Spotted Lanternfly	86
Figure 5.1 – River Birch Growing in the Charles River Flood Plain	93
Figure 5.2 – The Powder House	95
Figure 5.3 – Dedham Community House.....	96
Figure 5.4 – Dedham Town Forest.....	100
Figure 5.5 – Fish Sculpture by Gints Grinsberts at Mill Pond Park	1022
Figure 5.6 – Canoes and Kayaks on the Dedham Water Trail.....	1044
Figure 5.6 – The Endicott Estate	1112
Figure 5.8 – The Old Village Cemetery.....	1133
Figure 6.1 – Residents Arrive at the First Public Workshop	1155
Figure 6.2 – Residents Discuss Open Space and Recreation Opportunities in Dedham	1166
Figure 6.3 – Small Workgroups at the First Public Workshop	11818
Figure 6.4 – Children’s Drawings from the First Public Workshop.....	11818
Figure 6.5 – Introduction at the Second Public Workshop.....	1211
Figure 6.6 – Facilitated Workgroups at the Second Public Workshop	1211
Figure 6.7 – Children’s Drawings from the Second Public Workshop	1212

Section 1: Plan Summary

The Town of Dedham’s 2019 Open Space and Recreation Plan (OSRP) is a guide for municipal leaders and community members who are committed to protecting open space resources and offering exceptional recreation opportunities to the residents of Dedham. This OSRP update continues and builds upon the Town’s ongoing efforts to support the environmental, social, physical, and economic health of the community and encourages programs and policies that adhere to sustainability standards, so these efforts can continue long into the future. Meeting the goals set forth in this plan will require cooperation and communication between Town employees, appointed and elected Committee/Board members and Commissioners, private institutions, community groups, conservation organizations, and engaged citizens.

Dedham’s first OSRP was prepared in 1991 and this update reaffirms the Town’s commitment to preserving the character of Dedham while providing the highest quality open space and recreation resources to serve current and future residents. This plan is organized according to the format recommended by the Massachusetts Division of Conservation Services and contains all required sections and revisions. Using the Town’s 2010 OSRP served as a starting point, we reviewed all content for accuracy and made revisions to reflect current demographic data, environmental conditions, and community vision. The Open Space and Recreation Committee (OSRC) meets regularly to review this plan and update it to reflect any changes in the Town’s goals, accomplishments, or needs.

Dedham is a proud community with strong roots and rich history. The Town values its natural, historic, and scenic resources and strives to preserve these assets for future generations. Residents are passionate about the diverse recreation opportunities available to them – both organized and informal – including team sports, hiking, paddling along the waterways, visiting neighborhood playgrounds, and passive nature appreciation. Having recently passed its 375th anniversary, Dedham faces the challenge of maintaining sustainable economic growth without any negative effects on the natural and historic resources that are intrinsically linked to the Town’s identity. Continued public engagement and participation in open space planning will be essential for the successful implementation of this OSRP. Enhanced communication within the Town is a high priority for Dedham residents, who want better access to information about the Town’s open space and recreation resources and programs, as well as opportunities to become involved in planning and stewardship efforts.



Figure 1.1 - Stone Wall in Dedham Town Forest

Section 2: Introduction

2A. Statement of Purpose

Dedham is committed to preserving the character of the Town and providing the highest quality open space and recreation resources to serve current and future residents. The Town has been preparing Open Space and Recreation Plans (OSRPs) since 1991, with prior updates occurring in 1998, 2004, and 2010 (Figure 2.1).

The purpose of the 2019 OSRP Update is to provide the citizens of Dedham with a current, comprehensive report which identifies, locates, and evaluates how residents access and use public and private open space resources and recreation facilities within the Town. The Five-Year Action Plan in Section 9 is an outline of the goals and actions to be implemented by the Town to protect natural resources, manage and expand open space areas, provide improved and accessible parks and recreation facilities in the future, and increase civic engagement by improving communication and outreach efforts.

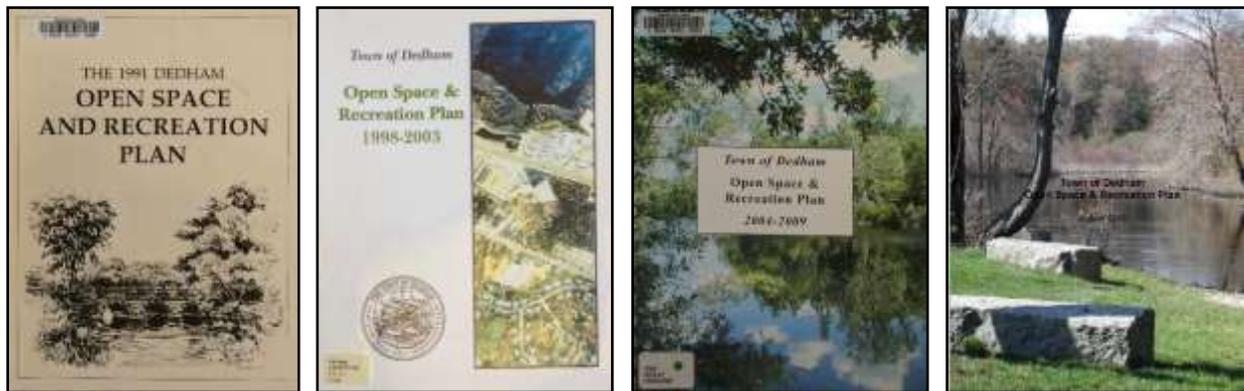


Figure 2.1 – Dedham’s Open Space and Recreation Plans (1991, 1998, 2004, 2010)

The Open Space and Recreation Committee (OSRC) reviewed the goals set forth in the Town’s 2010 OSRP to determine what has been accomplished, to identify goals that are no longer appropriate, and to prioritize what efforts need to continue. This list of accomplishments demonstrates Dedham’s commitment to protection and management of the Town’s resources:

- Two vernal pools were certified and observation data were collected to certify at least four other vernal pools.
- The Conservation Commission provides developers and landowners with information about landscaping and property management techniques that protect wildlife and habitats (*e.g.* decrease use of pesticides/fertilizer, use native plant species).
- Two biodiversity events in 2011 and 2012 provided educational resources for the community and identified more than 1,000 species of flora and fauna in Dedham.
- Annual cleanup days were coordinated with neighborhood groups and the Charles and Neponset River Watershed Associations (CRWA and NepRWA).
- CRWA and NepRWA continue their volunteer water quality monitoring programs.

- Eagle Scout candidates cleared, marked, and improved Town Forest trails.
- Signage has been placed at Town-owned conservation areas.
- A trail connecting the Dolan Center and Whitcomb Woods was created.
- The Environmental Department worked with Green City Growers and private citizen groups to establish community gardens.
- The Green Communities Act certification process has been completed.
- Improvements were made to Condon Park and Churchill Park Playground.
- A turf field was installed at Gonzalez Park and accessibility improvements were made (stairs replaced, ramp and handicapped parking added).
- The Challenger Program is now a Town-organized and funded program.
- On-road marking and signage have been added to bicycle rights-of-way.
- The Dedham Water Trail was launched in 2013 with boat rentals at the Dolan Center.
- A temporary dog park was created at the Dolan Center.
- The Town received Tree City USA designation in June 2010.
- Dedham partnered with NepRWA to develop a stormwater management brochure.
- Dedham and NepRWA received a grant for stormwater management improvements to reduce pollution in Mother Brook.
- The Environmental Department and Sustainability Advisory Committee continued their outreach efforts to engage the public in volunteer programs to protect resources.
- Dedham established a Renewable Energy Fund to allow the sale of Solar Renewable Energy Credits generated by the solar panels at Dedham High School and Town Hall.
- The Parks and Recreation Department finished an engineering report for the Manor Fields project and secured necessary approvals to proceed after funding is secured, although some permits have lapsed.
- The Facilities Manager was increased from a part-time to a full-time position, increasing capacity for oversight and maintenance of municipal properties.

2B. Planning Process and Public Participation

The planning process for this update was led by the OSRC, which was established by vote of Town Meeting in 2004. The duties assigned to the OSRC are:

- To maintain continuous review and oversight of the OSRP for the Town;
- To keep the plan current with state requirements;
- To continuously monitor, review, revise and update the Five-Year Action plan;
- To increase public awareness and support of open space and recreation activities; *and*
- To submit an annual report to the Board of Selectmen.



The following Open Space and Recreation Committee members contributed to this update:

- Stephanie Radner (member at-large) – Chair
- Jonathan Briggs (Parks and Recreation Commission)
- Frederick Civian (Conservation Commission – through September 2019)
- Michelle Kayserman (Conservation Commission – beginning October 2019)
- Dennis Cunningham (Engineer, member at-large)
- Brendan Keogh (Board of Selectmen)
- Michael Podolski (Planning Board)
- Georganna Woods (member at-large)

The OSRC met numerous times throughout the planning process to discuss goals and objectives, review draft documents, and determine strategies for involving the public in the planning process. The OSRC met on the following dates:

- April 4, 2017
- April 25, 2017
- May 9, 2017
- May 30, 2017
- June 13, 2017
- July 25, 2017
- August 8, 2017
- Sept 12, 2017
- Oct 10, 2017
- Nov 14, 2017
- Dec 12, 2017
- Jan 16, 2018
- February 13, 2018
- April 10, 2018
- June 12, 2018
- April 10, 2018
- Sept 18, 2018
- Nov 13, 2018
- Dec 20, 2018
- February 19, 2019
- March 19, 2019
- May 14, 2019

One OSRC subcommittee worked on the update to the Five-Year Action Plan to prioritize the actions, identify responsible entities, and determine anticipated time frames for completion. Another subcommittee reviewed the final documents for technical accuracy and consistency.

The OSRC worked in parallel with the Parks and Recreation Master Plan Steering Committee (MPSC) to develop two independent, yet complementary documents: the 2019 OSRP update and Dedham’s first Parks and Recreation Master Plan. The MPSC was established by Town Meeting in Fall 2014 to create a plan to guide future development, redevelopment and maintenance of parks, facilities and recreation programs to meet the needs of Dedham’s current and future residents of all ages and abilities. The concurrent timeline for these projects allowed for a combined public input process which reduced redundancies and conflicting information. The following individuals are members of the Parks and Recreation MPSC:

- Dan Hart - Chair
- Kevin Hughes
- Jim Maher
- Stephanie Radner
- Clarissa Robyn
- Mac Sterling
- Tracey White

The following municipal liaisons provided valuable assistance with this OSRP update:

- Elissa Brown – Conservation Agent
- Virginia LeClair – Environmental Coordinator
- Rich McCarthy – Town Planner through October 2017
- John Sisson – Economic Development Director
- Bob Stanley – Parks and Recreation Department Director

Several outreach methods were employed to educate, inform, and engage the community including two public workshops (March 7, 2017 and June 6, 2017), an online survey (open for 5 weeks beginning March 7, 2017), a project website, a social media campaign, and interviews with stakeholders and user groups. Detailed information about the public outreach process can be found in Section 6 and in Appendix 9.

All public workshops and committee meetings were posted at Town Hall, on the Town website, and in the local newspaper in accordance with Massachusetts Open Meeting Law. Public meetings and online survey links were advertised on the project website and the Town website. In addition, several social media outlets were used to engage the public. The public workshops were held at Dedham Middle School and Oakdale Elementary School in fully accessible areas. Both schools are located close to the Town's two Environmental Justice (EJ) neighborhoods and serve a large percentage of the Town's EJ population.

2C. Enhanced Outreach and Public Participation

There are two EJ block groups in Dedham which are located in the Oakdale and East Dedham neighborhoods, both of which have very active community groups (Oakdale Square Alliance and Mother Brook Community Group). Contacts from these groups were included in a list of more than 30 stakeholders compiled by the Steering Committee to represent groups, programs, and neighborhoods with special interests or unique needs. The stakeholder list included municipal entities, private schools, youth and adult sports programs, and several social/cultural organizations in Dedham. The consultants from Horsley-Witten reached out to all contacts to seeking feedback, either by interview or email survey, about the specific wants and needs of the stakeholders. Our data analysis and goals reflect feedback collected from all sources, including stakeholder interviews.

Section 3: Community Setting

3A. Regional Context

Dedham is an historic suburban town located in Norfolk County in the southern portion of the Boston metropolitan area. The Town is bordered by Needham on the west, Boston on the north and northeast, Canton on the east, and Westwood on the south.

3A.1 Regional Governance

The Metropolitan Area Planning Council (MAPC) is the regional planning agency serving 101 municipalities in the metropolitan Boston area, including the Town of Dedham. MAPC works with cities and towns through eight subregions whose members include municipal officials and regional stakeholders.¹ Dedham is a member of the Three Rivers Interlocal Council (TRIC) subregion which also includes Canton, Dover, Foxborough, Medfield, Milton, Needham, Norwood, Randolph, Sharon, Stoughton, Walpole, and Westwood. Map 1 illustrates Dedham's regional context, showing neighboring cities and towns in the TRIC region and in Norfolk Country, the city of Boston, waterways, and both highway and rail transportation routes.

MetroFuture, the MAPC regional plan, promotes smart growth and regional collaboration. The plan includes goals, objectives, and strategies to help cities and towns work toward sound municipal management, sustainable land use, protection of natural resources, efficient and affordable transportation, a diverse housing stock, public safety, economic development, clean energy, healthy communities, an informed public, and equity and opportunity among people of all backgrounds.² Some MetroFuture strategies, goals, and actions that are relevant to Dedham are listed below:

Strategy 1: Implement Coordinated Plans

- Goal: Increase municipal planning capacity
 - Action: Increase capacity of citizen boards through education
 - Action: Foster informed public participation in planning efforts

Strategy 2: Democratize Information

- Goal: Build and maintain strong 'information infrastructure'
 - Action: Create the information infrastructure necessary to make data accessible in a timely manner

Strategy 3: Strengthen Municipal Finance

- Goal: Modernize municipal governance structures and practices
 - Action: Implement best practices for municipal charters and governance structures
 - Action: Use the internet to enhance transparency and civic participation
- Goal: Provide cities and towns with flexibility to raise local revenues
 - Action: Increase the diversity of local revenue sources

¹ www.mapc.org/aboutus/

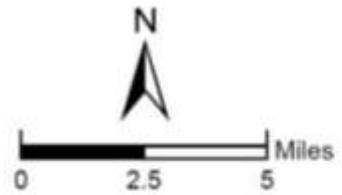
² *Ibid.*

Town of Dedham Massachusetts



Map 1 Regional Context

- Rivers and Streams
- Lakes and Ponds
- MBTA Stations
- MBTA Commuter Rail
- Interstate
- U.S. Highway
- State Route
- Norfolk County
- TRIC Sub-Region
- Municipal Boundaries

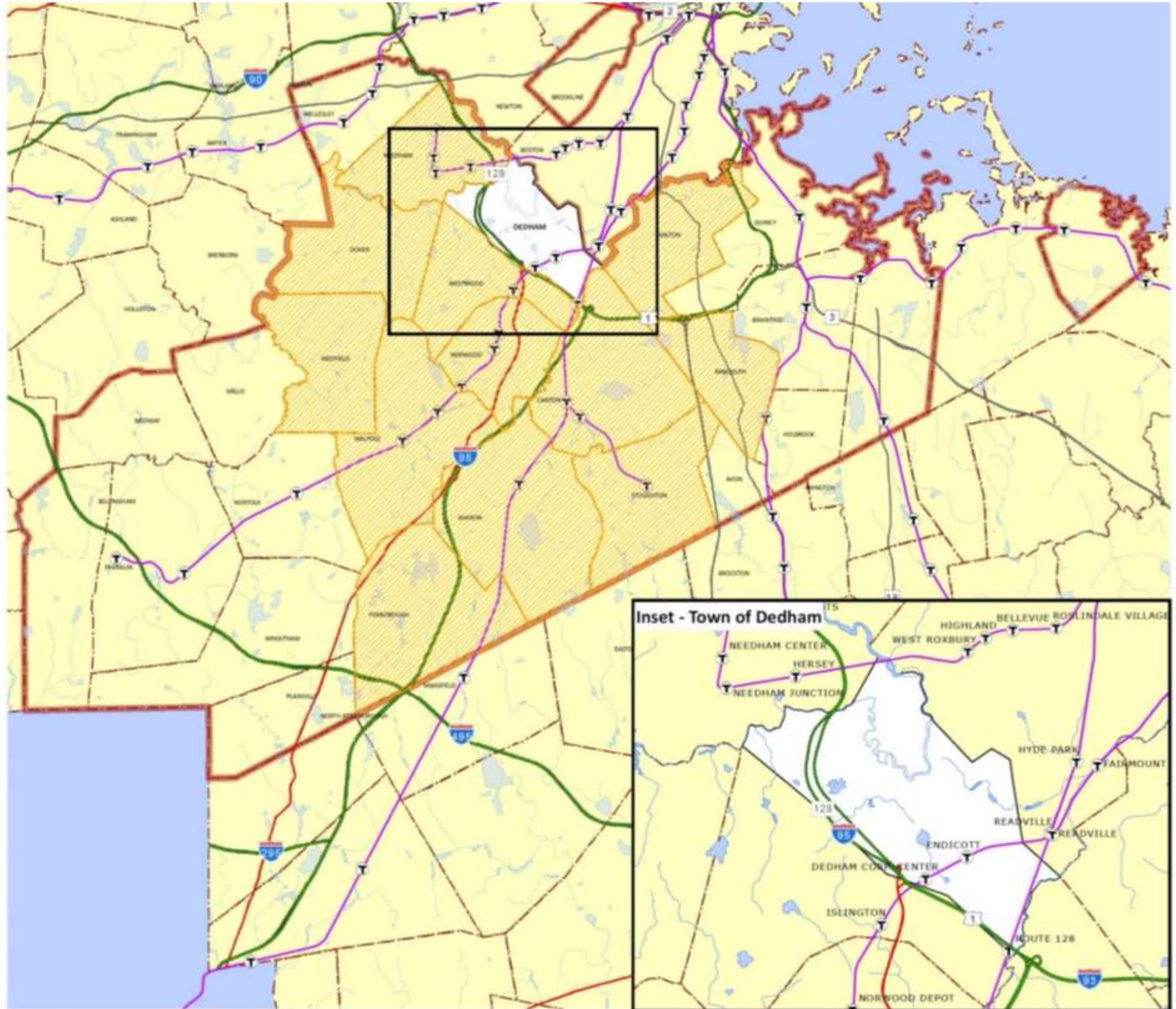


Data Sources: Town of Dedham, MassGIS

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Horsley Witten Group, Inc. March 2019



Strategy 6: Improve City Life and School Quality

- Goal: Improve urban services, maintenance, and accessibility
 - Action: Improve bicycle, pedestrian, and transit accessibility and safety
- Goal: Improve urban parks and the urban environment
 - Action: Leverage partnerships and private funding to improve maintenance of urban parks

Strategy 7: Protect Natural Landscapes

- Goal: Plan for land preservation on a state and regional basis
 - Action: Bring strategic and regional perspectives to local open space planning
- Goal: Increase funding for priority land acquisition
 - Action: The Commonwealth should provide adequate funding for open space
 - Action: Increase local capacity for open space acquisition

Strategy 12: Expand Coordinated Transportation

- Goal: Prioritize transit and transportation alternatives
 - Action: Maintain and manage bicycle and pedestrian facilities and traffic as full-fledged transportation linkages

3A.2 Surrounding Communities

Open space planning does not stop at a town's boundaries. Coordination with neighboring communities will be important for Dedham to achieve some of its Open Space and Recreation Goals and Objectives. Four communities in the TRIC subregion have recently completed or kicked off updates to their Open Space and Recreation Plans: Canton, Medfield, Needham, and Stoughton. At least six other communities in the TRIC subregion have completed Open Space and Recreation Plans, approved between 2000 and 2011. A collaborative effort between Dedham and Westwood in 2014, with support from MAPC, produced the Dedham and Westwood Bicycle and Pedestrian Network Plan.³ The plan includes suggestions for improving trails, sidewalks, on-street bicycle infrastructure, and other bicycle and pedestrian resources, including connections that cross I-95, a major physical barrier between the towns (see section 3D.2 for more details about this plan).

3A.3 Natural Setting

Bordering the city of Boston, Dedham is in the most urbanized region in Massachusetts. At the same time, the Town has retained significant natural and recreational resources. As part of the Boston Harbor Watershed area, Dedham has several protected parks and conservation areas; some of which are under the jurisdiction of the Massachusetts Department of Conservation and Recreation (DCR), while others are managed through partnerships with land trusts, local governments, and conservation organizations. Of the six major rivers in the Boston Harbor Watershed, the Charles and Neponset wind their way through Dedham and along its borders. These rivers played an important historical role in the development of industry in Dedham and have attracted settlers to the area for centuries.

³ <https://www.dedham-ma.gov/Home/ShowDocument?id=3894>

DCR, the Neponset River Watershed Association (NepRWA) and the Charles River Watershed Association (CRWA) are working to extend a network of greenways along these rivers from Boston Harbor inland to beyond I-95. The Neponset River Greenway Trail reached a major milestone in 2017, connecting Boston Harbor to Mattapan Square, and continuing to Hyde Park (less than 2 miles from Dedham) with marked bike lanes.⁴ CRWA launched the Blue Cities initiative to create natural green corridors along the Charles River in order to restore natural hydrologic function and to enhance neighborhoods and connect existing open spaces.⁵

The Mother Brook Community Group in Dedham works to promote a vital and thriving community among the neighborhoods connected by historic Mother Brook, the first man-made canal in the United States which connects the Charles and Neponset Rivers.⁶ Today, thanks to more than 50 years of stewardship from NepRWA and CRWA and more recently, the leadership efforts of the Mother Brook Community Group, these waterways now support significant wildlife habitats, contribute to the scenic character of the Town, and provide recreation opportunities for residents and visitors.



3A.4 Transportation

The Boston and Providence Railway came to Dedham in the 1830s. Today, the tracks through Dedham are primarily used for the Metropolitan Boston Transit Authority (MBTA) commuter rail service to Boston via the Franklin line with two stops in Dedham, Endicott and Dedham Corporate. The CSX Transportation rail line also passes through Dedham providing regional transportation service for freight. Two other MBTA commuter rail stations, Readville in Hyde Park (Fairmount line) and Route 128 in Westwood (Providence/Stoughton line) are convenient for Dedham residents. There are also several MBTA bus routes through Dedham, including the 34, 34E, 35, 36 and 52. The Town-operated Dedham Local Bus offers affordable transportation to residents around Dedham. For traveling farther afield, Amtrak trains from Boston passing through the Route 128 station can take passengers to destinations along the East coast.

Interstate 95, which runs along the east coast from Florida to Maine, passes through Dedham. The White Mountains of New Hampshire are just a 2-hour drive to the north, and New York City is a 4-hour drive south. Smaller roads, including Providence Highway, Route 1, and the Boston parkway roads connect Dedham to Boston, Providence and much of the metropolitan Boston area. The heart of Dedham's commercial activity stretches along Providence Highway through the center of Dedham. The Town's proximity to Boston, its convenient public transportation options, and easy access to major highways make it a desirable place to live, increasing the demand for housing. Despite a decline in population from the 1970s until 2000, residential and retail development have increased, claiming much of Dedham's land.

⁴ www.mass.gov/locations/lower-neponset-river-trail

⁵ www.crwa.org/blue-cities

⁶ www.facebook.com/motherbrook/

3B. History of the Community

In 1636, Dedham was established by the General Court of the Massachusetts Bay Colony to relieve population pressures within the existing settlements and to create a buffer to protect the main colony from a potential attack by Native Americans from the interior. Dedham's original grant encompassed more than 200 square miles of territory stretching from Boston south to the Rhode Island border and north to land that is now the town of Wellesley. The inland border partially followed the Charles River and extended beyond the Charles to include what is now the towns of Millis and Medway (Figure 3.1).⁷

Dedham's waterways were an integral part of the Town's history and economy. The Charles and Neponset Rivers supported agriculture and provided power for mills. In 1639, Mother Brook was dug by hand to connect the Charles and Neponset Rivers and provide additional power for mills and factories.⁸ In 1652, the 4,000-foot Long Ditch was completed to channel water for Charles River flood control and preservation of the riverbank meadows. Dwight's Brook, or the Little River, was a major waterway which connected the Wigwam Pond drainage area with the Charles River. Initially, this stream provided nourishment for adjoining grasslands which were important pasture areas.

The first house lots were laid out along High Street, a new road, and East Street, along a trail originally created by Native Americans.⁹ When Samuel Colburn died in 1756, he bequeathed a large tract of land in what is now Dedham Village, for the founding of an Episcopal Church in Dedham (now known as St. Paul's Episcopal Church). The Church began dividing the land into streets and house lots. The first street laid out under this program was Church Street which became the first urban street in Dedham in the sense that it was intended to be bordered by house lots rather than to serve merely as a passage between isolated farms. By 1801, the First Church in Dedham, similarly began setting out and renting lots on its own property.¹⁰

In 1793, Dedham was designated as the county seat for the Norfolk County. In 1803, the Norfolk and Bristol Turnpike was opened for business passing through Dedham Center, and in

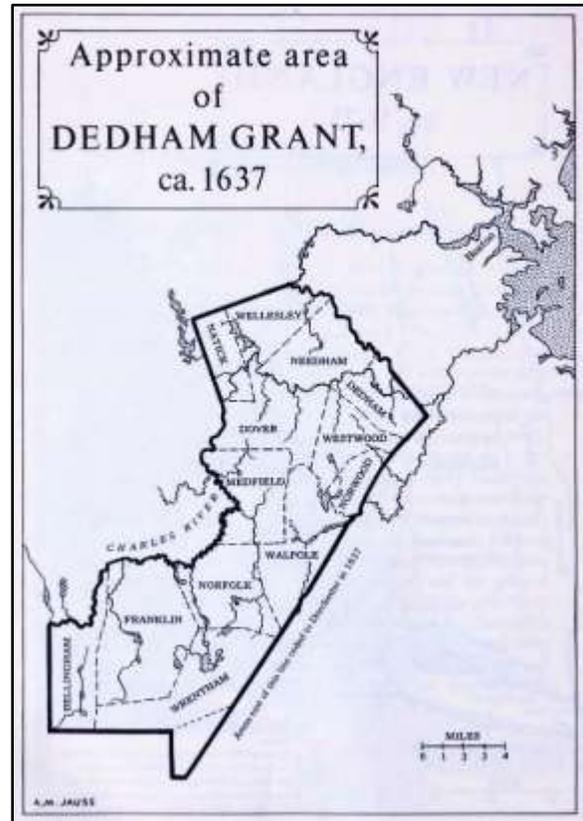


Figure 3.1 – The Dedham Grant, circa 1637

⁷ *A New England Town, The First Hundred Years, Dedham, Massachusetts, 1636-1736*. Kenneth A. Lockridge, 1970.

⁸ dedhamhistorical.org/historyofdedham/

⁹ Dedham Historical Society, *A Capsule History of Dedham*.

¹⁰ *Ibid.*

1804, the Hartford and Dedham Turnpike was built, along some of the same streets. Suddenly, stagecoach service to Boston, Providence, and Hartford became easily available. The old corn mill of the first settlement was joined by saw, wire, and paper mills and, by 1810, wool and cotton mills. By 1845 the Town's factories employed more than 650 people and produced a wide variety of goods.

In response to the Town's swelling population and continued business growth, rail service was extended to Dedham in the 1830s. The Boston and Providence Railroad was chartered in 1831 and Dedham was included on the route that connected the Town to the main line at Readville. Dedham Station, which was built with Dedham granite, was where the parking lot in Dedham Square is currently located (Figure 3.2). Introduction of the rail lines changed Dedham's natural landscape. Embankments, railroad cuts, massive quantities of fill, grade crossings, and new bridges were scattered throughout the countryside. In addition, the development of the railroad station resulted in diversion of Dwight's Brook into a massive granite culvert, and swamps and bogs were filled in near the present-day location of the Norfolk County Courthouse.¹¹

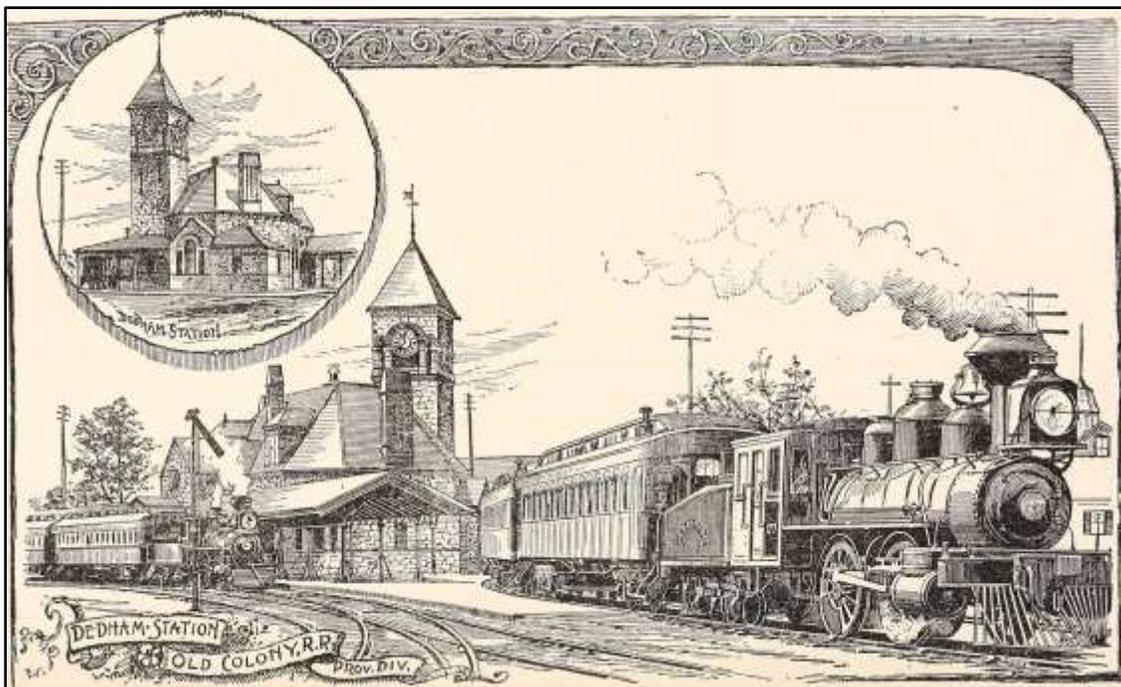


Figure 3.2 – Dedham Station circa 1890¹²

Due to improvements in modes of transportation and the associated increase in development and activity, Dedham Square became a prominent section of Town. The outlying sections of Town retained their agricultural character much longer than the downtown. While railroad access played a role in a declining agricultural base in Dedham, the availability of convenient

¹¹ Dedham Historical Society, *A Capsule History of Dedham*.

¹² *A Gazetteer of the State of Massachusetts with Numerous Illustrations*. Elias Nason, 1890. (Internet Archive)

transport for raw materials and finished goods led to diversification of manufacturing interests in Dedham. Convenient, reliable transportation also permitted wealthier individuals to settle in Dedham and build country estates while remaining within commuting distance to Boston. The availability of work at the East Dedham mills and other manufacturing enterprises was a clear attraction to outsiders wishing to settle in Dedham as was the convenient railroad and streetcar access to other areas of metropolitan Boston. Dedham's main industries (particularly the mills), however, collapsed after the first World War, and the next wave of development had to wait for the construction of the Circumferential Highway (Interstate 95/Route 128).

The construction of Route 128 took place between 1947 and 1956, creating what is considered the first circumferential roadway built around a U.S. city.¹³ Improved automobile and truck access brought new businesses to the Town and made Dedham a more attractive place to live for white-collar workers. Route of 128 helped to spur the establishment of the area's many technology companies. Later, many of Dedham's residents would find employment in the new high-tech firms springing up along America's Technology Highway. A boom in new house construction to accommodate these new middle-class professionals had direct effects on the Town's landscape. The demand for land began to drive development into the outlying agricultural areas and, in some cases, into wetland areas.

The prime upland areas along Providence Highway and Route 128 were almost completely developed by the late 1970s, and more parcels with some constraints were developed by the mid-1980s. Strip malls and shopping centers were built along the main roads which increased concern regarding traffic in the Town. East Dedham underwent a program of urban renewal, which resulted in the loss of some of its historic character.

3C. Population Characteristics

3C.1 Past, Present and Future Population

Around the beginning of the 20th century when the extension of streetcar service promoted development, Dedham experienced rapid population growth. Dedham's first population boom occurred between 1905 and 1915 when the Town grew from 7,800 to 11,000 residents. Growth rates declined during World War I, but rebounded with a second population boom in the 1920s bringing the population to 15,315 in 1930. The third phase of Dedham's population growth occurred after World War II with the completion of Route 128 in the 1950s. According to the U.S. Census, Dedham's population peaked in 1970 at 26,938, and decreased steadily until 2000, when the population had dropped by over 3,000 to 23,464. Since 2000, the population has been increasing, reaching 24,729 in 2010 and estimated at 25,224 in 2015.

The population decrease that started in the 1970s may be attributed to smaller household size, an aging population, and high housing costs. The average household size was 3.51 persons in 1970 and dropped to 2.45 persons by 2010. Dedham consisted of 8,654 households in 2000, and that number had increased by more than 11% to 9,651 in 2010. In 2000, more than 70% of

¹³ American Road & Transportation Builders Association.

the households in Dedham were families (a household of two or more people related by birth, marriage, or adoption). By 2010, that percentage dropped to 65.4% and is estimated to have decreased even more since then (Table 3.1).

Table 3.1 – Household Composition, 1990 – 2015

Household Type	1990	2000	2010	2015 Estimate
1-Person	20.7%	23.9%	28.7%	32.0%
Families	75.4%	71.0%	65.4%	64.6%
Married Couples	59.9%	56.3%	50.3%	50.1%

Source: U.S. Census 1990, 2000, 2010, American Community Survey 2011-2015.

In 2000, approximately 32% of households in Dedham had children under eighteen years old and that number decreased to 27.6% by 2010. The population is also aging, with a median age of 43.4 in 2010, up from 39.6 in 2000. Four percent of Dedham’s population in 2000 consisted of people living in group quarters, including approximately 600 inmates in the Norfolk County Correctional Center and another 240 in nursing homes.¹⁴ This percentage has remained stable, according to the 2010 U.S. Census. Dedham, like other Boston suburbs, is getting older and its population has fewer households with children. The increase in smaller households correlates with a small increase in the overall population.

Just as demand for housing can place pressure on remaining open space, changes in population characteristics can affect the open space and recreation needs of the community. An aging population may increase demand for activities and programs for seniors, and a decline in the youth population may force the Town to be more creative in continuing to provide high quality organized youth sports with fewer participants. Smaller households may indicate an increase in single persons (living alone, divorced, or widowed) who seek organized recreation programs and athletic facilities that offer opportunities for increased social interactions.

3C.2 Population Density

Population density influences the demand for public outdoor recreation facilities. Houses in high density residential areas often lack sufficient private yard space to be of recreational value. Typically, these areas benefit from small parks for young children. In lower-density residential areas, the need for small parks is less significant due to larger private yards. Based on the 2015 population estimate of 25,224 and the Town's area of 10.64 square miles, Dedham’s population density is 2,371 persons per square mile, or approximately 3.7 persons per acre, compared to 1.3 persons per acre in Massachusetts and 22.7 persons per acre in Boston.

Dedham is made up of six primary neighborhoods: Dedham Village, East Dedham, Oakdale, Riverdale, Greenlodge/Sprague/Manor, and West Dedham (Figure 3.3). These neighborhoods were described in the 1996 and 2009 Master Plans and their geographic boundaries were defined by the Census Tracts and Block Groups used by the U.S. Census Bureau in 1990. Census

¹⁴Dedham Master Plan 2009, page 9. The U.S. Census Bureau classifies all people not living in households as living in group quarters – some type of institutional or shared non-institutional setting.

Tracts and Blocks are the geographic units defined by the Census Bureau based on population distribution. Census Tracts and Blocks were redrawn in 2010 to reflect changes in population distribution. Although the new boundaries do not align precisely with those used in earlier Master Plans, they provide quantifiable population data for areas of Dedham that align well enough with Dedham’s neighborhoods to be useful for determining open space and recreation needs in different parts of the Town. Figure 3.3 shows the physical boundaries of Dedham’s neighborhoods and the panel on the lower left corner of the figure lists the 2010 Census Tracts and Block Groups associated with each neighborhood.

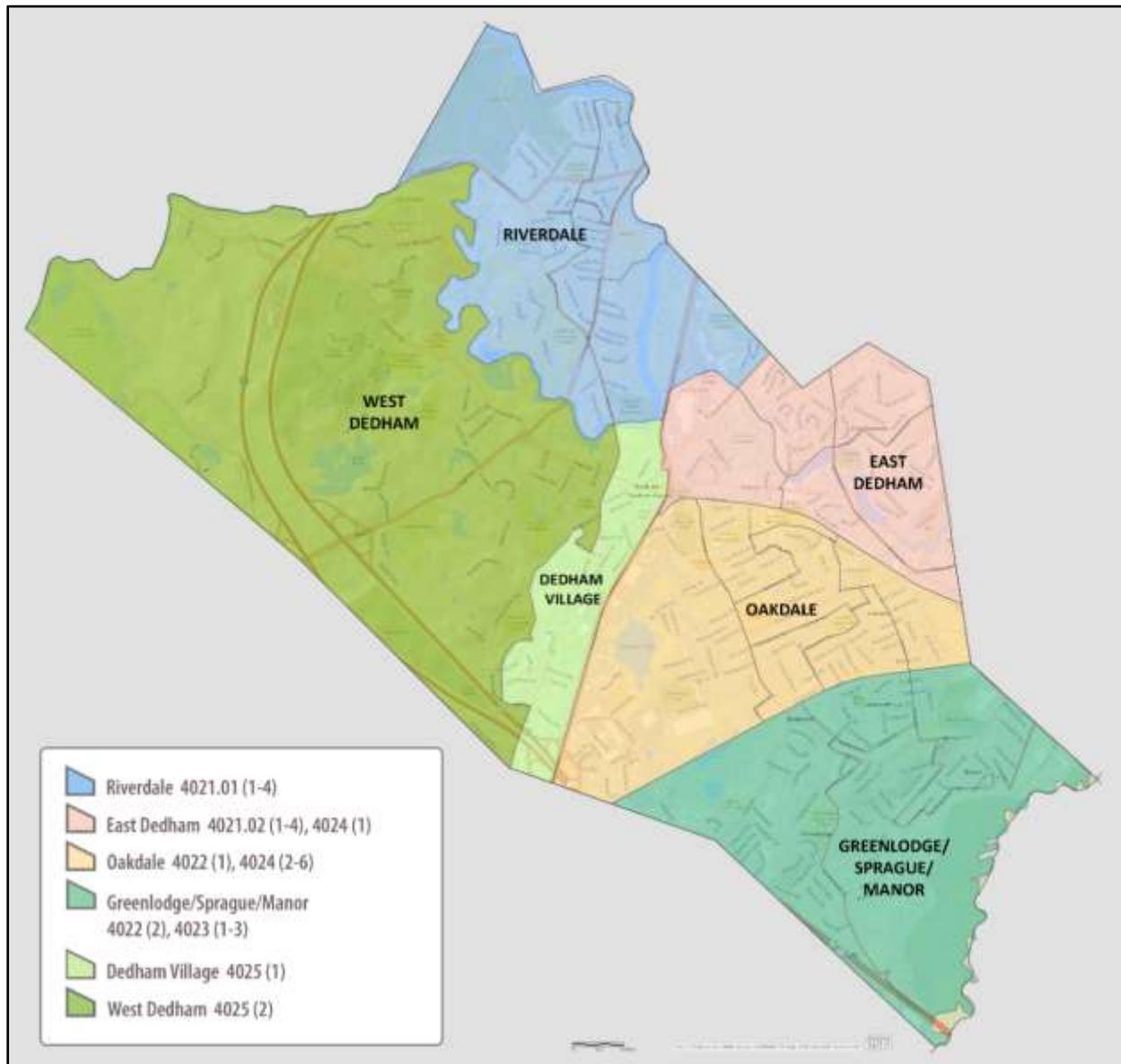


Figure 3.3 – Dedham Neighborhoods¹⁵

¹⁵ MassGIS. 2010 US Census Blocks/Block Groups

Table 3.2 shows the population, number of housing units, population density, and the housing density in each of Dedham’s neighborhoods. These data were compiled using the 2013-2017 American Community Survey (ACS) 5-Year Estimates for the corresponding Census Block Groups as listed in the key on Figure 3.2. While the neighborhoods with highest population density are East Dedham, Oakdale, and Greenlodge/Sprague/Manor, most of the public land available for recreation use is located in West Dedham.

Table 3.2 – Dedham’s Neighborhoods: Population, Housing Units and Density

Neighborhood	Area (acres)	Population	Housing Units	Population Density	Housing Density
East Dedham	670	4,891	2,188	7.3	3.3
Greenlodge/Sprague/Manor	1,242	5,863	2,171	4.7	1.7
Oakdale	1,032	6,077	2,511	5.9	2.4
Riverdale	1,064	3,634	1,560	3.4	1.5
Dedham Village	315	1,233	590	3.9	1.9
West Dedham	2,472	3,031	1,171	1.2	0.5

Source: 2013-2017 American Community Survey 5-Year Estimates as reported by the Pensacola News Journal.

3C.3 Housing Characteristics

According to the 2013-2017 ACS 5-Year Estimates, there were 10,620 housing units in Dedham in 2017, an increase of 4.2% from 10,191 in 2010.¹⁶ In 2017, 67.6% of the occupied housing units in Dedham were single-family homes, 14.3% were 2-4 family homes, and 17.9% were multi-family homes with more than 4 units. In 2010, 77.9% of the occupied housing units were single-family homes, 10.5% were 2-4 family homes, and 11.5% were multi-family homes with more than 4 units. In 2017, 30.9% of occupied housing units were renters, an increase from 2010, when only 21.2% of occupied housing units were renters.

Massachusetts General Law Chapter 40B (Comprehensive Permit Law) allows a developer to override most existing local regulations in order to increase the supply of affordable housing. The Comprehensive Permit Law applies if fewer than 10% of all housing units in a municipality are considered “affordable.” When 40B projects occur on land protected as open space by local rules, the Comprehensive Permit Law’s power to override local regulations creates hurdles to open space preservation. According to the Massachusetts Subsidized Housing Inventory,¹⁷ 10.9% of Dedham’s housing units met the definition of affordable in September 2017, down from over 12.3% in 2009.¹⁸ As new housing stock is built, the Town will need to monitor new subsidized housing, or the inventory could easily dip below 10%, exposing the Town to 40B projects which allow for less Town oversight and control of development. While the Planning Board routinely includes a requirement that multi-family projects include affordable housing units, the Town has no comprehensive plan to prevent dipping below the 10% threshold.

¹⁶ The US Census Bureau website only provides population and housing data by census block group for decennial census years. Fortunately, the Pensacola News Journal website has a search tool to retrieve these data fields for the 2013-2017 American Community Survey 5-Year Estimates: <https://data.pnj.com/american-community-survey/>

¹⁷ www.mass.gov/service-details/subsidized-housing-inventory-shi

¹⁸ 2010 Town of Dedham Open Space and Recreation Plan.

Due to limited space, residents in multi-family housing units, generally, have a greater need for public outdoor recreation facilities. Although some apartment complexes provide recreation facilities for tenants, many occupants lack access to private outdoor areas and depend on public parks and playgrounds for recreation.

3C.4 Age of Residents

The demographic profile and age distribution of the population can create a demand for specific types of outdoor recreation facilities. While residents of all ages differ in their recreation needs based on individual interests, there are some assumptions that can be made about the demand for facilities based on age demographics. Families with young children tend to want access to neighborhood playgrounds. Teenagers and adults need playing fields for team sports; areas for healthful exercise such as running, walking, and tennis; and activities and facilities that allow social interactions. Activities such as boating, fishing, and gardening are popular with mid-life adults, and elderly residents benefit from safe and accessible places to walk, places to sit outdoors, and places to go for group outings. Table 3.3 shows past and projected population by age cohort for 2000, 2010, 2020, and 2030.

Table 3.3 – Population by Age Group as a Percentage of Total Population

Age Group	2000	2010	2020 Projection	2030 Projection
Under 5	6.1%	5.4%	5.0%	4.8%
5 to 19	17.8%	17.2%	14.9%	13.9%
20 to 34	17.9%	15.3%	16.6%	15.2%
35 to 54	31.6%	30.1%	25.6%	25.5%
55 to 64	10.0%	12.8%	15.3%	12.6%
65 to 74	8.4%	7.8%	10.8%	13.1%
75 and Over	8.2%	10.5%	11.7%	15.0%
Total Population	23,464	24,729	25,587	26,562

Source: 2010 U.S. Census, 2016 MAPC Regional Growth Projections (“Status Quo” scenario)

The percentage of residents in older age brackets has increased while the percentage of population in the younger age brackets declined. Projections for the next fifteen years show a shrinking percentage of young children as well as teenagers. These projections correspond to a decline in the 35-54 age cohort, when people are likely to have young children and teenagers at home. At the same time, the number of senior citizens age 65 and over is projected to grow.

The population projections in Table 3.3 are based on the MAPC “Status Quo” scenario which assumes that there will be little change in birth and death rates, migration, and housing needs. The MAPC “Stronger Region” scenario assumes changes in trends that could result in higher population growth and greater housing demand.¹⁹ According to the “Stronger Region” scenario, residents age 65 and older are still expected to account for 27.4% of the population by 2030 (compared to 28.1% using the “Status Quo” scenario).

¹⁹ www.mapc.org/learn/projections/

The increase in the retirement age population may create a demand for additional, and varied, recreation opportunities. The decrease in the percentage of children and younger adults could indicate that playgrounds and athletic fields may become a lower priority. However, providing adequate youth-appropriate activities will continue to be an objective for Dedham.

3C.5 Income, Occupation, and Education

According to the 2015 Census estimates, the median household income in Dedham was \$83,438, slightly lower than the County median, but an increase of over 35% from 2000. The median income for owner-occupied households was estimated at \$99,324 in 2015, compared to \$56,833 for renter-occupied households. These Census numbers are adjusted for inflation, suggesting a significant increase in incomes since 2000. The 2000 Census estimated that four percent of Dedham’s population was living below the federal poverty level. The poverty level in Dedham increased slightly to 4.7% in 2016, but remains lower than the Norfolk County poverty rate of 6.1%.

While Dedham’s median income is relatively high compared to State averages, it has more socioeconomic diversity than its neighbors. Comparisons with demographic data for Norfolk County and with other towns in the TRIC subregion (Canton, Dover, Foxborough, Medfield, Milton, Needham, Norwood, Randolph, Sharon, Stoughton, Walpole, and Westwood) show the socioeconomic diversity of Dedham compared to neighboring communities:

- The median family income is less than all but three towns in the TRIC region (Norwood, Randolph, and Stoughton), but about one third of families in Dedham are considered upper income.²⁰
- The poverty rate of 4.7% is the fifth highest of communities in the TRIC region.
- Dedham has a larger percentage of its workforce in construction, production, and service occupations (about 28% according to 2015 census estimates). These occupations tend to have lower annual wages than other occupations; however, a large percentage of the workforce in Dedham (close to 50%) is employed in management and professional occupations, which tend to pay the higher annual wages.
- While 28% of adults age 25 and older have only received high school diplomas, almost 50% have attained a bachelor’s degree or higher, which correlates with the mix of occupations in the workforce.

These comparisons and the data from which they are derived suggest that in the context of a very wealthy region with relatively little socioeconomic diversity, Dedham has a more balanced population of varied income levels, education, and occupations than many of its neighbors. Socioeconomic factors can influence the demand for public recreation facilities and open space. For example, while higher-income households are able to pay for private recreation and have the resources to travel to recreation centers outside of the Town, low- and moderate-income families are more dependent on free public recreation. For this reason, it will be important for

²⁰ According to Massachusetts Executive Order 418 Community Development Plan Guidelines, households and families who earn over 150% of the area median income are considered upper income. The median family income in Norfolk County in 2016 is \$90,226.

the Town to provide a range of open space and recreation options to meet the needs of different population groups and income ranges.

In 2017, approximately 18% of Dedham’s residents were employed in the Health Care and Social Assistance industry. The Educational Services sector employed almost 13% of Dedham residents, representing the second largest employment industry. Table 3.4 lists population numbers and percentage of total population for employment sectors.

Table 3.4 – Employment by Industry

Industry	Number Employed	% of total population
Health Care & Social Assistance	2,399	18.1
Educational Services	1,704	12.8
Professional, Scientific, & Technical Services	1,437	10.8
Retail Trade	1,188	8.94
Finance & Insurance	1,053	7.92
Manufacturing	823	6.19
Construction	779	5.86
Other Services, Except Public Administration	734	5.52
Accommodation & Food Services	612	4.61
Transportation & Warehousing	417	3.14
Public Administration	415	3.12
Information	369	2.78
Arts, Entertainment, & Recreation	353	2.66
Administrative & Support & Waste Management Services	284	2.14
Wholesale Trade	269	2.02
Real Estate & Rental & Leasing	221	1.66
Utilities	210	1.58
Mining, Quarrying, & Oil & Gas Extraction	9	< 1%
Management of Companies & Enterprises	8	< 1%
Agriculture, Forestry, Fishing & Hunting	5	< 1%

Source: 2013-2017 American Community Survey 5-Year Estimates (datausa.io)

Looking at employment statistics for both Dedham residents and individuals who are employed by Dedham’s largest businesses, we see a trend toward working indoors and doing tasks that require little physical activity. Employees of some of Dedham’s largest companies – Dedham Medical Associates, General Dynamics, the American Red Cross, and Ali-Med – are largely professional or medical staff working in similar environments. A plurality of other jobs in the local economy involves retail, food service, and office jobs that are also performed indoors with varying levels of physical exertion. Public open space provides a counterbalance for people employed locally to get fresh air and exercise near their workplaces.²¹ In contrast, of the estimated 13,289 Dedham residents in the workforce, only an estimated 16.5% work in

²¹ MA Department of Unemployment Assistance, http://lmi2.detma.org/lmi/Largest_employer_index.asp

vocations that require physical fitness and outdoor work. Such jobs include public safety, buildings and grounds work, construction and maintenance occupations, and production, transportation, and material-moving occupations.²²

3C.6 Environmental Justice and Equity

In 2002, the Massachusetts Executive Office of Energy and Environmental Affairs (EOEEA) adopted an Environmental Justice (EJ) Policy to provide equal protection and meaningful participation for all Massachusetts residents with respect to environmental regulations and policies. This policy also supports equitable access to environmental assets, which include parks, open space, and recreation areas.²³ The EJ policy affirms Article 97 of the Massachusetts State Constitution, which reads:

"The people shall have the right to clean air and water, freedom from excessive and unnecessary noise, and the natural, scenic, historic, and esthetic qualities of their environment; and the protection of the people in their right to the conservation, development and utilization of the agricultural, mineral, forest, water, air and other natural resources is hereby declared to be a public purpose."

When evaluating the impacts of open space and recreation planning on EJ populations, EOEEA data were used to identify marginalized communities within Dedham and their access to local open space and recreation opportunities. EOEEA uses 2010 Census block groups and collects census data to determine if a block group meets one or more the following criteria to classify it as an EJ neighborhood:

- More than 25% of the block group population is minority (individuals who identify themselves Latino/Hispanic, Black/African American, Asian, Indigenous people, and people who otherwise identify as non-white);
- 25% of households have a median annual household income at or below 65% of the statewide median income; *or*
- 25% or more of the residents have English Isolation (households that are English Language Isolated according to the U.S. Census, or do not have an adult over age 14 who speaks only English or English very well).

While Dedham did not have any EJ populations at the time of the 2010 OSRP update, there are now two areas that meet EJ criteria based on minority populations (Map 2). The first EJ area is Census Tract 4024, Block Group 6, a triangle area of the Oakdale neighborhood along Elm Street and Rustcraft Road, roughly bound by the Franklin line MBTA track, Providence Highway, and East Street. The second is Census Tract 4021.02, Block Group 3, which is a smaller swath between the abandoned rail line and Milton and Bussey Streets, running from the Boston border to Dedham High School.

²² 2013-2017 ACS 5-year estimates, <https://factfinder.census.gov>

²³ 2017 Environmental Justice Policy: www.mass.gov/eea/agencies/massdep/service/justice/

The two EJ neighborhoods are served by recreation facilities such as Gonzalez Field, Barnes Memorial Park, Fairbanks Park, Mother Brook Park, Condon Park, Mucciaccio Pool, and school fields and playgrounds. Another resource in this area is the Mother Brook Arts and Community Center (MBACC), which offers educational programs, hosts community events, and has a small nature trail along the bank of Mother Brook. MBACC programs and classes have associated fees, but the organization has been very supportive of the East Dedham community and might consider offering reduced fees or scholarships for the EJ population.

While the largest open space areas are in less densely populated areas (*e.g.* West Dedham), there are recreation opportunities that could serve the two EJ neighborhoods in Dedham. Improving access to conservation land around Wigwam Pond would benefit the larger Oakdale EJ population. Improvements to the abandoned rail line as proposed by the supporters of the Dedham Rail Trail would provide a safe, convenient, and fully accessible outdoor recreation space for the smaller East Dedham EJ population that directly abuts this linear parcel.

3D. Growth and Development Patterns

3D.1 Patterns and Trends

Historically, development in Dedham has occurred along major transportation routes – water, rail, and roads. Leaving behind the farms and factories of its past, Dedham has evolved into an economically developed suburb.²⁴ Many commercial and public resources are concentrated near the geographic center of Dedham, which is surrounded by the Town’s distinct residential neighborhoods. Consistent with this general pattern of development, the Town is bisected by large-scale commercial development along Providence Highway. Warehouses and office parks are concentrated in the southeast, and several private educational institutions have significant land holdings primarily in West Dedham.

The Dedham Square Improvement Project was completed in November 2013, which involved comprehensive traffic and safety improvements in Dedham Square through the installation of modern coordinated signals with pedestrian phases, reduced crosswalk lengths, and the addition of handicap accessible ramps. The project also included parking improvements (the addition of 24 spaces downtown) and streetscape enhancements such as decorative sidewalk surfaces, tree plantings, bike racks, benches, and period lighting.

Revitalization efforts continue in East Dedham, with the goal of creating a shared community vision and developing a strategic economic action plan in East Dedham. These efforts build on recent investments in the community (Mother Brook Arts and Community Center), a growing local arts presence, new park and recreation amenities, and programs to reestablish a vibrant community in East Dedham along historic Mother Brook. These revitalization goals will be achieved through a collaborative initiative between the Town, MAPC, and East Dedham stakeholders. In December 2013, the Town of Dedham and MAPC collaborated on the East

²⁴ Classification by Massachusetts Department of Revenue, Division of Local Services.

Dedham Village Charrette.²⁵ East Dedham stakeholders provided input to identify the strengths, challenges, and needs of the Mother Brook neighborhoods and to create a set of goals, strategies, and actions to promote revitalization. In May 2014, Town Meeting established the East Dedham Revitalization Committee and approved the Arts Overlay District to help achieve the vision outlined in the Charrette. In May 2017, MAPC, together with the Town working group, created the Design Guidelines for East Dedham Square.²⁶

3D.2 Infrastructure

Transportation Systems – Motor Vehicles

Interstate 95 (Route 128), running through the west part of Dedham and serving as part of the border between Dedham and Westwood, offers convenient access to surrounding towns and all of New England. The heavy volume of traffic and the proximity to stations on the MBTA Franklin and Providence commuter rail lines, as well as the Amtrak NE Corridor, has attracted the attention of developers. Five interchanges from I-95/Route 128 serve Dedham: Exit 14 – East Street/Canton Street, Exit 15A – Route 1A Dedham (Exit 15B is Route 1 South toward Norwood), Exit 16A – Route 109 East (16B is Route 109 West toward Westwood), Exit 17 – Route 135, and Exit 18 – Great Plain Avenue.

Providence Highway, Washington Street, and High Street provide access to the primary commercial centers in Dedham. Providence Highway, which runs north to south from the Boston border toward Norwood, is the most commercial stretch of road in Dedham with several shopping centers, restaurants, supermarkets, and “box” stores. Washington Street and High Street carry a great deal of local traffic through Dedham Square. The Boston parkway roads (Dedham Parkway and Enneking Parkway which connect to the Arborway in Boston) also carry a high volume of traffic from Boston into East Dedham. Likewise, Routes 109 and 135 in West Dedham carry substantial amounts of traffic into West Dedham.

The Massachusetts Department of Transportation’s I-95 Add-a-Lane project was completed in 2019. This major roadway project, which was started in 2003, has resulted in an additional travel lane in both directions and a restored breakdown lane on I-95 between Randolph and Wellesley.²⁷

Vehicular Transportation Challenges

Smartphone navigation apps have greatly increased the amount of cut-through traffic on Dedham roads. Also, In 2019 Boston was ranked the number one most congested U.S. city.²⁸ Dedham is adjacent to Boston and has experienced its own increase in development. As a result, the Town has been impacted by the mounting traffic problems that are plaguing the entire Boston Metro region. One intersection in Dedham has even popped up on the most recent Massachusetts Department of Transportation (MassDOT) Highway Division Top 200

²⁵ www.mapc.org/wp-content/uploads/2017/09/East-Dedham-Village-Charrette-Report-WEB.pdf

²⁶ www.dedham-ma.gov/Home/ShowDocument?id=3852

²⁷ www.mass.gov/needham-wellesley-i-95-add-a-lane

²⁸ inrix.com/press-releases/scorecard-2018-us/

Crash Locations Report. The intersection at Boston Providence Turnpike and Legacy Boulevard in Dedham was ranked 181.²⁹

Public Transportation Systems

As described in Section 3A.4, Dedham residents have several public transportation options, including MBTA commuter rail service on the Franklin line (Dedham Corporate Center and Endicott stations). The Readville station in Hyde Park (Fairmount line) and the Route 128 station in Westwood (Providence line) are also convenient for Dedham residents. Amtrak Northeast regional service along the East Coast is available at the Route 128 station. Several MBTA bus lines also serve Dedham residents.

Bicycle and Pedestrian Transportation

According to the 2009 Town of Dedham Master Plan: “Dedham does not have designated bicycle paths. On-street conditions on Dedham’s major roads are not considered favorable by bicyclists, and therefore do not promote bicycle use.” In 2019, this is still an accurate representation of the bicycle infrastructure situation in Dedham.

The Master Plan also emphasizes the importance of improving pedestrian and cycling opportunities: “As more and more people recognize the importance and myriad benefits of non-motorized transportation, Dedham’s pedestrian infrastructure will remain of paramount importance, and the town should take every opportunity to maintain and, when appropriate, expand this critical infrastructure.” Furthermore, the Master Plan recommends that the Town create car-free, multi-use paths and connections in the following places:

- Mother Brook
- Charles River
- Wigwam Pond
- Providence Highway corridor
- The abandoned rail corridor running from the Boston line to East Street

While progress has been slow in this work there are some improvements that have happened and more are on the horizon:

- The Rustcraft Road construction project (funded by MassDOT) will include sidewalks and designated bike lanes. This project is slated to begin in 2020.
- Bridge Street and Ames Street upgrades will include bike lanes. These are State roads and also MassDOT projects. These roadways were marked as high priority in the 2014 2014 Dedham and Westwood Bicycle and Pedestrian Network Plan.³⁰
- In 2019, Dedham was awarded a MassDOT Complete Streets grant to add and improve sidewalks to Eastern Avenue in the vicinity of Barnes Memorial Park. MassDOT required that bike lanes be included in the scope of this work in order for the grant to move forward.

²⁹ www.mass.gov/files/documents/2019/03/01/dot-2016TopCrashLocationsRpt.pdf

³⁰ www.dedham-ma.gov/Home/ShowDocument?id=3894

- In 2019 an Active Transportation Advisory Committee was established to focus on improving conditions for cyclists and pedestrians and also maximizing transit-oriented development opportunities.
- In 2019, Town Meeting established the Providence Highway Development District (PHDD) as a first step in creating a so-called district improvement financing (DIF) program that would use a portion of tax revenues from the PHDD for design, construction and maintenance of roadway, traffic, pedestrian, and bicycle, and other infrastructure. Providence Highway has long been a challenge as it bisects the town and is not pedestrian or bike friendly. This DIF program will hopefully lead to infrastructure improvements in the PHDD.
- Community groups have formed to advocate for improved bicycle and pedestrian amenities, namely The Friends of the Dedham Heritage Rail Trail as well as The Dedham Cycle Club.
- The Boston section of the abandoned rail corridor that is recommended as a pedestrian/bicycle path, has been completed and as a result, the Dedham Rail Trail is shown on the MAPC Landline Map as partially completed.^{31,32}
- At the 2019 Spring Town Meeting, a “Snow Removal Recommendation Committee” was established that would be “charged with evaluating options for and recommending actions concerning the establishment of a local Dedham rule requiring commercial, industrial and/or institutions to remove snow and ice from sidewalks serving their properties.” The intent of this committee is to address the inconsistent snow removal practices that greatly impact the safety and ease of pedestrian access.

The 2014 Dedham and Westwood Bicycle and Pedestrian Network Plan details bicycle facility recommendations for 23 Dedham roadways (seven of which are ranked as high priority) and nine priority locations for sidewalk installation in Dedham. Sidewalks are the backbone of a strong pedestrian infrastructure and 41% of main roads and 38% of local roads in Dedham do not have sidewalks. The 2009 Town of Dedham Master Plan and the 2017 update from the Master Plan Implementation Committee both identify the importance of maintaining and keeping sidewalks clear. Future Complete Streets project proposals as well as other road improvement projects will ideally factor in these recommendations where relevant.

Water Supply Systems

Dedham is served by the Dedham-Westwood Water District (DWWD), which supplies over 13,000 service connections in the two neighboring Towns. DWWD water is groundwater pumped from 17 wells (6 in Westwood and 11 in Dedham). On an average day, the District pumps about 4.25 million gallons of water. Water is treated at two filtration plants to remove iron and manganese. Construction began in 2017 of a major \$8 million upgrade to the Bridge Street Treatment Plant in Dedham.³³

³¹ www.mapc.org/transportation/landline/

³² www.mapc.org/wp-content/uploads/2017/10/SR_TRIC.pdf

³³ www.dwwd.org/history

In December of 2005, the DWWD was granted membership in the Massachusetts Water Resources Authority (MWRA), allowing it to purchase supplemental water when needed to ensure public health and safety during peak water use periods. The contractual allowance for purchase is 73 million gallons per year (220,000 gallons per day) which Dedham accessed only twice since the agreement in 2005. Recent DWWD updates include a water main replacement project in 2016 (Beacon, Fairfield, and Riverview Streets) and the MWRA Southern Extra High Redundancy and Storage project, started in 2018 and is scheduled to be complete in 2019.³⁴ The DWWD makes regular capital improvements to the system, replacing water mains, services, meters, fire hydrants, pumps, motors and filtration equipment in order to provide high quality drinking water and fire protection to Dedham and Westwood residents and businesses.³⁵

Municipal Sewer System and Individual Septic Systems

The Town's sanitary sewer system carries sewage from homes and businesses to the MWRA network and ultimately to the Deer Island treatment plant in Boston. This system serves approximately 95% of the Town's population; the remaining 5% of residents has private septic systems. No expansion of the service area is anticipated by the Town or by MWRA.

Stormwater Management

Stormwater is collected through catch basins and culverts and transported to rivers, streams, and wetland areas. The storm drainage system collects rainwater and snowmelt from streets, parking lots, driveways, and sidewalks. When rain or snow falls on hard surfaces, pollutants such as bacteria, oil, litter, and pet waste are carried into storm drains. Much of this untreated water is discharged directly into the Charles and Neponset Rivers and into our watershed.

In accordance with the requirements of its MS4 permit, Dedham is actively developing a Stormwater Management Plan of public education and participation, illicit discharge detection and elimination, construction site erosion and sedimentation control, new development and redevelopment requirements, and public works good housekeeping practices. This is a multi-year effort to make upgrades that improve water quality in the Town's water bodies, with requirements for continuing operation and maintenance of Town facilities and infrastructure.

In partnership with NepRWA, the Town secured a grant from the Massachusetts Department of Environmental Protection (MassDEP) to improve stormwater treatment near Mother Brook. The Environmental and Conservation Departments and NepRWA offer recommendations to homeowners and businesses to help reduce pollution from stormwater runoff. The Dedham Conservation Commission enforces Town and State regulations for stormwater management, including requirements to add or improve storage and infiltration for new construction or redevelopment projects.^{36,37,38}

³⁴ www.mwra.com/projects/water/seh/seh-update.html

³⁵ www.dwwd.org/history

³⁶ www.dedham-ma.gov/departments/environmental/stormwater-management

³⁷ www.dedham-ma.gov/departments/engineering/sewer-system

³⁸ www.neponset.org/archived-pages/prevent-stormwater-runoff/

3D.3 Long-Term Development Patterns

The Town has established 12 types of zoning districts. There are four types of residential zoning districts and eight types of nonresidential zoning districts, which are described in this section. Map 3A shows the zoning districts in Dedham.

Land Use Controls: Residential Districts

Most of the land in Dedham is zoned for one of four types of residential use:

- Single Residence A (SRA)
- Single Residence B (SRB)
- General Residence (GR)
- Senior Campus (SC)

The SRA District includes lower-density areas intended to provide a semi-rural setting for single-family dwellings, and may also accommodate uses that require large parcels of land such as assisted living residences and public and institutional uses. The SRB District includes medium-density areas served by municipal utilities that are intended for single-family homes, subsidiary apartments, some assisted living residences, and public uses. The GR District includes higher-density areas intended for one- or two-family dwellings, assisted living residences, and apartments or row houses. The SC District was created in anticipation of Hebrew Senior Life's residential and health care campus. The 162-acre campus is now occupied and includes a continuum of residential options and health care facilities for older adults as well as a primary (K-8) school.

Land Use Controls: Nonresidential Districts

The eight types of nonresidential zoning districts are:

- Administrative and Professional (AP)
- General Business (GB)
- Local Business (LB)
- Highway Business (HB)
- Central Business (CB)
- Research Development and Office (RDO)
- Limited Manufacturing Type A (LMA)
- Limited Manufacturing Type B (LMB)

The LB District, designed for low-density development, accommodates small establishments that service nearby neighborhoods. The GB District is intended for similar retail and service establishments but offers greater dimensional flexibility with no minimum requirements for lot frontage, lot area, lot width, or yard setbacks.

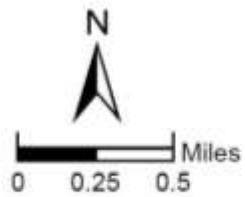
Town of Dedham Massachusetts



Map 3 Zoning Districts

Districts

- Central Business
- General Business
- General Residence
- Highway Business
- Local Business
- Limited Manufacturing
- Limited Manufacturing Type B
- Research Development & Office
- Senior Campus District
- Single Residence A
- Single Residence B

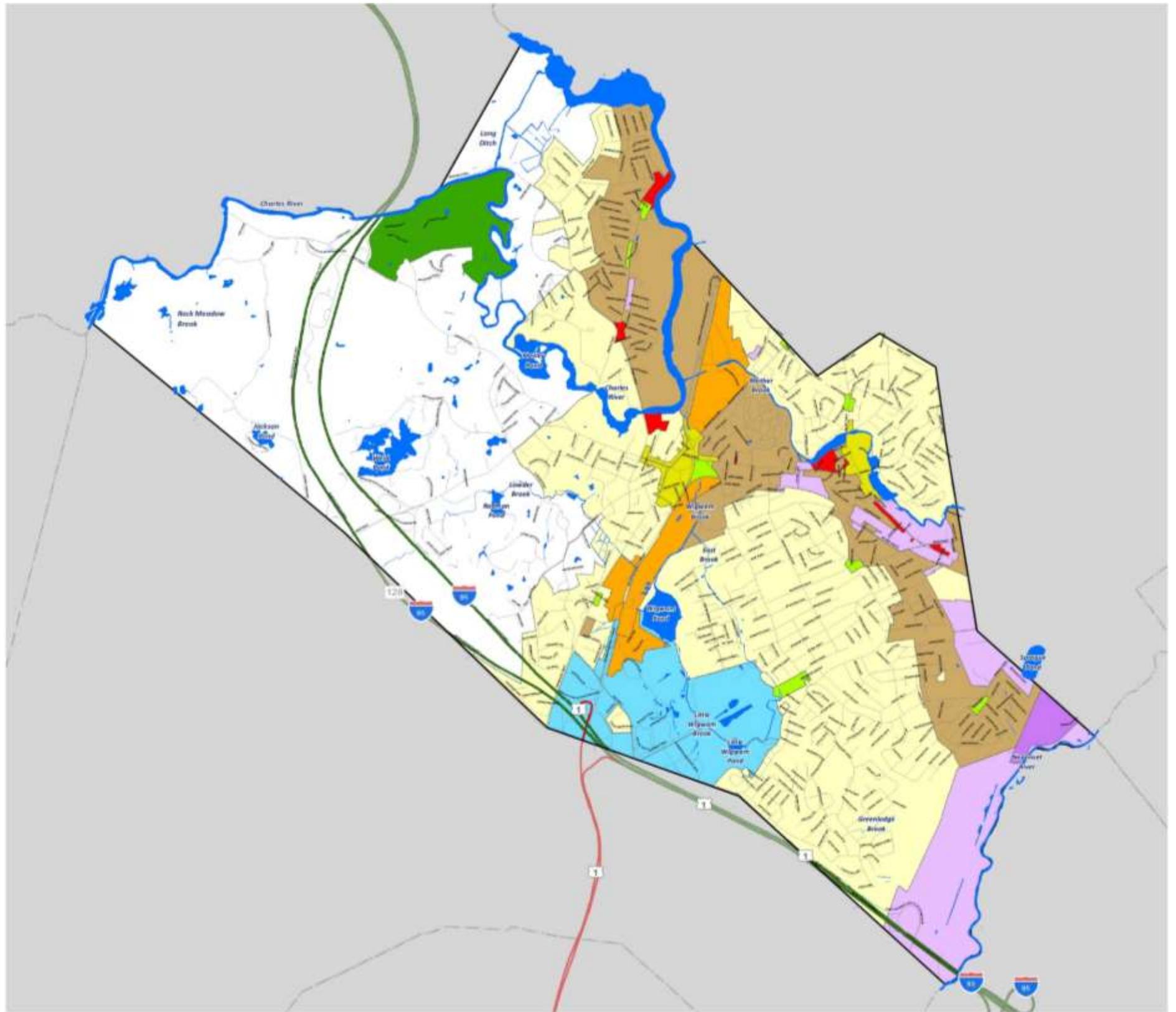


Data Sources: Town of Dedham, MassGIS

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The HB and CB Districts were created based on recommendations of the 1996 Master Plan. The HB District was created to recognize the retail uses along Providence Highway and provides for commercial activities that may require large land areas for retail and service facilities related to highway travel. The CB District was established in order to recognize the special character of downtown area and encourages a higher density of small-scale businesses, as well as municipal, institutional, residential, and mixed-use developments. More recently, Town Meeting changed the zoning of East Dedham commercial areas to CB District as part of the efforts to revitalize East Dedham.

The RDO District provides areas for employment centers for high technology industries and business development. This District is designed to encourage park-like groupings of buildings and facilities with and has requirements to protect against encroachment and any impacts of commercial uses on residential areas. The LMA and LMB districts establish requirements for industrial and related uses, and are intended to include those uses which serve the immediate needs of the LMA and LMB occupants.

Land Use Controls: Overlay Districts

The Town has established seven overlay districts that impose additional regulations on land use and provide a mechanism to encourage or shape development. Some overlay districts support specific types of land use (*e.g.* Arts), some define areas where certain usages are permitted (*e.g.* Adult Use, Medical Marijuana), and others encourage protection of historic and natural resources (*e.g.* Historic Preservation, Aquifer Protection). The overlay districts (Map 3B) in Dedham are:

- **The Adult Use Overlay District (AUOD)** was established to accommodate adult uses within the Town of Dedham, as described by the Town's Zoning By-Laws. Adult uses may be permitted in the AUOD upon the granting of a Special Permit by the Board of Appeals. Adult uses are only allowed in the Town's AUOD.
- **The Aquifer Protection Overlay (AQP)** By-law prohibits uses which could pollute the aquifer that is one of the groundwater sources for the DWWD.
- **The Arts Overlay District (AOD)** was established to encourage the development, preservation, and enhancement of Arts-Related Uses, particularly in East Dedham. The AOD is meant to preserve and enhance the area as a center for a variety of retail, business, housing, and office uses and promote a strong pedestrian character and scale.
- **The Flood Plain District (FPD)** was established to preserve the groundwater table, to protect public health and safety, and to conserve natural conditions, wildlife and open space. The FPD boundary corresponds to the 100-year base flood elevations determined by the Flood Insurance Rate Map issued by the Federal Emergency Management Agency.
- **The Historic Preservation Overlay District (HP)** was established to encourage the preservation and continued use of buildings and structures of historic and architectural significance and to encourage the adaptive re-use of such buildings and structures by broadening and modifying use and dimensional regulations that may otherwise impede historic and architectural preservation efforts.

- **The Medical Marijuana Overlay District (MMOD)** provides for the location and placement of registered marijuana dispensaries in locations determined suitable for lawful medical marijuana facilities and to minimize adverse impacts by regulating the siting, design, placement, security, and removal of medical marijuana dispensaries.
- **The Wireless Communications Services Overlay District (WC)** is intended to accommodate the necessary infrastructure for wireless communications services while protecting residents from the impacts associated with such facilities. The WC District includes all land owned by the Town excluding the Town Forest, land owned by the State, land within the RDO and LMB Districts, and portions of the LMA District.
- **The Providence Highway Development District (PHDD)** was established by Town Meeting in May 2019 with the hope of leveraging the economic strength of the Providence Highway corridor into public infrastructure projects that can address the corridor’s shortcomings. In Massachusetts, municipalities can create such districts and invest a portion of new growth--future property tax revenue generated by new private development--into public infrastructure within the district. Because the PHDD has not been added to the Town GIS system yet, a portion of the locus maps is included below. The detailed map is available on the Town website.³⁹

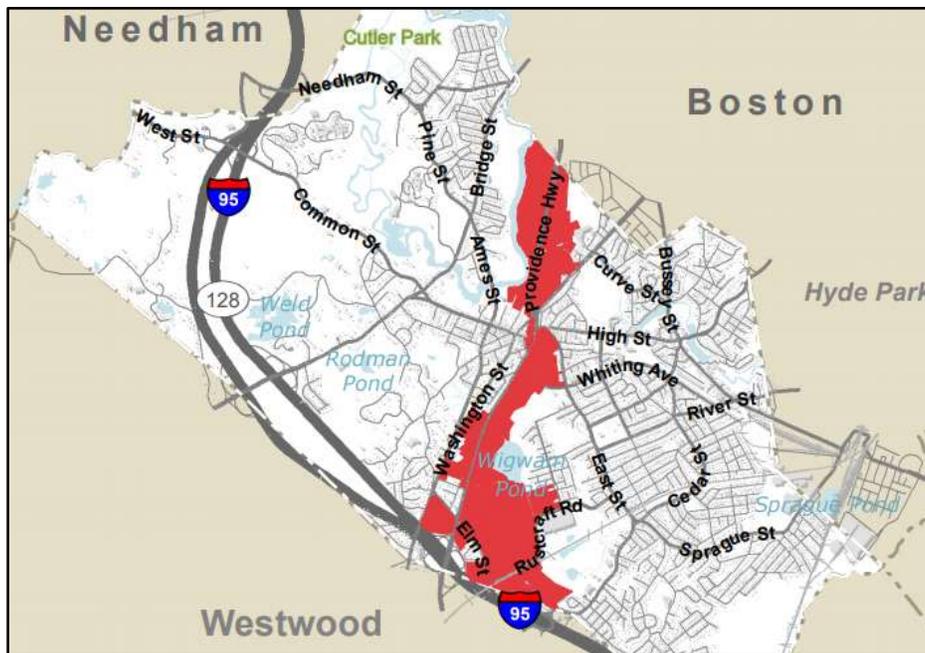


Figure 3.4 – Providence Highway Development District

Dedham’s Zoning Bylaw provides several special permit options for certain types of commercial and residential development. These options establish standards regarding landscaping, parking, access, signage, aesthetics and other planning details that are appropriate for the specific type of development. A Planned Commercial Development is a special permit option for land in the LMA, LMB, HB, GB, CB, or RDO Districts that provides flexibility for commercial or mixed-use development. The standards require that the development include the creation, maintenance,

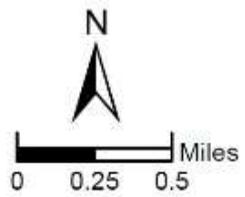
³⁹ www.dedham-ma.gov/discover-dedham/projects-studies/providence-highway-create-a-better-corridor

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Map 3B Overlay Districts

- Arts Overlay District
- Aquifer Protection Overlay District
- Adult Use District
- Historic District
- Historic Preservation Districts
- Medical Marijuana District

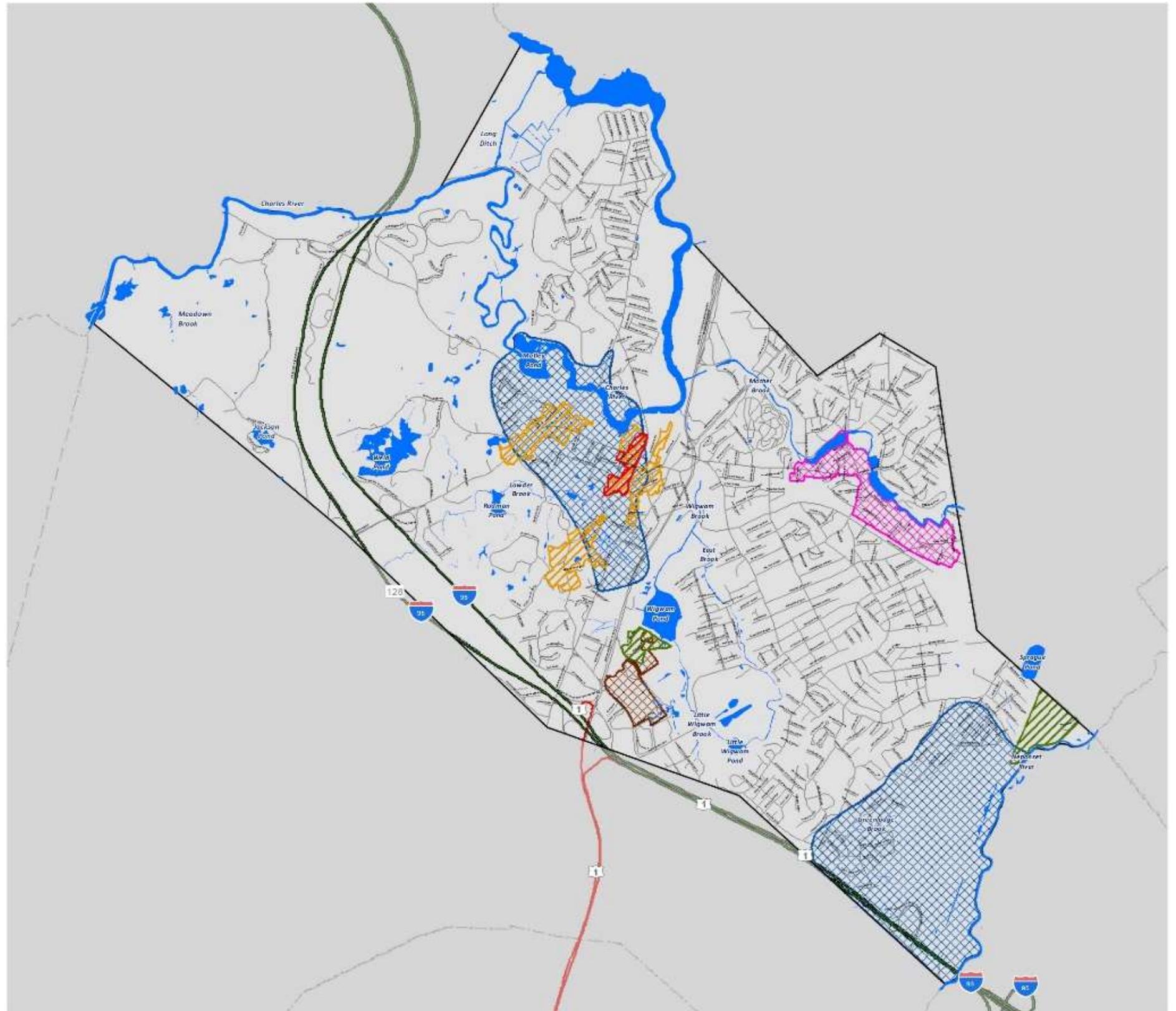


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and preservation of natural or landscaped open space, and protection of wetlands and environmentally sensitive areas. Planning standards also exist for Planned Residential Development, Mixed Use Development, Hospitals, Assisted Living Facilities and several other more specialized projects. Dedham has adopted a site plan review process, which requires a review of projects meeting specific criteria such as size or number of parking spaces. Site plan review requires review of structures and uses that may have significant impacts on traffic, municipal, and public services and utilities, environmental quality, community economics, and community values in the Town.⁴⁰

3D.4 Recent and Projected Growth

Between 2005 and 2010, the Town permitted construction of approximately 445 new housing units, mostly in multi-family buildings built during a small housing boom that ended with the financial crisis of 2008. The Recession years (2008 – 2011) saw an average of just over 11 housing permits issued per year, mostly for single family dwellings. As the economy picked up again, so did housing permits, with 81 permits issued in 2012 and 50 in 2013, primarily in multi-family buildings (66 of the 81 permits issued in 2012 and 27 of the 50 permits issued in 2013 were in buildings with 5 or more housing units). An average of 12 housing permits were issued in the years 2014-2016, all single-family homes. Several mixed-use and multi-family buildings have been permitted in the past two years.

In 2013, the Planning Board hired Professor Bluestone from Northeastern University to analyze demographic changes within Dedham and resulting effects on housing needs.⁴¹ Professor Bluestone's report indicates that Dedham's population has slowly increased since 2000 and predicts that this trend of modest population growth will continue, and household size will decline, calling for an increased supply of smaller and likely less expensive housing options.⁴²

Buildout Analysis

In 2001, MAPC completed a buildout analysis for Dedham through the Section 401 program. Buildout analyses illustrate the maximum development permitted according to the current local zoning in place. This information is used to estimate future demands on public infrastructure and the environment. The analysis for Dedham projected an addition of 2,409 new residents at buildout, and indicated the potential for an additional 930 total residential units based on current zoning. The assessment excluded areas within the 100-year flood plain for residential development, and excluded wetlands for all types of development. A summary of Dedham's capacity for development at buildout is provided in Table 3.4.

The buildout analysis is intended to be used as a tool to guide development, but does not estimate the rate of development and therefore cannot predict how long it would take to reach buildout. Additional limitations of undeveloped land or the potential redevelopment of existing parcels was not considered in the buildout process. Further, this analysis is now more than 15

⁴⁰ www.dedham-ma.gov/government/planning-board/about-planning

⁴¹ 2009 Town of Dedham Master Plan, 2017 Update.

⁴² www.dedham-ma.gov/Home/ShowDocument?id=448

years old. Since 2001, the demand for housing has plummeted, grown again, and shifted away from single-family and toward multi-family homes, as fewer households in Dedham consist of two-parent families with children. Although the potential development densities could be significantly higher or lower than projected, this analysis still provides a useful, if rough, guide for the future.

In addition to redevelopment opportunities, Dedham’s greatest potential for land use change lies in the remaining large parcels, many of which are owned by the Town, the Commonwealth, or by private institutions. Section 5 identifies those areas and parcels which have a high likelihood for change through sale or new development.

Table 3.4 – Dedham Buildout Analysis Summary, 2001

Zoning District	Undeveloped Land (acres)	Lots	Dwelling Units	Buildable Commercial/Industrial (acres)
Single Residence A (SRA)	701.74	630	630	
Single Residence B (SRB)	92.29	236	236	
General Residence (GR)	13.58	57	65	
Highway Business (HB)	2.01			0.58
Local Business (LB)	0.69			0.17
Limited Manufacturing A (LMA)	6.27			2.19
Limited Manufacturing B (LMB)	7.50			0.31
Research, Development and Office (RDO)	10.42			3.10
Total	834.50	923	931	8.29

Source: Metropolitan Area Planning Council, 2001.

Dedham Legacy Place Technical Assistance Panel Report

In October of 2016, the Dedham Legacy Place Technical Advisory Panel (TAP) convened under the direction of the Urban Land Institute’s Boston/New England District Council for a day-long meeting with Town leaders, residents, developers, and business owners to focus on the issues, constraints, and opportunities presented by the area lying to the south and west of Wigwam pond and bounded by Providence Highway to the west, Legacy Place to the southwest, Rustcraft Road to the south and the General Dynamics property, among others, to the east (Study Area). The TAP also looked at Legacy Place and the MBTA Dedham Corporate Station to evaluate options for improving connectivity between the Study Area and these focal points. During these discussions and interviews, several issues stood out:

- The area has strong assets (the MBTA Dedham Corporate Station, Legacy Place, and Wigwam Pond); however, these resources are completely segregated from each other,
- Wigwam Pond is a wonderful natural resource that is underutilized by the community and has limited public access,
- There is a lack of public open green space, *and*
- Community stakeholders and residents are frustrated about the lack of affordable housing and housing for seniors looking to downsize from single-family homes.

Recommendations include:

- Improve pedestrian access to/from the MBTA Dedham Corporate station
- Extend Legacy Boulevard to Rustcraft Road
- Improve access to Wigwam Pond
- Acquire more open green space
- Utilize mixed-use development with a range of ownership and rental options and some designation of age-restricted living

Dedham Corporate Station: Creating a Connected Neighborhood

The 1996 Master Plan outlined recommendations for the area around the Dedham Corporate Station to become an employment center for technical research and light assembly jobs, but this plan was never implemented due to various economic factors. Since that time, a premier lifestyle shopping center and over 550 apartments were built across from the Dedham Corporate station. Although the area includes many elements associated with a high-quality, livable community - access to transit, housing, retail, office space, and open space - all within walking distance, the area remains somewhat disconnected from the rest of the town.

MAPC initiated a Transit-oriented development (TOD) project to evaluate the opportunity to overcome these challenges and create a neighborhood with strong pedestrian connectivity, public realm improvements, and attractive future development. The 2017 TOD report from MAPC represents the first step towards creating a neighborhood utilizing TOD principles, and provides a snapshot of existing conditions, as well as near- and long-term recommendations toward achieving the vision of a vibrant neighborhood.⁴³ One recommendation included in the TOD report is to improve connectivity, especially for pedestrians. The TOD report also suggests that the Town consider making zoning changes for portions of the study area (*e.g.* the MBTA parking lot) to facilitate the type of development that will meet the Town's future needs.

⁴³ www.mapc.org/resource-library/dedham-tod-study/

Section 4: Environmental Inventory and Analysis

4A. Geology, Soils and Topography

Dedham is in the Seaboard Lowland physiographic region of New England. This region is characterized by low to moderate relief. The topography results both from the irregular configuration of bedrock, (rock at and near the surface) and the effects of glaciation.⁴⁴ An understanding of the geology and the distribution of the various types of soils can be very important in the planning and development of a site for a specific purpose. Great differences in soil properties often occur within short distances. Some soils are seasonally wet or subject to flooding; some soil layers are thin and the bedrock is close to the surface; some are unstable and not suitable for buildings and roads. Clay or wet soils are poorly suited for use as septic tank absorption fields. A high water table can cause problems in the construction of basements and underground installations. Consideration of geology, soils, and topography is fundamental to sound and comprehensive land use planning.

4A.1 Geology

The bedrock in Dedham consists mostly of igneous and sedimentary rocks. The major rock types are Dedham Granodiorite, Westwood Granite, and Mattapan Volcanic Complex. There are also small areas of Roxbury Conglomerate. There are bedrock outcrops in Greenlodge, Ashcroft, West Dedham, and East Dedham. While Dedham's bedrock is no longer mined, outcrops offer reminders of its place in the Town's history, and are a pleasant feature of the landscape.

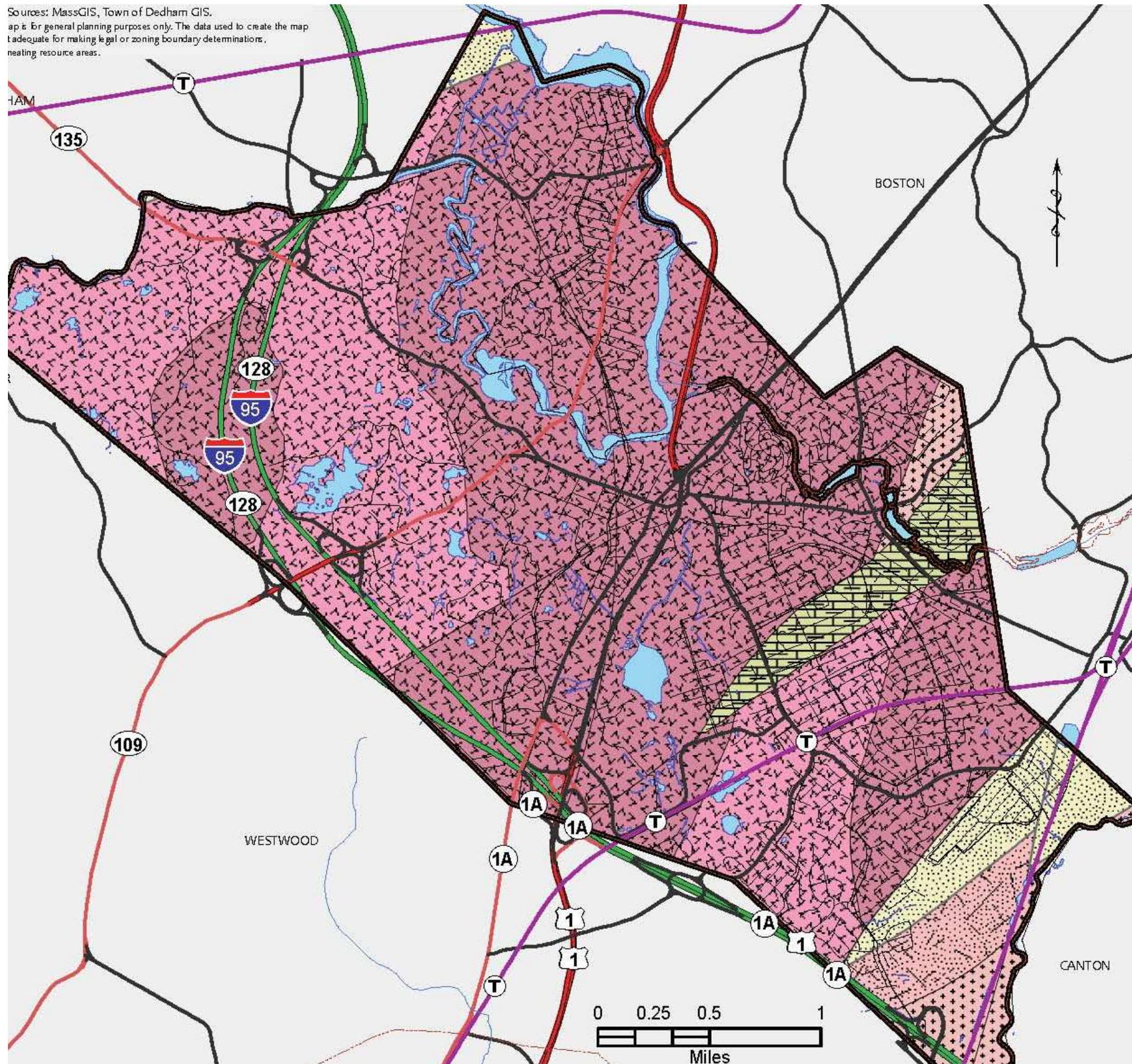
Dedham's land surfaces were formed and altered some 10,000 years ago as the area's last glaciers retreated, scouring the underlying bedrock, and carrying and depositing these scrapings where they melted. The resulting surficial geology can be generally classified into two principal deposits: glacial till and glacial outwash.⁴⁵ Glacial till is deposited directly from ice and consists of a random mixture of different size fragments of angular rocks in a matrix of fine grained, sand- to clay-sized fragments. Glacial outwash by comparison, is deposited by the moving waters of the melting glacier and is deposited in stratified layers. Rapidly moving waters release the heaviest rocks and fragments and, as meltwaters slow, the finer sediments are deposited.

Most of the Town is underlain by ground moraine: deposits of glacial till that have a form different from the underlying bedrock. Compacted till is found mainly in the uplands while Dedham's broad and gently sloping outwash plains, developed by glacial outwash, hold many sand and gravel deposits scattered in small hills of varied sizes and shapes. Figures 4.1 and 4.2 are maps that were created for the 2009 Dedham Master Plan to illustrate the bedrock and surficial geologic characteristics of the Town. Given that there have been no significant geologic events in the past decade, these maps should still be accurate today.

⁴⁴ Glaciation is defined as the modification of the earth's surface by the actions of glaciers.

⁴⁵ Dedham Master Plan, 2009.

Sources: MassGIS, Town of Dedham GIS.
 Map is for general planning purposes only. The data used to create the map
 is not adequate for making legal or zoning boundary determinations,
 delineating resource areas.

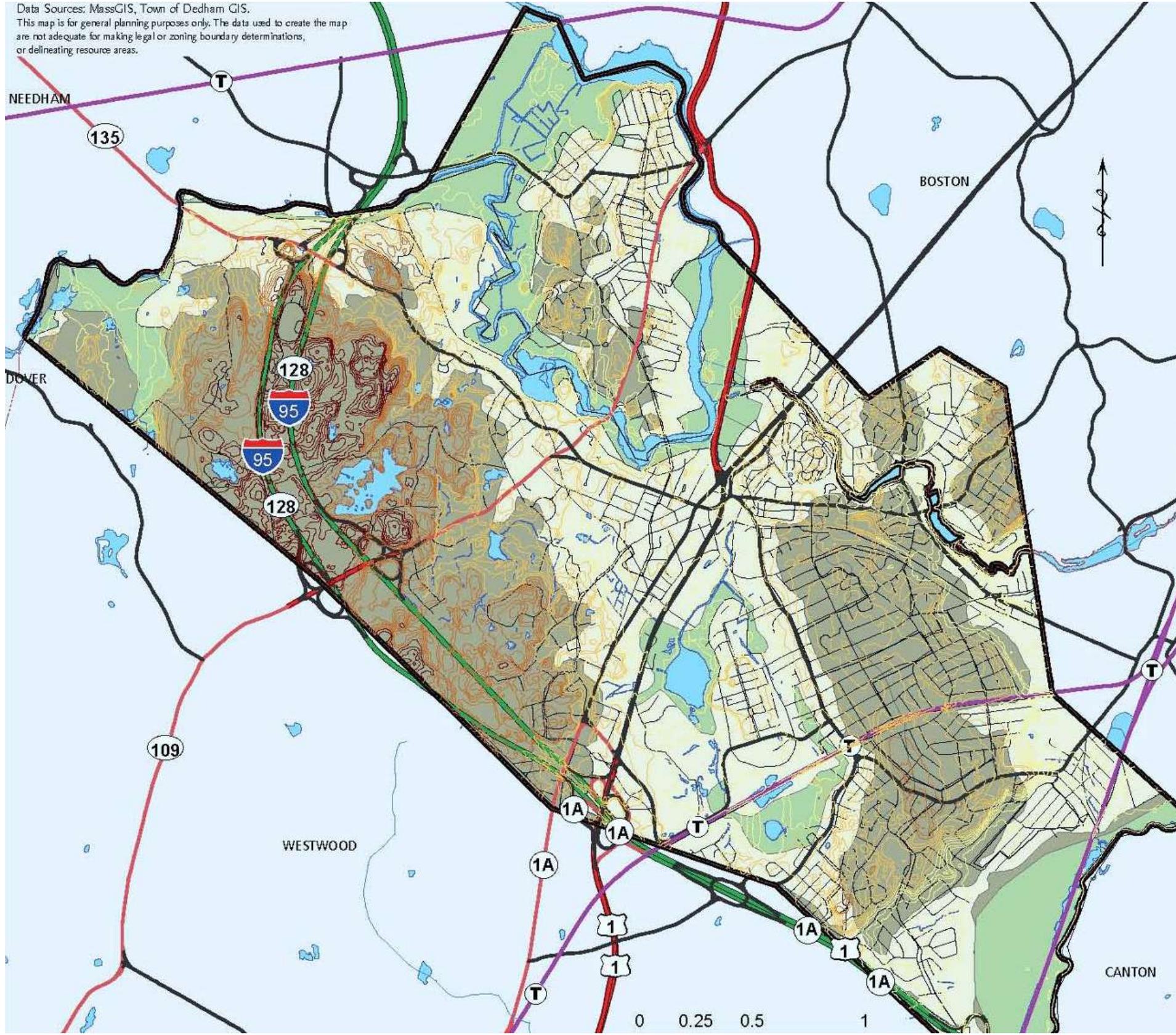


Map 6.1 Bedrock Geology March 2009

- KEY**
- Municipal Boundary
 - Ⓣ MBTA Stations
- ROADWAYS**
- Limited Access Highway
 - Multi-Lane Highway
 - Other Numbered Highway
 - Major Road, Collector
 - Local Roads
 - Open Water
- BEDROCK GEOLOGY**
- Green Lodge Formation
 - Cambridge Argillite
 - Dorchester Conglomerate
 - Roxbury Conglomerate
 - Avalon Granite
 - Mattapan Volcanic Complex
 - Westwood Granite

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 McMahon Associates, Inc.
 Stephen Herzog

Data Sources: MassGIS, Town of Dedham GIS.
 This map is for general planning purposes only. The data used to create the map are not adequate for making legal or zoning boundary determinations, or delineating resource areas.



Map 6.2 Surficial Geology March 2009

- KEY**
- Municipal Boundary
 - Ⓣ MBTA Stations
- ROADWAYS**
- Limited Access Highway
 - Multi-Lane Highway
 - Other Numbered Highway
 - Major Road, Collector
 - Local Roads
 - Open Water
- ELEVATION CONTOURS (FT)**
- 39 - 98
 - 99 - 147
 - 148 - 206
 - 207 - 295
- SURFICIAL GEOLOGY**
- Sand and gravel deposits
 - Till or bedrock
 - Floodplain alluvium

COMMUNITY OPPORTUNITIES GROUP, INC.
 Larry Koff & Associates
 McMahon Associates, Inc.
 Stephen Herzog

4A.2 Soils

The patchwork pattern of the undisturbed soils in Dedham was produced by glacial and post-glacial actions including weathering, organic deposits, and water flows. Today this patchwork includes large areas of the Town that have been disturbed by a variety of human actions including development and road building. The wide range of soil types found in Dedham includes the Hollis-Rock Outcrop-Charlton complex which is visible as the uppermost layers exposed by the excavations along Route 128, the Freetown Muck surrounding Wigwam Pond, and the Saco Silt Loam common along both the Charles and Neponset Rivers. The Fowl Meadow wetlands, which includes Dedham's principal aquifers, is made up of many different soil types with large areas of Canton Fine Sandy Loam and Swansea Muck.

Because of the great variety of soils in the area and the important differences in their properties, specific site evaluations may be necessary when soil characteristics are critical, such as in the design of septic systems or retention basins. Map 4 shows all the soils in Dedham grouped into three general categories according to the degree of limitation for development. This is a generalized assessment based on development limitations to residential dwellings with basements. Limitation ratings are usually based on hazards, risks, or obstructions presented by properties or characteristics of undisturbed soil. Limitation ratings use terms of severity such as slight, moderate, or severe.

- **Slight.** Presents, at most, minor problems for the specified use. The soil gives satisfactory performance with little or no modification. Modifications or operations dictated by the use are simple and relatively inexpensive. With normal maintenance, performance should be satisfactory for a period of time generally considered acceptable for the use.
- **Moderate.** Does not require exceptional risk or cost for the specified use, but the soil does have certain undesirable properties or features. Some modification of the soil itself, special designs, or maintenance are required for satisfactory performance over an acceptable period of time. The needed measures usually increase the cost of establishing or maintaining the use, but the added cost is generally not prohibitive.
- **Severe.** Requires unacceptable risk to use the soil if not appreciably modified. Special design, a significant increase in construction cost, or an appreciably higher maintenance cost is required for satisfactory performance over an acceptable period of time. A limitation that requires removal and replacement of the soil would be rated severe. The rating does not imply that the soil cannot be adapted to a particular use, but rather that the cost to overcome the limitation would be high.⁴⁶

⁴⁶ USDA Natural Resources Conservation Service:
www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/ref/?cid=nrcs142p2_054256

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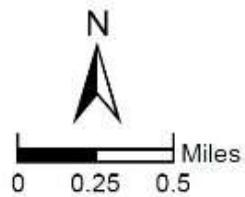


Map 4 Soils

Limitations to Development

- Moderate
- Severe
- Unrated
- Urban land

Soil Survey Geographic (SSURGO) data base was produced by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies for the Soil Survey of Norfolk County, MA. The depicted soil boundaries and interpretations derived from them do not eliminate the need of onsite sampling, testing, and detailed study of specific sites for intensive uses. Thus, this map and its interpretations are intended for planning purposes only.

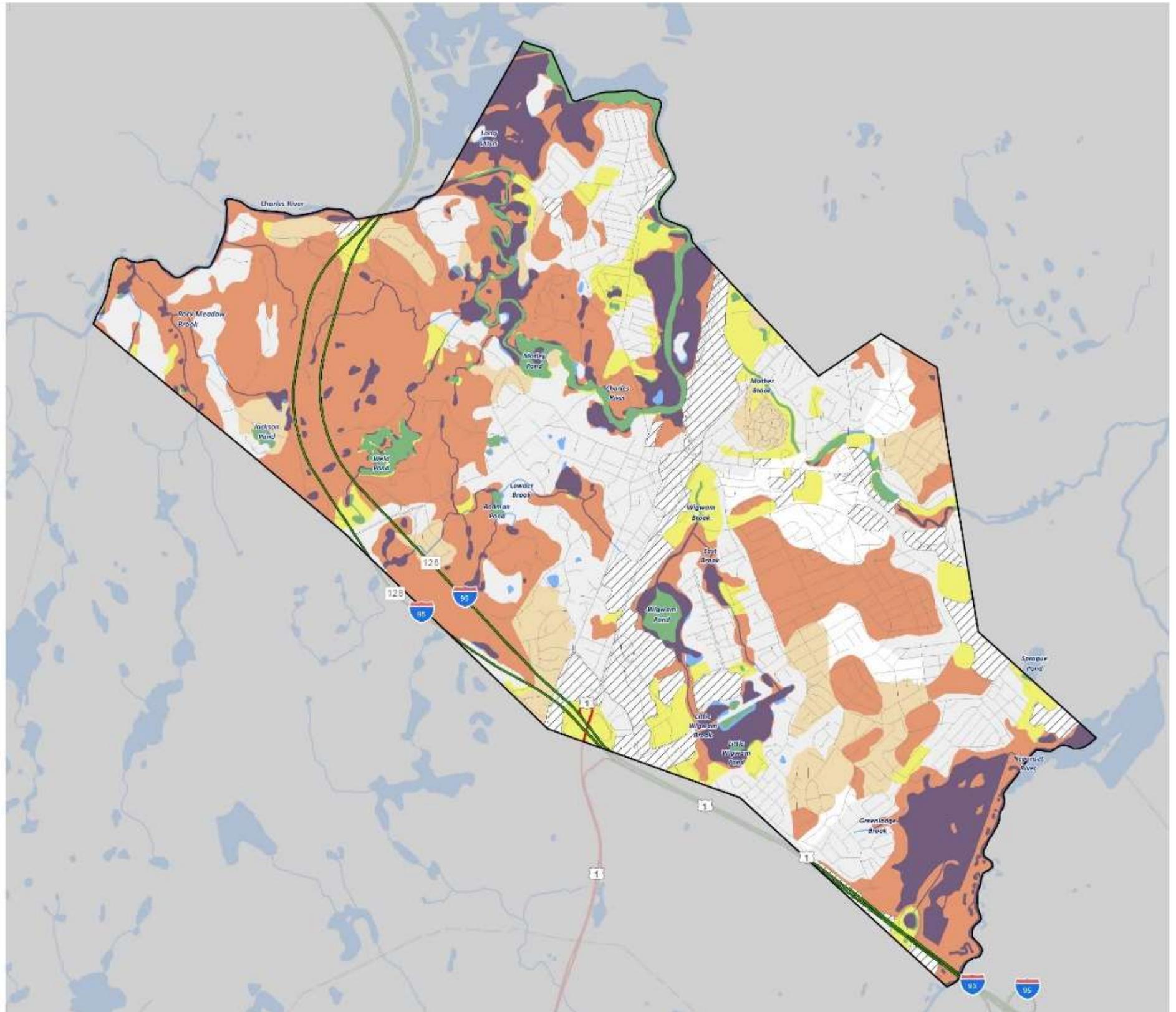


Data Sources: Town of Dedham, MassGIS

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4A.3 Topography

The gently rolling terrain of Dedham is typical of the Seaboard Lowland physiographic region of New England and ranges from 100 to 200 feet above sea level. Wilson Mountain, the Town's highest point, reaches almost 300 feet above mean sea level (MSL). In contrast, a few areas in the Neponset River Reservation in the southern part of Town and some stretches along Mother Brook in East Dedham are less than 100 feet in elevation. Dedham's Town center lies at around 110 feet, just below the average of about 150 feet above MSL. While the topography of the Town is not dramatic, this gentle rising and falling of the land coupled with a matrix of open and closed landscapes ranging from fields to forests to water bodies and neighborhoods, results in a beautiful and interesting landscape that is highly valued and worthy of protection.

4B. Landscape Character

Located immediately south of Boston, Dedham has become urbanized but still retains some remnants of its agricultural and mill town heritage. The construction of Providence Highway and Route 128 increased accessibility to other areas of the region and spurred development, but Dedham was able to retain much of its natural beauty and open space due to significant private institutional holdings and conservation land in State Parks within the Town. Map 5 shows Dedham's unique landscape features.

Dedham has many distinct landscape features that contribute to the character of the Town. The most striking and prevalent of these are Dedham's waterways – the Charles and Neponset Rivers, Mother Brook, and Long Ditch – which shaped historic and economic development of the Town and continue to provide natural, recreational, and economic benefits to residents today. The waterways also link Dedham to other communities in eastern Massachusetts. In its 1982 Massachusetts Landscape Inventory, the Department of Environmental Management (merged with the Metropolitan District Commission in 2003 to form DCR) designated a portion of West Dedham along the Charles River as a noteworthy landscape.

Wilson Mountain is a dominant landscape feature, providing scenic views of the Town from its peak as well as long range views of forested hillsides, surrounding lowlands, and the Boston skyline. Open landscapes also define the character of Dedham, ranging from manicured institutional greens, recreational fields, and golf courses to meadows, wetlands, and riparian habitats. These open landscapes provide a counterpoint to both the forested and built environments giving a sense of rhythm and relief. At a smaller scale, some features that are characteristic of the Town as a whole – rocky ledges, forested uplands, and remnants of pastureland marked by stone walls – punctuate the broader landscape and allow Dedham to maintain its unique suburban, bucolic identity despite its growth and urbanization.

Dedham's upland areas are primarily forest land and, to a lesser extent, fields and meadows. Many of these areas are privately-owned parcels which have become fragmented from one another by roads, subdivisions, and other development. Most of the wetland areas are under public ownership and consist of large parcels interconnected by waterways throughout the community with few interruptions. Dedham is nearing buildout, as evidenced by the shortage

Town of Dedham Massachusetts



Map 5 Unique Features

-  Open Space Properties
-  Historic Districts
-  Potential Scenic Roads

Natural Heritage & Endangered Species Program

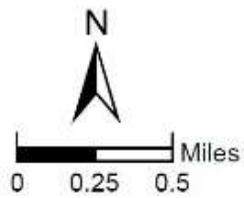
-  Priority Habitats of Rare Species
-  Estimated Habitats of Rare Wildlife
-  NHESP Certified Vernal Pools

MA Scenic Landscape Inventory (1982)

-  Scenic Landscape

Area of Critical Environmental Concern

-  Fowl Meadow And Ponkapoag Bog



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of developable land remaining in the Town. The pressure of development increases the importance of preserving the natural features and open spaces that shaped the Town's history and are enjoyed by Dedham residents today.

4C. Water Resources

The Town of Dedham continues to be a leader in collaborations on regional water resources and water quality issues with neighboring municipalities, with the help of organizations like the Charles and Neponset River Watershed Associations (CRWA and NepRWA) and the Dedham-Westwood Water District (DWWD). Dedham continues to work toward a cleaner future by providing educational resources for its residents on how to prevent stormwater pollution. Dedham collaborated with NepRWA to create a cooperative stormwater management program in 2014 with a grant from the United States EPA and MassDEP. The Town and NepRWA co-created the *Dedham Stormwater Best Management Practices Flyer* which is available on the Town's website.⁴⁷

The DWWD has partnered with the Charles River Watershed Association (CRWA) to help homeowners save water by creating an app that can be used on Android and Apple devices and on the DWWD website. The Dropcountr app can be used by DWWD customers to track water usage, set efficiency goals and learn about incentives and rebates for conservation appliances and technology.⁴⁸

Two additional opportunities for collaboration are the Neponset River Greenway project⁴⁹ (Figure 4.3) and the CRWA's Blue Cities initiative,⁵⁰ described in Section 3A.3. It is critical that the Town of Dedham continue these collaborations and partnerships as natural resources and environmental habitats often cross municipal boundaries. Actions taken by a community, within its own boundaries, may significantly impact resources in adjacent communities.

4C.1 Watersheds

A watershed is a topographically delineated area that is drained by a stream system; that is, the total land area above some point on a stream or river that drains past that point. Also referred to as drainage basins or river basins, watersheds are hydrological units of reference that can encompass a variety of physical and biological features and may cross political boundaries. Larger watersheds may be composed of sub-watersheds, which drain into smaller feeder streams and rivers. Dedham lies within the Boston Harbor Watershed and is part of two sub-watersheds, the Charles River Watershed and the Neponset River Watershed.

The Charles River Watershed drains an area of 308 square miles and includes 35 cities and towns. The Neponset River Watershed covers roughly 130 square miles including parts of fourteen cities and towns. Both the Charles and the Neponset have active watershed

⁴⁷ www.dedham-ma.gov/home/showdocument?id=966

⁴⁸ www.dwwd.org/dropcounter-app

⁴⁹ www.mass.gov/locations/lower-neponset-river-trail

⁵⁰ www.crwa.org/blue-cities

associations which have been working for more than 50 years to improve water quality and to protect and promote the natural areas along these rivers. More about the efforts by these organizations to improve water quality is in the Environmental Challenges section (Section 4G).

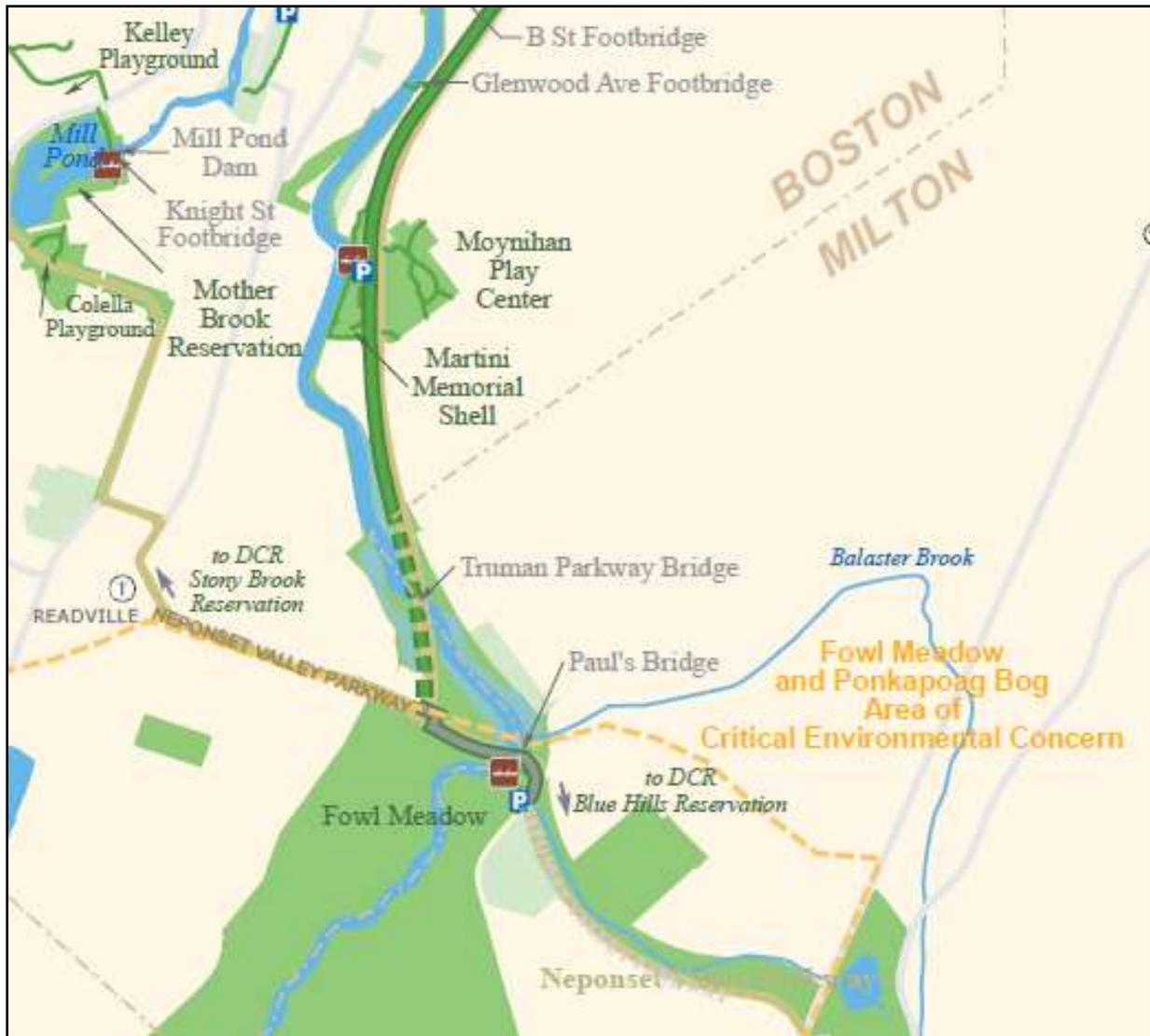


Figure 4.3 – Lower Neponset River Trail Map⁵¹

The Charles River Watershed drains an area of 308 square miles and includes 35 cities and towns. The Neponset River Watershed covers roughly 130 square miles including parts of fourteen cities and towns. Both the Charles and the Neponset have active watershed associations which have been working for more than 50 years to improve water quality and to protect and promote the natural areas along these rivers. More about the efforts by these organizations to improve water quality is in the Environmental Challenges section (Section 4G).

⁵¹ www.mass.gov/locations/lower-neponset-river-trail

4C.2 Surface Water

Dedham's history and development have evolved around its waterways. Both the Charles and Neponset Rivers have provided a means of transportation and a source of power for mills and factories. Recreational use of Dedham's waterways has always been important, as illustrated by Figure 4.4 from a book by Edwin M. Bacon published by the Appalachian Mountain Club in 1898.⁵² and has become important and is increasing as water quality improves and access is enhanced.

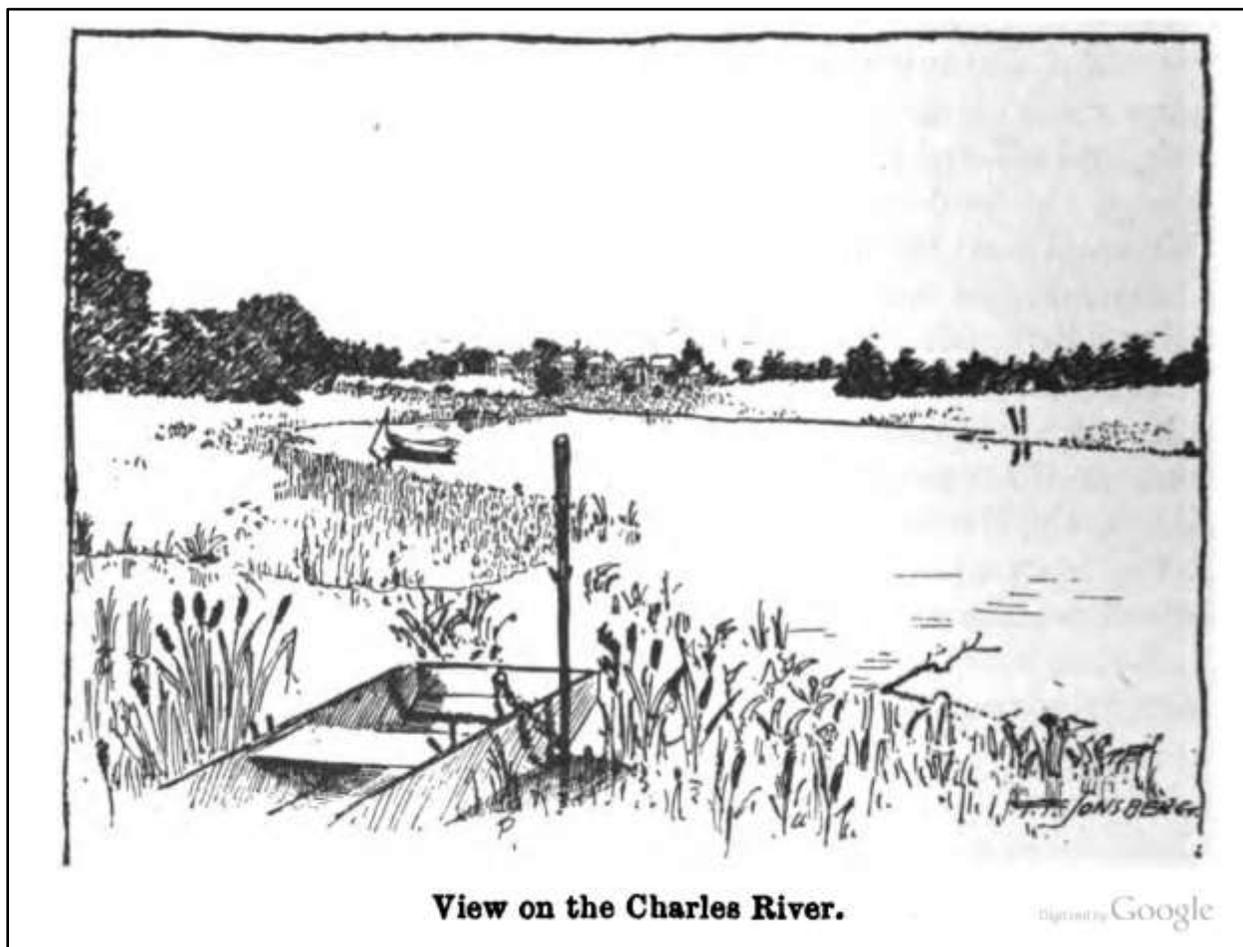


Figure 4.4 – A View of the Charles River (circa 1897)⁵³

The Charles River

The Charles River is one of the most significant rivers in Eastern Massachusetts and a dominant feature in Dedham. Running approximately 80 miles in length, the river rises in the Town of Hopkinton and falls some 350 feet to its outlet at the Charles River basin. Once used as a major east-west transportation route by the Native Americans, the Charles River was harnessed by

⁵² Walks and Rides in the Country Round About Boston, by Edwin Munroe Bacon, published for the Appalachian Mountain Club by Houghton, Mifflin and Company, 1898.

⁵³ *Ibid.*

early European settlers used to provide power for industry. The river's industrialization decreased the river's natural flow and increased water pollution. As a result, fish populations, once numerous, were depleted. Other natural ecosystems related to the river suffered as well, resulting in decreased biodiversity and advancing invasive species. Figure 4.5 shows a modern view of the Charles River from Riverdale Park.



Figure 4.5 – The Charles River from Riverdale Park

Thanks in large part to 50 years of stewardship by the CRWA, the water quality in the Charles River has improved, but some contamination issues remain. The CRWA conducts monthly water quality testing at 35 sites along the river, three of which are in or near Dedham (the Lyons Street Bridge, the Ames Street Bridge, and the Route 109 Bridge). Volunteers collect samples which are analyzed for several water quality indicators, including *E. coli* bacteria, an indicator of sewage contamination.⁵⁴ MassDEP sets standards for *E. coli* levels at which water is considered safe for swimming and boating. At Dedham's most central sampling location, the Ames Street Bridge, 82% of samples taken between 2002 and 2017 had *E. coli* levels that were safe for swimming and 98% were safe for boating. For the same time period, 70% of samples taken at the Route 109 Bridge were safe for swimming and 93% were safe for boating. 72% of samples

⁵⁴ www.crwa.org/field-science/monthly-monitoring/water-quality-data

at the Lyons Street Bridge were safe for swimming and 94% were safe for boating. Unsafe *E. coli* levels were often observed after heavy rainfall events, possibly due to runoff contamination.

The portion of the Charles River flowing through Dedham is generally flat and is bordered by wetlands that provide areas of natural flood storage. In the 1650s, the Town dug a 4000-foot-long canal, known as Long Ditch, to allow the meadow to drain in the spring. Long Ditch, which also provides a convenient short cut for paddlers, runs roughly parallel to the Needham border, cutting across the Riverdale neighborhood peninsula at its northern edge. To say that the Charles River is circuitous through Dedham is an understatement; nearly 9 miles of the Charles River (almost 10% of its entire length) winds its way through Dedham. An early settler had this to say about paddling on the Charles River:

“The river took many turns, so that it was a burden the continual turning about ... West, east, and north we turned on that same meadow and progressed none, so that I, rising in the boat, saw the river flowing just across a bit of grass, in a place where I knew we had passed through nigh an hour before.”⁵⁵

Much of the land along the Charles River in Dedham is owned by the Federal Government, the State and the Town, and includes parks and conservation areas. One of the larger state parks on the Charles is Cutler Park Reservation, a 700-acre tract of open water, wet meadow, and forested wetlands located in Dedham, Needham, Newton, and Boston. Approximately 190 acres of Cutler Park is in Dedham, and the Town owns a 5.8-acre parcel in the Riverdale neighborhood that is contiguous with Cutler Park.

Canoeing and kayaking on the Charles River are popular activities, particularly along the Upper Charles River where there are safe and easy access points. Public input at the time of the 2010 OSRP update indicated that the community wanted better access to the Charles River. The Town was awarded a Recreational Trails Grant to fund the development of the Dedham Water Trail which opened in 2012. More information about the Dedham Water Trail is in Section 5B.1.

The Neponset River

The Neponset River has its headwaters in the Town of Foxborough and flows in a northeasterly direction to Dorchester Bay. As it passes along the southeastern border of Dedham, the river flows slowly and is characterized by extensive vegetated wetlands that are home to many plants and animals, including some rare and endangered species. Almost the entire length of the river in Dedham is located within the state-owned Neponset River Reservation, which includes Fowl Meadow. The Fowl Meadow area of the watershed, containing large areas of both protected and unprotected open space, is a source of public water supply for Dedham, Canton, and Westwood. DCR owns a significant portion of northern Fowl Meadow, most of which is in the Fowl Meadow/Ponkapoag Bog Area of Critical Environmental Concern.⁵⁶

⁵⁵ Old paths and legends of New England; saunterings over historic roads, with glimpses of picturesque fields and old homesteads in Massachusetts, Rhode Island, and New Hampshire, by Katharine M. Abbott.

⁵⁶ Neponset River Watershed Association (NRWA). *Neponset River Watershed Basin Wide Action Plan, 1997*

Like the Charles, the water quality of the Neponset is improving in large part due to the vigilant stewardship efforts of NepRWA. The organization monitors the waters of the Neponset River and undertakes multiple initiatives to improve water quality and quantity in the Neponset and its tributaries and to restore and to protect the lands within its watershed. Nevertheless, leaking sewers and contaminated stormwater runoff continue to plague local streams, ponds, lakes, and the river itself, highlighting the fact that continued efforts are required.

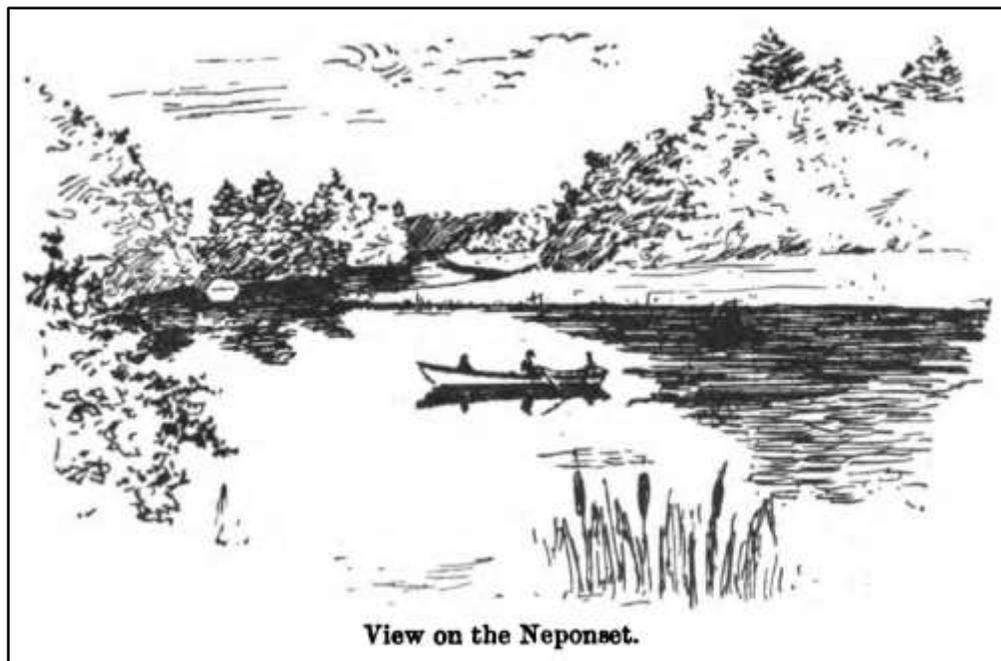


Figure 4.6 – A view of the Neponset River (circa 1897)

NepRWA has been monitoring water quality along the Neponset for more than two decades, just as the CRWA monitors the Charles. Volunteers collect water samples at 41 locations throughout the watershed between May and October (several locations freeze over in the winter) which are analyzed for indicators of water quality. In Dedham, samples are collected from Mother Brook at its origin on Washington Street. Most samples during 2016 were within safe limits for boating and often for swimming; however, heavy rainfall prior to a sample date can introduce runoff contamination causing spikes in *E. coli* levels.⁵⁷ More information on water quality of the Neponset River is included in the Environmental Challenges section (Section 4G).

Mother Brook and Other Waterways

Mother Brook, which originates from an inlet in the Charles River, is a one mile long man-made canal dug by the Town in 1639 to divert a portion of the flow of the Charles to the Neponset. The canal, believed to be the first industrial canal in the country, converted the historic East Brook, a small Neponset River tributary, into a major source of power for mills in Dedham. The industrialization of Mother Brook, including the installation of dams and the increased development along its shores and within its watershed, created a polluted and diminished

⁵⁷ www.neponset.org/projects/water-quality/

waterway. However, today Mother Brook is not only at the center of the East Dedham neighborhood, but is seen as a critical resource in that neighborhood's revitalization. The Mother Brook Community Group, leading the revitalization initiative, is supported by both the Town and DCR, which manages Mother Brook for flood control purposes.

In 2017 and 2018, water samples collected from Mother Brook near the Dedham Transfer station had *E. coli* levels significantly higher than the safe level for boating. The source of the pollution was determined to be a drainpipe designed to collect rainwater and discharge it into the brook. Dedham's Department of Public Works (DPW) has worked closely with NepRWA to improve the situation. As of August 2018, the Transfer Station no longer processes municipal or household waste, and the Town will sanitize the entire storm sewer system to eliminate any residual *E. coli* that may be breeding inside.⁵⁸ In 2012, the Town began the process of designing a more modern transfer station. The viability of the site as a transfer station is in question, due to several complicating factors, including a title search revealing that part of the site was not owned by the Town, the deteriorated state of the current building and smokestack, and the pollution problem. The Town is currently gathering information to evaluate all future options for the Transfer Station. As of June 2019, the Transfer Station has been closed permanently.⁵⁹

Many other small brooks and streams flow through portions of Dedham. Lower Brook enters Dedham from the Westwood border flowing into Wight Pond and drains north of Wigwam Pond. Rocky Meadow Brook cuts through Dedham Country and Polo Club in West Dedham. Little Wigwam Stream flows into Wigwam Pond and connects to Little Wigwam Pond. Map 6A shows Dedham's wetlands, streams, rivers and 100- and 500-year flood zones.

Ponds and Lakes

While there are many ponds and lakes that dot the landscape in Dedham, private ownership and lack of trails and parking limit widespread use. Wigwam Pond and Little Wigwam Pond are located between Providence Highway and the railroad in the southern portion of Dedham. The Town's Conservation Commission has jurisdiction over approximately sixteen acres in the Wigwam Pond area and 50 acres surrounding Little Wigwam Pond. Access to the ponds is challenging due to private ownership, natural constraints (wetlands), and lack of parking areas near public roadways. In 2009, L.L. Bean introduced an Outdoor Discovery School on Town land near Wigwam Pond to teach fly fishing and kayaking. After L.L. Bean moved its programs and support to the Charles River (Dolan Center), the Wigwam Pond location has become underutilized. Dedham continues to seek other options for public access to Wigwam Pond, as this is a high priority for residents.

In Massachusetts, any pond or lake that contains more than 10 acres in its natural state is defined as a great pond. Wigwam Pond is the only great pond in Dedham. Chapter 91 of the Massachusetts General Laws, the Public Waterfront Act, protects waterways – including great ponds - for public use. The law dates back to 1866, but the ideas it represents go back to

⁵⁸ www.neponset.org/happenings/problems-at-the-dedham-transfer-station/

⁵⁹ www.dedham-ma.gov/Home/Components/News/News/2329/16

Colonial times. Efforts to provide public access to Wigwam Pond may benefit from the requirements of the Public Waterfront Act. MassDEP administers and enforces Chapter 91 to:

- Protect and promote the public's interest in waterways;
- Protect the public health, safety and general welfare as it may be affected by any project near great ponds;
- Ensure that public rights to fish, fowl and navigate are not unreasonably restricted and that unsafe or hazardous structures are repaired or removed;
- To protect the legal rights of adjacent water property owners to approach their land from the water;
- Support public and private efforts to revitalize unproductive property along urban waterfronts, in a manner that promotes public use and enjoyment of the water.⁶⁰

Weld Pond is located east of Route 128 near Wilson Mountain. Most of the surrounding land is privately owned. The Massachusetts Audubon Society owns property to the west of the pond and the Dedham Land Trust owns land adjacent to the pond on Meadowbrook Road; however, public access to the pond is currently unavailable. Wight Pond is located near the Curran Early Childhood Education Center on High Street and most of the land around it is privately owned. Motley Pond is a widening within the Charles River near Common Street. The land surrounding the pond is owned by the Noble and Greenough School, a private educational facility. The public can access Motley Pond from one of the five launch points of the Water Trail. Several other small, unnamed ponds and streams can be found on private property in Dedham.

4C.3 Aquifer Recharge Areas

An aquifer is a groundwater supply which can yield a significant volume of water for a useful well. Aquifers of sufficient capacity to serve as a municipal water supply are scarce, and are found only in locations with certain geologic and hydrologic conditions. Most aquifers with such a volume were formed in valleys carved into bedrock millions of years ago by ancient rivers that drained the continent. Map 6B shows Dedham's area of public water supply and wellhead protection areas (Zone II).

An aquifer is a groundwater supply which can yield a significant volume of water for a useful well. The DWWD operates eleven wells in Dedham within wetland areas surrounding the Charles and Neponset Rivers. All DWWD groundwater supply areas in Dedham are protected by the Town's Aquifer Protection Overlay District By-law which currently exists for the Bridge Street Wellfield and the Fowl Meadow Aquifer. The Aquifer Protection Overlay By-law prohibits activities in or near wetlands which could result in pollutants entering the water supply.

4C.4 Flood Hazard Areas

When a water body can no longer accommodate increased discharge from heavy rains or snow melt, the excess water flows onto the adjacent land. The land adjacent to streams, lakes, or rivers that is likely to flood during a storm event is known as the floodplain. Floodplains are

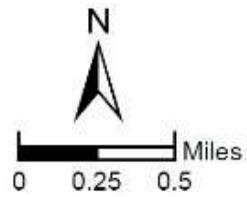
⁶⁰ www.mass.gov/guides/waterways-permitting-frequently-asked-questions

Town of Dedham Massachusetts



Map 6A Surface Water Features

-  Wetlands
-  Stream, River
-  100-Year Flood Zone
-  500-Year Flood Zone

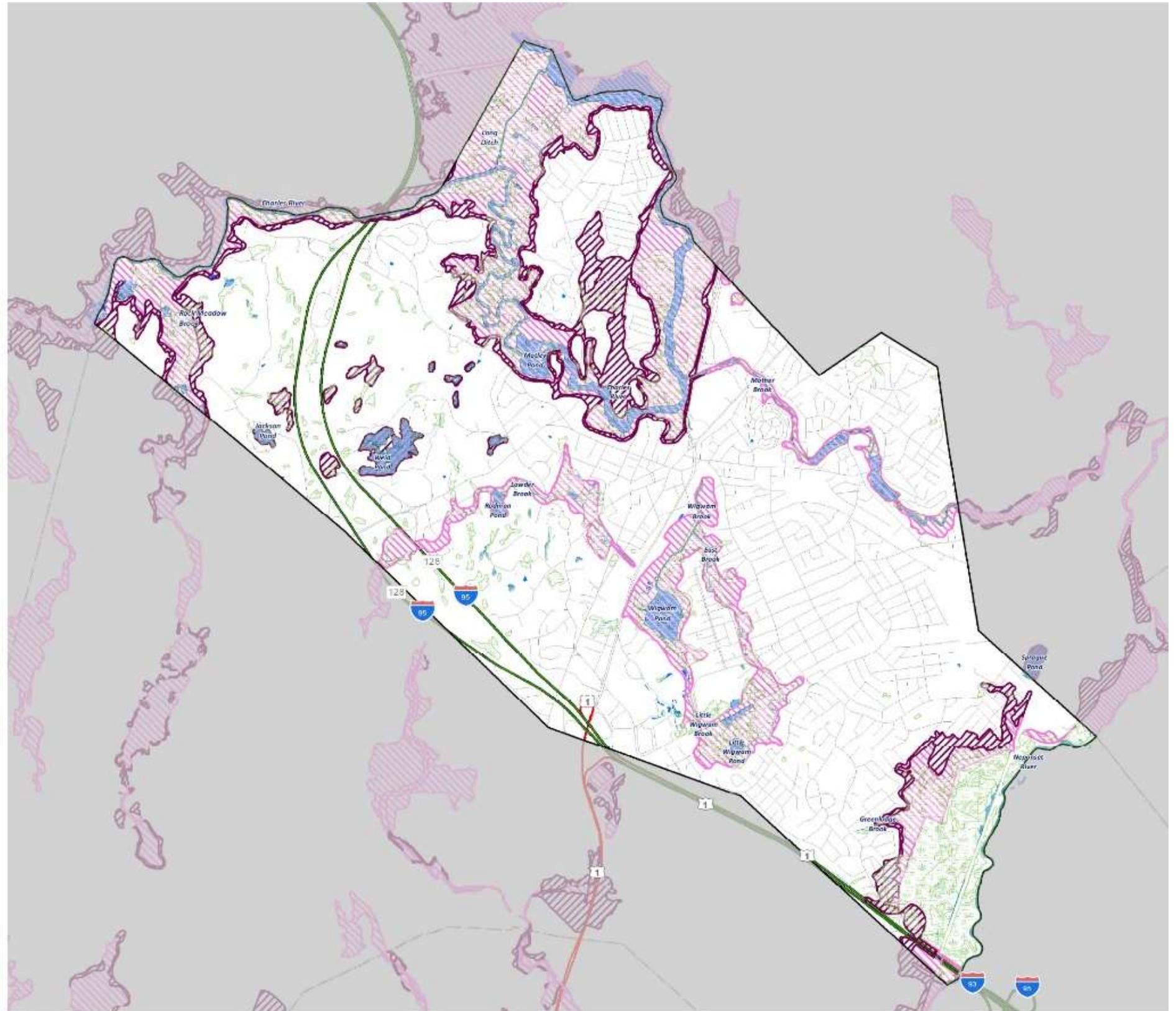


Data Sources: Town of Dedham, MassGIS

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Town of Dedham Massachusetts



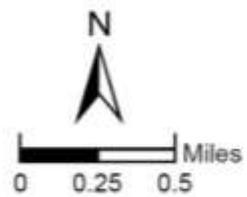
Map 6B Groundwater

Public Water Supply

- Public Water Supply
- Approved Wellhead Protection Areas (Zone II)

Aquifers

- High Yield
- Medium Yield

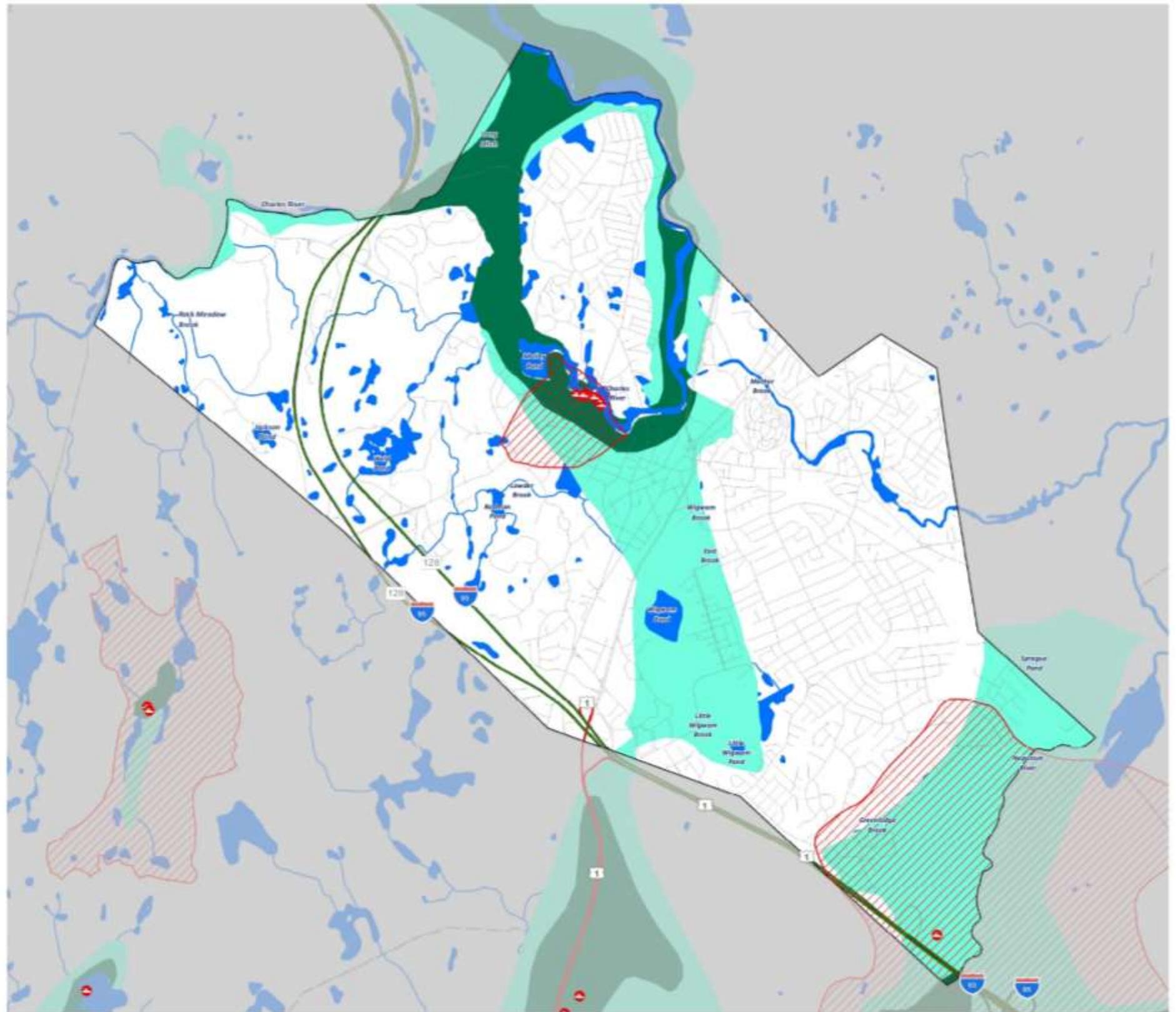


Data Sources: Town of Dedham, MassGIS

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Horsley Witten Group, Inc. March 2019



categorized according to the average frequency of flooding. The 100-year floodplain is the area of land that is likely to be flooded once every 100 years. Another interpretation is that there is a 1% probability that the land will be flooded in any given year.

Floodplains are delineated based on topography, hydrology, and development characteristics of the area. The 100-year and 500-year floodplains in Dedham were delineated in 1982 by the Federal Emergency Management Agency (FEMA) in the form of Flood Insurance Rate Maps, appended by the Town, revalidated by FEMA July 17, 2012, and updated through FEMA's Map Modernization Project effective July 14, 2017.⁶¹ Flood hazard areas present risks to humans, wildlife, and property that must be assessed and minimized. Unregulated development in a floodplain area can increase the likelihood of flooding by adding impervious surfaces and increasing the surface runoff into the stream channel. In addition, water contamination from flood-damaged sewage or septic systems and debris swept downstream from flooded properties can result in unnecessary hazards to properties downstream.

Dedham has adopted zoning regulations intended to preserve and maintain the ground water table within its floodplains, to protect the health and safety of people, to protect property, and to preserve natural conditions, resources, wildlife, and open spaces. The Flood Plain Overlay District (FPOD) regulates development in all flood hazard areas as indicated on the 100-year floodplain on the Flood Insurance Rate Maps and within the Neponset River Reservation. Filling or building in these areas is prohibited to preserve the flood-mitigating effects of these vital resources. The only permitted uses in this district are recreation, agriculture, and structures that do not impede the flow of flood waters. Additionally, all work within a FPOD requires a Special Permit issued by the Zoning Board of Appeals.

4C.5 Wetlands

Wetlands are areas of land whose soils are saturated with moisture either permanently or seasonally. They include marshes, swamps, and bogs and often lie within floodplains. Wetlands serve not just as a sponge to soak up inundations, but also as a protection for groundwater, the prevention of aquifer pollution, and as a wildlife habitat. State laws support the Conservation Commission's efforts to protect wetlands. The Massachusetts Wetlands Act established local Conservation Commissions in all 351 Massachusetts cities and towns and enacted a wide range of protections for wetlands.

The Town also has local wetlands By-laws which, in some cases, offer more protection than the State Wetlands Act. Large and small development activities which have the potential to alter any wetlands must be reviewed and approved by the Conservation Commission. According to the Massachusetts Division of Fisheries and Wildlife, all wetlands need to maintain their natural water regime, including normal fluctuations and connections with uplands and other wetlands. Water quantity and quality are ongoing issues for wetland areas. The control of invasive plant species that alter habitat and occupy space that native species would otherwise use is another aspect of managing wetlands and conservation areas.

⁶¹ docs.digital.mass.gov/dataset/massgis-data-fema-national-flood-hazard-layer

Dedham contains more than 1,200 acres of wetlands accounting for almost 18% of its total area. A large portion of Dedham's wetlands surrounds the Charles River, including the river itself, its banks, floodplain, and its extended watershed including Cutler Park, an extensive area between Common Street and Pine Street, and another large area between Bridge Street and Providence Highway. Much of this acreage is federally owned and managed by the U.S. Army Corps of Engineers. The remainder is owned by the State, the Town, and private landowners.

Another large wetland area in Dedham is Fowl Meadow, which is the largest contiguous wetland area in the Neponset River Basin and one of the most significant wetland areas in the metropolitan Boston region. Other wetland areas include the banks of Mother Brook, Rock Meadow Brook and Lowder Brook, and the areas around Dedham's many ponds, including Wigwam, Little Wigwam Pond, Weld, and Rodman Ponds. Much of land is owned by the Town, the State, and private institutions.

As authorized by the Massachusetts Wetlands Act and enforced by the Dedham Conservation Commissions and MassDEP, the major wetlands in Dedham have been mapped and are subject to protection regulations which limit encroachment and development. Any activity that will occur in or near wetlands and has the potential to impact the wetlands must be approved by the local Conservation Commission. The Conservation Commission decides whether to approve any applications based on Town and State regulations and may set certain conditions that the applicant must follow to minimize the impact on wetland function.

With some exceptions, work in these areas is not permitted if it endangers wetland functions, including but not limited to flood storage, water quality improvement, erosion control, fish and wildlife habitat, and recreation. Exceptions include those projects considered to contribute to the public good, such as agriculture; maintenance and improvement of public utilities, roads and bridges; and certain flood control projects. In addition, the Conservation Commission has the authority to permit wetland filling for a "limited project" which allows the Commission the discretion to allow certain work to proceed although the work may not meet the performance standards (*e.g.* when a landowner has no alternative access to uplands areas).

4D. Vegetation

4D.1 General Inventory

Even though Dedham is nearing its buildout capacity and much of its land has been developed with homes, businesses, and transportation ways, it still sustains a density of vegetation that gives the Town a rural character. Forests, vegetated wetlands, parks, fields, and the Town's commitment to replace shade trees along its streets all contribute to the living tapestry that blankets Dedham. Landscaped residential lots, institutional campuses, and improved design and property maintenance standards for businesses contribute to the feeling of 'Contentment' that Dedham residents felt when the Town was incorporated nearly 400 years ago, inspiring the original name given to Dedham.

4D.2 Forest Land

Dedham's woodland vegetation is typical of eastern Massachusetts. In the moderately to well-drained upland areas which support second and third growth forests, the predominant tree species are oak, maple, hickory, grey birch, beech, poplar, white pine, and hemlock. White birch, ground juniper, cedar, and spruce can also be found. Forested land in Dedham includes large areas such as the Town Forest and Wilson Mountain Reservation as well as many smaller areas scattered throughout the Town. Most of the forested land is west of Providence Highway near I-95/Route 128. In the eastern part of the Town, ribbons of wooded banks and vegetated wetlands flank the Town's waterways, including land adjacent to Mother Brook, the Neponset River and surrounding Wigwam and Little Wigwam Ponds.

The Dedham Town Forest consists of approximately 77 acres of land, mostly located between the northbound and southbound lanes of Interstate 95. Because the Town Forest is isolated by the highway and parking is only available on nearby residential streets, it is an underutilized resource. In 1973, an Eagle Scout candidate from Dedham created a fitness trail in the Town Forest with several exercise stations. The fitness trail was not maintained for many years and became overgrown until 2015, when another Eagle Scout candidate cleared and marked the trail and installed a boardwalk to improve access. The Environmental Department is working to mark more trails and increase awareness of this resource for Dedham residents.

Wilson Mountain Reservation, managed by the DCR, contains about 210 acres of forest and wetlands with linkage opportunities to adjoining open space areas. Too hilly in some parts and too wet in others to build or actively farm, Wilson Mountain today is an interlocking puzzle of habitats for a wide variety of animals and plants. The highest point in Dedham is a rocky ledge at 295 feet that rewards hikers with a fine view of the surrounding area. A canopy of white pines, oaks, and beeches shade the understory. In cooler ravines and on the northern side of the hill, eastern hemlock and yellow birch grow. Usually found in more northern climates, this population of yellow birch has found a cool, moist pocket that protects and shelters them. The lowlands are dotted with streams and pools which provide habitat for many wetland species. Red maples, skunk cabbage and marsh marigolds ring the pools and fill the wet areas.

4D.3 Public Shade Trees

Public shade trees, including street trees and trees within parks, cemeteries, and other public places have a tremendous impact on the visual character of a town as well as on its ecological health and human comfort. Shade trees help clean the air of toxins and pollutants, mitigate temperatures, reduce stormwater runoff, and provide essential food and habitat for a great variety of native and migrating species. More apparently, trees provide soft buffers to separate land uses, screen unsightly objects, break up view sheds, or provide privacy. The trees can be casual or dramatic points of interest and help create an awareness of changes in the weather and the seasons even within densely settled business centers or neighborhoods.

The Town of Dedham recognizes the importance of its public shade trees, and is working on several initiatives aimed at increasing their numbers. The Town has a two-for-one tree replacement policy and works closely with Dedham Civic Pride, a nonprofit organization

dedicated to improving the overall aesthetic of the Town, to increase the number of plantings and coordinate watering of new trees in the first years to ensure they thrive. The Town has documented the number, species, and health of trees on public streets, at the Endicott Estate, the Village Cemetery, and at Parks and Recreation properties (see Section 7A.5).

The Town has Tree City designation through Tree City USA, a recognition program of the National Arbor Day Foundation and the DCR Urban Forestry Program. The program provides public attention and national recognition for local commitment to community trees and forests. In addition to distributing promotional items, the DCR Department of Urban Forestry also gives preference to grant applications from Tree City USA communities.

There are four standards for Tree City designation:

1. The Town must have a tree board, committee, department, or staff member who is legally responsible for all care of trees on town-owned land. Joe Flanagan, Director of Dedham DPW, is the Town's Tree Warden and he works closely with professional arborists to monitor and manage tree health and community planning.
2. The Town must also have a Tree Care Ordinance that designates the tree board or department and determines policies for planning, maintaining and removing public trees.
3. The Town must have a minimum community forestry annual budget of \$2 per capita.
4. The Town must make an official proclamation for an annual Arbor Day Observance.

4D.4 Agricultural Land

Although Dedham's early history involved extensive agriculture associated with both small and large farms, today there is no agricultural land of significant size remaining. Some of the larger historic farms are now residential developments, including Oakdale, Endicott, Ashcroft, Fairbanks Park, and Greenlodge Estates. Many meandering stone walls in the Town Forest are evidence that the land was used for agriculture (see Figure 1.1).

4D.5 Wetland Vegetation

Wetland vegetation in Dedham can be found in the Town's wetland forests, swamps, bogs, and marshes, primarily along its river corridors and adjacent to its ponds. Wetlands range from areas that are permanently flooded to those that are only underwater for a relatively brief time during the growing season. Wetland vegetation includes plants that are distinct in that they are well adapted to life in saturated soil. Although some species grow only in habitats that are wet year-round, most wetland plants can tolerate a range of hydrologic conditions and may occur in uplands as well as wetlands. Invasive plant species are a growing threat to wetland vegetation and entire wetland systems throughout the country as well as Dedham. More information on wetland invasive species is referenced in the Environmental Challenges section (Section 4G).

4D.6 Endangered, Threatened, and Special Concern Species

Table 4.1 lists the plants recorded in Dedham that are on the list of Endangered, Threatened, and Special Concern species maintained by the Massachusetts Natural Heritage and

Endangered Species Program (NHESP).^{62,63} NHESP enlists the help of the Native Plant Trust Plant Conservation Volunteer program to conduct rare plant surveys throughout New England. Survey work is limited to times when the plant has leaves or is flowering, and the work is done by volunteers, making it impossible to monitor all rare plant populations on a regular basis. A listing of all rare plant species in Norfolk County is included in Appendix 6.

Table 4.1 – Endangered, Threatened, and Special Concern Vascular Plants

Species Name	Common Name	State Status	Last Observed in Dedham
<i>Asclepias purpurascens</i>	Purple milkweed	Endangered	Historic
<i>Asclepias verticillata</i>	Linear-leaved milkweed	Threatened	1884
<i>Betula nigra</i>	River birch	Watch	
<i>Eleocharis ovata</i>	Ovate spikesedge	Endangered	1878
<i>Gentiana andrewsii</i>	Andrews’ bottle gentian	Endangered	1911
<i>Houstonia longifolia</i>	Long-leaved bluet	Endangered	1897
<i>Nabalus serpentarius</i>	Lion's-foot	Endangered	1901
<i>Ophioglossum pusillum</i>	Adder's-tongue fern	Threatened	1884
<i>Potamogeton vaseyi</i>	Vasey’s pondweed	Endangered	1881
<i>Rhododendron maximum</i>	Great laurel	Threatened	1900
<i>Scirpus longyi</i>	Long's bulrush	Threatened	2002
<i>Senna hebecarpa</i>	Wild senna	Endangered	1885
<i>Viola brittoniana</i>	Coast violet	Threatened	2018*
<i>Viola pectinata</i>	Pectinate-leaved violet	Threatened	2018*

Source: Massachusetts Division of Fisheries and Wildlife, Natural Heritage and Endangered Species Program

*Personal observation by Dedham resident S. Radner

Rare plant populations may still be present in Dedham, even if they haven’t been observed in more than a century. One species of violet was found in Dedham for the first time in 2016 (*Viola pectinata*) and the Dedham population is one of only a handful throughout New England (Figure 4.7). There are no known populations of federally protected or globally rare plants in Dedham, although there is some thought among local botanists that *Viola pectinata* may be a globally rare species.



Figure 4.7 – *Viola pectinata*

The river birch (*Betula nigra*) which is seen along the banks of the Charles River in Dedham has recently been added to the State watch list, a list of plants of known or suspected conservation concern that NHESP is interested in tracking.

⁶² www.mass.gov/service-details/list-of-endangered-threatened-and-special-concern-species

⁶³ Only rare species records that are less than 25 years old are used in Natural Heritage project review associated with the Massachusetts Wetlands Protection Act Regulations (310 CMR 10.00) and the Massachusetts Endangered Species Act Regulations (321 CMR 10.00).

4D.7 Sites That Have Unique Natural Resources

Dedham is fortunate to have many unique natural resources. There are several vernal pools (as discussed in Section 4E.2) and both Cutler Park and Fowl Meadow are listed with NHESP as having important wildlife habitats (discussed in Section 4F.4). Two important natural areas are the wetlands around Long Ditch and Mother Brook. These waterways are unique because they are both man-made and the land surrounding them now supports diverse wildlife and they offer unique recreation opportunities in Dedham.

4D.8 Vegetation Mapping

In 2010, the Massachusetts NHESP and the Nature Conservancy published BioMap2 which incorporates NHESP rare species observations, spatial habitat data, and assessments of ecosystems and landscapes into a comprehensive report to protect the State's biodiversity. Reports can be downloaded for each city and town in Massachusetts, and Dedham's report demonstrates the rich natural resources and biodiversity that have been described in this report.⁶⁴ BioMap2 uses regulatory maps generated under the Massachusetts Endangered Species ACT (MESA) which are updated every 4 years, most recently in 2017. At that time, an area of approximately 25 acres was slated to be removed from the MESA map because of recent development. As a result of volunteer plant survey efforts coordinated by the Native Plant Trust, that area was evaluated and was not removed from the 2017 MESA map. As development continues to chip away at Dedham's natural areas, it is important that these maps be monitored to ensure that MESA protection of these areas is maintained.

4E. Fisheries and Wildlife

4E.1 Inventory

Mammals and Birds

Dedham is home to many species of mammals that are common throughout New England including deer, coyote, fox, beaver, gray squirrel, opossum, raccoon, skunk, bat, chipmunk, and rabbit. A list of mammals found in Norfolk County is included in Appendix 6. Also listed in Appendix 6 are birds that have been observed in Norfolk County which are on the State's Endangered, Threatened, or Special Concern list or that may be protected under either the Migratory Bird Treaty Act of 1918⁶⁵ or the Bald and Golden Eagle Protection Act of 1940.⁶⁶ According to a continually updated list maintained by the State Ornithologist, 448 species of birds are present in Massachusetts either seasonally or year-round. Forty of those species (approximately 9%) are considered permanent residents.⁶⁷

⁶⁴ maps.massgis.state.ma.us/dfg/biomap/pdf/town_core/Dedham.pdf

⁶⁵ www.fws.gov/birds/policies-and-regulations/laws-legislations/migratory-bird-treaty-act.php

⁶⁶ www.fws.gov/birds/policies-and-regulations/laws-legislations/bald-and-golden-eagle-protection-act.php

⁶⁷ Bird List for the Commonwealth of Massachusetts. Bradford G. Blodget, State Ornithologist

As birds are more mobile than other animals, it is difficult to identify species that are common to one town. It is more common to group bird species according to types of habitat and broader geographic areas. Although much of the Town is developed, Dedham’s extensive wetlands and riparian areas provide habitat for waterfowl and marsh dwellers including herons, ducks, and geese. Songbirds and wild turkeys are common in forested areas and in edge habitats (open spaces that are bordered by woodlands). Hawks, eagles, falcons, and osprey often build nests along power line corridors and riverways and hunt along rivers and in lakes. Dedham has diverse habitats including several birding hotspots where almost 150 bird species have been observed.⁶⁸



Figure 4.8 – Great Egret at Wigwam Pond

Several bird species currently listed as Threatened or Special Concern and one listed as Endangered are listed in Table 4.2. Dedham is fortunate to have several residents who are avid birdwatchers, and some of their recent observations are included in this Table.

Table 4.2 – Rare Birds Observed in Dedham (Recent and Historic)

Species Name	Common Name	State Status	Year Last Observed in Dedham
<i>Circus cyaneus</i>	Northern Harrier	Threatened	1867, 2016
<i>Botaurus lentiginosus</i>	American Bittern	Endangered	2017
<i>Haliaeetus leucocephalus</i>	Bald Eagle	Threatened	2017
<i>Falco peregrinus</i>	Peregrine Falcon	Threatened	2017
<i>Parula americana</i>	Northern Parula	Threatened	2017
<i>Dendroica striata</i>	Blackpoll Warbler	SC	2016

Observations documented in eBird (Cornell Lab of Ornithology)

Fish, Shellfish, Amphibians, Reptiles, and Insects

As water quality in Dedham’s rivers and ponds has improved over the years, so has the habitat for fish and shellfish. The abundance of water resources in Dedham makes the prevalence of freshwater fish likely. Many amphibian and reptile species have been observed in Dedham, in part due to increased efforts to survey and certify vernal pools. Although no rare fish, shellfish, amphibians, or reptiles have been reported in Dedham in recent years, observations in nearby

⁶⁸ eBird by Cornell Lab of Ornithology: <https://ebird.org/home>

towns suggest that Dedham may support some populations. Dedham may have populations of the Eastern Pondmussel (*Ligumia nasuta*), a freshwater shellfish of Special Concern (based on tentative shell identification). Appendix 6 contains a list of fish, shellfish, amphibians, reptiles, and insects in Norfolk County that are on the State’s Endangered, Threatened, or Special Concern species list.

Insects are the most abundant taxonomic group on the planet, with approximately 90,000 species in North America, about 1,000,000 species worldwide, and tens of thousands of species in the Northeastern United States.⁶⁹ It is important to monitor insect biodiversity because changes in insect populations often reflect other environmental challenges. One example is the decline in the of monarch butterfly population due to loss of milkweed plants (the only host plant for monarch caterpillars), habitat loss, and climate change.⁷⁰ Conservation biologists are concerned about threats to monarchs and other pollinators, including bees and wasps, that are responsible for successful propagation of all flowering plants, including food crops. Decline in pollinator populations has been attributed to many factors, including pests, pathogens, poor nutrition due to habitat loss, and pesticides.⁷¹

Another important reason to monitor insect populations is to help with early detection of forest pests (*e.g.* gypsy moth, Asian longhorned beetle, and emerald ash borer). The environmental damage caused by forest pests is devastating and the economic impact is alarming. The damage caused by forest pests is costing billions of dollars annually in some areas. Emerald ash borer (found in Dedham in 2017) has become the most expensive forest pest since it was first detected in the United States in 2002, with cost estimates of tens of billions of dollars,⁷² much of which is passed onto taxpayers. Table 4.3 lists two insects and one reptile that have been observed in Dedham in the relatively recent and far distant past.

Table 4.3 – Rare Insects and Reptiles Observed in Dedham (Historic)

Species Name	Common Name	State Status	Year Last Observed in Dedham
<i>Cicindela duodecimguttata</i>	Twelve-spotted Tiger beetle	SC	1908
<i>Neurocordulia absoleta</i>	Umber Shadowdragon	SC	2007
<i>Emydoidea blandingii</i>	Blanding's Turtle	Threatened	1993

Source: Massachusetts Division of Fisheries and Wildlife, Natural Heritage and Endangered Species Program

4E.2 Vernal Pools

A vernal pool is a specialized habitat characterized by a small depression that temporarily collects seasonal precipitation. The vernal pool habitat is essential to a variety of wildlife species including some amphibians that breed exclusively in vernal pools and invertebrates, such as fairy shrimp, which spend their entire life cycles confined to vernal pool habitat.

⁶⁹ Tom Murray, *Insects of New England and New York* (Duluth MN: Kollath & Stensaas Publishing, 2012), 1-6.

⁷⁰ www.nps.gov/articles/monarch-butterfly.htm

⁷¹ www.epa.gov/pollinator-protection/pollinator-health-concerns

⁷² www.nrs.fs.fed.us/disturbance/invasive_species/eab/effects_impacts/cost_of_infestation/

Seasonal periods of dryness results in a lack of fish, allowing safe larval development of obligate vernal pool species. Many additional wildlife species utilize vernal pools for breeding, feeding, and other important functions. Certified vernal pools and their upland habitats may be protected if they fall under the jurisdiction of the Massachusetts Wetlands Protection Act Regulations (310 CMR 10.00). Certified vernal pools are also afforded some protection under the State Water Quality Certification regulations (401 Program), the State Title 5 regulations, and the Forest Cutting Practices Act regulations.



Figure 4.9 – Certified vernal pool at Whitcomb Woods

Dedham’s strict wetlands By-Laws presume that any potential vernal pool *is* a vernal pool unless proven otherwise. The Town maintains a list of potential vernal pool locations that the Conservation Commission can reference when reviewing development proposals. Many potential vernal pools have not been identified or certified because they are difficult to access or they are on private property. Two vernal pool in Dedham are certified, one at Whitcomb Woods (Figure 4.9) and one at Wilson Mountain, and data have been collected for certification of other vernal pools in the Dedham Town Forest, at Wilson Mountain, and on Town Conservation land at 235 Stoney Lea Road.

Based on a study from 1991 that used aerial photography to look at surface topography, more than 70 locations in Dedham were identified as potential vernal pools (PVP). Some of those PVPs have been eliminated by development, but many have been untouched and should be evaluated prior to future development.⁷³ In addition to the PVPs identified in the 1991 report, a few vernal pools have been identified in different locations in Dedham. Certified and potential vernal pools are being added to a datalayer in the Town GIS system.

Figure 4.10 shows three obligate vernal pool species, all observed in Dedham – spotted salamander (*Ambystoma maculatum*), fairy shrimp (*Branchinecta lynchi*) and wood frog (*Lithobates sylvaticus*). Observation of any of these species or evidence of breeding activity (photos of egg masses or audio recording of wood frog calls) can be sufficient for certification.



Figure 4.10 – Vernal Pool obligate species (spotted salamander, fairy shrimp, wood frog)

⁷³ www.mass.gov/eea/docs/dfg/nhosp/vernal-pools/ma-aerial-survey-pvp.pdf

4E.3 Wildlife Corridors

Wildlife corridors are areas of contiguous tracts of land that provide habitat suitable to accommodate wildlife migration patterns. Major wildlife corridors in Dedham follow the Charles and Neponset Rivers. In addition, stream channels, wetland systems and lake shores throughout Town also provide smaller pockets of wildlife habitat. The Charles River wetlands are breeding grounds for many duck species, blue heron, and other birds. Bald eagles have been observed frequently in recent years, and are nesting in nearby towns near the Charles and Neponset Rivers. For a town as developed as Dedham, the large tracts of forested land east of Route 128 are a significant asset. However, this area's utility as a wildlife corridor is diminished by Route 128, which separates it from adjacent forests.

4E.4 Endangered, Threatened, and Special Concern Animal Species

According to information provided by the NHESP, there are two threatened and two special concern animal species which have been recorded in Dedham.⁷⁴ None of these species is listed on the Federal Endangered Species list; instead focus is on the protection of habitat for state listed species. As with plants, rare animal species are difficult to detect even though they are present, and NHESP does not conduct comprehensive surveys in all towns on a regular basis.

According to NHESP, one of the most important areas for rare species in Dedham is Fowl Meadow in the Neponset River Reservation. This area is listed as both a *Priority Site of Rare Species Habitat* and an *Estimated Habitat of Rare Wildlife* by NHESP. It is also part of an Area of Critical Environmental Concern (ACEC). Priority sites are identified for the rarity of species occurring within the site, the number of co-occurring rare species populations, and the size and health of these populations.

Only a small portion of Fowl Meadow is within the Town limits, but that area is a wet meadow with impressive flora and fauna (Figure 4.10).⁷⁵ The waterways which support these habitats flow through Dedham and adjacent communities. Therefore, activities along these water bodies can impact the wildlife downstream. A portion of the Charles River Watershed in Cutler Park in northwest Dedham is also identified as priority habitat for rare species. Areas of Estimated Habitat differ from Priority Habitat areas in that they are used to implement the Massachusetts Wetlands Protection Act and are not sufficient for use with other types of regulatory review such as the filing of an Environmental Notification form under the Massachusetts Environmental Policy Act.

Despite the amount of commercial and residential development in Dedham, approximately one third of the Town remains classified as Open Space with two areas along the rivers being marked as NHESP priority habitats. The Dedham Land Trust sponsored two BioBlitz events in 2011 and 2012, during which dozens of local naturalists came to Dedham to survey the Town's open spaces to identify as many species of flora and fauna as possible in a 24-hour period. In

⁷⁴ Mass. Division of Fisheries & Wildlife, Natural Heritage and Endangered Species Program

⁷⁵ Photo by Tom Palmer from February 27, 2019 blog "Fowl Meadow in Readville with Martha", Neponset River Watershed Association (www.neponset.org/category/happenings/neprwa-blog/)

2011, more than 500 species were observed and more than 700 species were observed in 2012.⁷⁶ Current observations are added to the list from the BioBlitz events and there are more than 1,000 observations now, demonstrating the biodiversity in Dedham's natural places.⁷⁷



Figure 4.11 – Wetlands flora of Fowl Meadow

⁷⁶ dedhamnaturalwonders.org/bioblitz/

⁷⁷ bit.ly/2kKMz91

4F. Scenic Resources and Unique Environments

4F.1 Scenic Landscapes

The Massachusetts Landscape Inventory

In 1982, the Department of Environmental Management published the Massachusetts Landscape Inventory - A Survey of the Commonwealth's Scenic Areas. The purpose of this study was to devise a system for classifying landscapes that were worthy of protection and to apply it throughout the State. The system identified areas as being distinctive, noteworthy or common. A portion of Dedham was identified as being a noteworthy scenic landscape. The area is part of the Upper Charles River Unit (see Map 5), which was described in the 1982 report as follows:

This unit follows the course of the Charles River from West Street in Dedham to Noon Hill in Medfield. It includes the Lake Waban area in Wellesley, Pegan Hill in Dover and some extensive wetlands in Medfield. These reaches of the Charles are relatively unpolluted and quiet, making it an excellent canoeing river close to the Boston Metropolitan area. Pegan Hill in Dover offers some fine vistas to the north and west. This area is built up, though in many cases with larger holdings.

Scenic Roads

Stone walls and tree-lined streets are part of what is commonly considered community character. The Scenic Roads Act is one tool which the Town can use to preserve community character. The Act (M.G.L. Ch. 40, Section 15C) affords a certain level of protection to local roads which have officially been designated as scenic roads. The purpose of the statute is to provide an opportunity for the Planning Board to review the cutting or removal of trees or the alteration of stone walls within the road right-of-way of a designated scenic road.

Currently, there are no designated scenic roads in Dedham; however, Dedham's 1996 and 2009 Master Plans both made recommendations that the Town consider designating the following network of major streets as scenic roads. Some sections of these streets would not be eligible for designation as scenic roads because they are numbered state routes; these sections are described for each of the candidate streets:

- Needham Street/Pine Street/Ames Street
- Common Street/West Street (West Street - State Route 135 not eligible)
- Haven Street/Lowder Street
- Highland Street
- High Street/Mill Lane (from Dedham Common through Dedham Square to Mother Brook)
- Dedham Boulevard (not officially eligible because it is owned by the DCR)
- Washington Street/Court Street
- Walnut Street
- Oakdale Avenue/Cedar Street
- East Street
- Sprague Street

4F.2 Major Characteristics or Unique Geological Features

In West Dedham near Routes 128 and 109, there is an area of granite with a distinctive pink color. During the late 19th century, this pink granite was removed from three small quarries which are no longer active. The stone from these quarries was used for several Dedham buildings including St. Paul's Episcopal Church, Memorial Hall, St. Mary's Church, the Library (main branch), and the Bullard Residence. It was also used in Trinity Church in Boston.⁷⁸ Wilson Mountain Reservation boasts the highest point in Dedham and has the greatest topographic relief. Because of the rocky terrain, this area of Dedham was not permanently settled, although some areas were historically cleared for farming. Wilson Mountain offers panoramic views of Boston and surrounding areas and is the largest preserved open space within Dedham.

4F.3 Cultural, Archaeological and Historic Areas

Dedham has a rich history and there are many cultural and historic areas which have been preserved. The Town has three designated local historic districts, five sites that are in the National Register of Historic Places, and several other properties of historic significance.

Local Historic Districts

There are three local historic districts in Dedham which were designated in 1975 according to Massachusetts General Laws, Chapter 40C. Figure 4.12 shows the three historic districts, which are described below.

- The Connecticut Corner Historic District is located along High Street, from Lowder Street to the far edge of Dedham Common.
- The Franklin Square-Court Street Historic District includes parts of High and Court Streets, Old River Place, Village Avenue, Church Street, School Street, Norfolk Street, and Franklin Square, so designated in 1975. In 2006, the Town approved to expand the Franklin Square-Court Street Historic District to include the Old Village Cemetery.⁷⁹
- In 2008, Town Meeting unanimously voted to create the Federal Hill Historic District. This District includes nineteen properties ranging from the late seventeenth century (ca. 1690) to a reproduction Cape built in 1986.⁸⁰

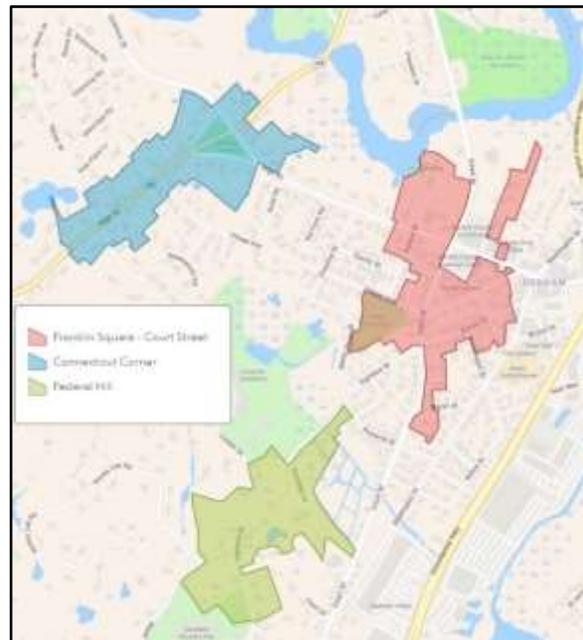


Figure 4.12 – Historic Districts in Dedham

⁷⁸ Dedham, *OSRP*, 1998.

⁷⁹ 2009 Master Plan, p. 76.

⁸⁰ 2009 Master Plan, p. 77.

National Register of Historic Places

Several of Dedham's local historic districts have some overlap with the larger Dedham Village Historic District which received designation in the National Register of Historic Places in 2006. This district follows High Street from Haven Street to Bridge Street and continues southeast along High Street toward Washington Street and south along Court Street. Several other sites in Dedham are also listed in the National Register of Historic Places:

- *Ames Schoolhouse*: This Colonial Revival structure at 450 Washington Street was built in 1897. It was renovated in 1937 by the Works Progress Administration. In 2014, the Town repurchased the Ames Schoolhouse to be used for the new Town Hall and Senior Center.
- *Endicott Estate*: The Endicott Estate was built in 1904 by Henry Endicott, founder of the Endicott Johnson Shoe Company. Henry's daughter Katherine bequeathed the Estate to the Town after her death in 1967. The Endicott Estate is owned by the Town and is used for functions and informal recreation.
- *Fairbanks House*: This house is located at the corner of East Street and Eastern Avenue. It is the oldest house in Dedham (circa 1636) and has been recognized by the Department of the Interior as the oldest wooden frame house in the United States. The property is owned by The Fairbanks Family Association and offers tours to the public.
- *Norfolk County Courthouse*: The Courthouse, which is located near the center of Dedham within the District Court complex, was built in 1827 and was the location of the historic Sacco-Vanzetti Trial in 1921.
- *Fairview Cemetery*: Although most of the Fairview Cemetery is in the Hyde Park neighborhood of Boston, approximately 3 acres of the cemetery lies within Dedham.

Other Historic Properties in Dedham

- *Dedham Common*: The Common is located at Bridge, High, and Common Streets. Also called the Great Common or Training Ground, this space was created in 1644 and was used as a militia training ground.⁸¹
- *Little Common*: Located in front of the First Parish Church at the intersection of High and Court Streets, this space near Dedham Square is the last remaining open parcel of land from the original 1638 landholdings of the Church.
- *Mother Brook*: In Fall 2018, the Town took the first step toward National Historic Designation for Mother Brook and the surrounding neighborhoods. A consultant is conducting a survey of cultural and architectural resources along the Mother Brook Corridor in East Dedham and is working with the Massachusetts Historical Council to identify landmarks and properties for nomination to the National Historic Register.
- *Old Village Cemetery*: Established in 1678, the Old Village Cemetery on Village Avenue is the oldest cemetery in Dedham. In 2005, the Town completed a Preservation Plan to evaluate the cemetery's current condition and determine restoration needs.⁸² The Old Village Cemetery is part of the Dedham Village Historic District.

⁸¹ Town of Dedham, *Master Plan*, 2009.

⁸² *Ibid.*

- *Brookdale Cemetery*: This forty-seven-acre cemetery, established in 1878, was designed in a style typical of the rural landscape movement. The cemetery includes Victorian-era monuments as well as more contemporary stones. The Town has also completed a master plan for the Brookdale Cemetery, which includes an assessment of the condition of the grounds and facilities and describes improvements that will be needed over the next several years.⁸³
- *Dedham Community House (DCH)*: Owned by the Dedham Community Association, DCH is located on High Street and serves as a community center. The building was formerly the estate of Judge Samuel Haven. The building can be rented out for functions, and DCH offers many recreational programs, hosts community events, and operates a preschool.
- The *Powder House*: Located on Ames Street near the Charles River, this historic structure was built by Captain Fuller in 1766 as a powder magazine for the Town. The structure, owned by the Town, is located on less than one acre of land, which is owned by the Dedham Historical Society. After years of neglect, the Powder House received some cleaning and maintenance in 2009 by Girl Scouts working with the Dedham Historical Society and the Town. The Dedham Historical Society maintains the property, which has importance as a scenic, historic, and natural resource.

4F.4 Unique Environments

The State's Secretary of Environmental Affairs may designate Areas of Critical Environmental Concern (ACEC) for natural areas of regional or statewide significance. The designation requires that new developments within the ACEC be reviewed under the Massachusetts Environmental Policy Act (MEPA), an interdisciplinary program that examines environmental impacts of major developments. No proposed uses, including development, which might environmentally degrade the area are permitted in an ACEC.

Approximately 665 acres of the Fowl Meadow and Ponkapoag Bog ACEC are in Dedham. The entire ACEC encompasses approximately 8,350 acres and includes land in Boston, Dedham, Canton, Milton, Norwood, Randolph, Sharon, and Westwood. Approximately 2,330 acres (28%) of the ACEC are owned by the State and managed by DCR as part of the Blue Hills Reservation. Almost 40% of the ACEC within Dedham is protected open space; the State owns about 206 acres (31%) and the Town owns almost 69 acres (10%). The remaining land in Dedham within the ACEC, approximately 390 acres (59%), is developed with residential and commercial property in the Greenlodge/Manor neighborhood, extending to Greenlodge and Sprague Streets. The northern Fowl Meadow area and Ponkapoag Bog have been designated a National Environmental Study Area by the National Park Service.⁸⁴

Fowl Meadow is the largest contiguous wetland area in the Neponset River basin and is one of the most significant wetland areas in the metropolitan Boston region. The Fowl Meadow wetlands and floodplain protect lives and property from flooding. Extensive flooding has occurred several times, most notably in 1936, 1955, 1968, 1982, 1987, and 1994. The aquifer

⁸³ *Ibid.*

⁸⁴ Massachusetts Department of Environmental Management, ACEC Program.

underlying Fowl Meadow provides drinking water for Dedham, Westwood, and Canton. The northern portion of Fowl Meadow is a priority habitat for at least five state-listed endangered or threatened species, and Ponkapoag Bog is home to eight state-listed species as well as four other animal species and three plant species which are on the State's watch list.⁸⁵

There are several sites of archaeological and historic significance in Fowl Meadow. According to the Massachusetts Historical Commission, there has been documented human habitation along the Neponset River, Fowl Meadow, and in the Blue Hills since the Paleo-Indian period 10,000 years ago. Sixteen properties in the ACEC are listed on the National Register of Historic Places and there are numerous historic structures dating from the early 1700s to the early 1900s.

4G. Environmental Challenges

4G.1 Hazardous Waste Sites

MassDEP classifies oil or hazardous material disposal sites (or Chapter 21E sites) using a tier system. Tier 1 sites are the highest priority. Until recently, Tier 1 was split into three categories; from Tier 1A being assigned to those sites which posed the most serious environmental risk to Tier 1C which posed a lesser risk. On June 5, 2014 revisions to the Massachusetts Contingency Plan (MCP) were promulgated. In accordance with the amended MCP all formerly classified Tier 1A, Tier 1B, and Tier 1C sites were reclassified as Tier 1. Tier 1 criteria include:

- Evidence of groundwater contamination with oil and/or hazardous material at concentrations equal to or exceeding the applicable RCGW-1 Reportable Concentration set forth in 310 CMR 40.0360, and such groundwater is located within an Interim Wellhead Protection Area, Zone II, or within 500 feet of a Private Water Supply Well;
- An imminent hazard is present;
- One or more remedial actions are required as part of an Immediate Response Action pursuant to 310 CMR 40.0414(2); or
- One or more response actions are required as part of an Immediate Response Action to eliminate or mitigate a Critical Exposure Pathway pursuant to 310 CMR 40.0414(3).

Gasoline filling stations and other service or disposal sites which may pose environmental problems are primarily considered to be non-priority sites by MassDEP, or Tier 2 sites. According to the 2014 MCP revisions, Tier 2 now includes any disposal site that is not Tier ID pursuant to 310 CMR 40.0502 or 40.0520(5) and does not meet the Tier 1 criteria described in 310 CMR 40.0520(2). This tier is the lowest priority with MassDEP. While there is reason to be concerned, the sites in this classification are generally disposal sites which have the least impact on the environment of all classified sites. There is relatively little oversight by MassDEP in these cases, and the property owner is responsible for cleanup and monitoring of environmental hazards.

⁸⁵ MAPC, Municipal Land Use Regulation in the Fowl Meadow and Ponkapoag Bog ACEC, 1997.

According to a review of the MassGIS Data - MassDEP Tier Classified Oil and/or Hazardous Material Sites (MGL c. 21E) datalayer, there are no longer any MassDEP Tier Classified Oil and/or Hazardous Material Sites reported or Tier Classified under M.G.L. Chapter 21E and the MCP. The abandoned rail line in East Dedham, formerly the property of the MBTA, went through an environmental cleanup in Dedham prior to ownership being transferred to the Town. The process capped the contaminated areas to prepare the corridor for recreational use in the future.

4G.2 Landfills

Dedham has no active landfills. The eight-acre former municipal landfill off Washington Street, to the rear of the Dedham Mall, was closed in 1976 without being capped or lined. There have been no known environmental problems associated with this site and there are no MassDEP records indicating that the landfill poses a threat to public health or safety. The Town had considered capping this landfill and installing solar panels on the site. However, the Dedham Sustainability Advisory Committee determined that tearing out the forestland that has grown on top of the landfill would counteract any advantages to generating solar power there.

4G.3 Erosion

Environmental quality is notably diminished through erosion and permanent soil loss which reduces the land's ability to restore its vegetative cover. Erosion may present a problem in construction areas and on properties located along steep riverbanks. The Conservation Commission regulates construction projects involving more than 500 square feet to ensure that erosion and sedimentation controls are provided. Erosion along the banks of the Town's water bodies is an ongoing and serious problem contributing to algae blooms and degradation of the integrity of the banks.

4G.4 Chronic Flooding

As the result of severe flooding events recorded over the past century, extensive flood control improvements have been implemented on both the Charles and Neponset Rivers. These improvements include the use of wetlands restrictions and the Army Corps of Engineers Natural Valley Storage Program. The major areas affected by floods in the past were Bridge Street, Maynard Road, the rear of Dedham Plaza between Providence Highway and Route 1A, and Robert and Booth Roads. In addition, the Manor neighborhood, the Charles River at Claybank Road, and the area near Ursuline Academy in West Dedham have also experienced flooding problems in the past. More recently, the University Avenue area and Wigwam Brook have had significant flooding.⁸⁶ In some cases, beaver dams contribute to flooding. The Environmental Department has a small budget to help manage the beaver population when a threat to public health or safety exists.

In 2018, the Town began to assess the potential impacts of climate change after being selected to participate in the State's Municipal Vulnerability Preparedness (MVP) Program. Based on analysis of historic trends and climate predictions, flooding will probably be a significant

⁸⁶ Dedham, *OSRP*, 1998.

vulnerability in Dedham's future. The Town's preliminary MVP report includes the following assessment of flood risk in Dedham:

"Dedham has seen an increase in annual rainfall over the past several decades and more is falling at once, meaning storm events are heavier. These heavy rain events may overwhelm the existing stormwater system and overtop Dedham's riverbanks, leading to flash flooding. They may also lead to dam failure, causing significant flooding downstream. According to FEMA record, from 1996-2016, Norfolk County, in which Dedham is located, has experienced approximately 38 flooding events. Dedham has seen a significant increase in average number of flood events over the past couple decades, averaging two events per year from 1996-2005 to 2.7 events per year from 2006-2016."⁸⁷

4G.5 Sedimentation

Sedimentation alters the physical features of a water body through modifications to the basin profile which affect water depth, surface area, circulation patterns, and flow rates. These physical challenges can have a significant effect on water quality due to the alteration of the natural self-purification process. Sedimentation can cause water quality impacts from an increase in suspended matter, high turbidity, nutrient enrichment, water temperature fluctuations and reduced concentrations of dissolved oxygen.

Sedimentation sometimes occurs as a result of construction activities. The Conservation Commission monitors construction activities which typically require silt fences, compost filter tubes, and/or straw wattles for sedimentation and erosion control during construction. The Conservation Commission and the MWRA have been working cooperatively to ensure that sediment run-off into the Charles River is reduced. Wigwam Pond, which is partially surrounded by commercial development with large parking lots, has suffered from the impacts of sediment run-off. The accumulation of sediment in Wigwam Pond has raised the water temperature and increased nutrients, which contribute to the likelihood of algae blooms.

4G.6 New Development

Most new development has some impact on the environment although many of these impacts can be minimized by strict enforcement of federal, state, and local environmental regulations. Impacts occur during construction as vegetation is altered and topsoils are disrupted allowing wind, rainfall, and snowmelt to increase erosion and sedimentation. Long-term effects of development include increased impervious areas which contribute to flooding, reduced groundwater recharge, and increased stormwater runoff. Other environmental effects of development are pollution potential from industrial processes and loss of open space, tree canopy, and wetlands. New development impacts Dedham in a few significant ways:

- **Habitat loss:** Dedham is close to buildout capacity. As demand for housing increases, large, private parcels are at risk for subdivision and development. Each project reduces wildlife habitat, resulting in increased interactions between humans and wildlife, disconnected wildlife corridors, and species over-population (e.g. white-tailed deer).

⁸⁷ Town of Dedham Municipal Vulnerability Preparedness Program preliminary report, 2018.

- **Encroachment:** Many of the parcels in Dedham that remain vacant are relatively small and close to conservation land. Developers who need to run profitable businesses are building larger homes on smaller parcels and despite regulations detailed by the Building and Conservation Departments, new construction tends to have a greater impact on adjacent open space areas than in the past. Moreover, homeowners who feel limited by relatively small yards can encroach on adjacent open space.
- **Access to natural resources:** Dedham residents are often surprised when they learn that nearly a third of Dedham’s land is considered open space because many of the natural areas are surrounded by development, with fences, parking lots, and roadways that prevent access. Wigwam Pond is a great pond and should be protected for public use by the Public Waterfront Act (Section 4C.2), but its shoreline has been reduced to a narrow strip of land that is densely vegetated and difficult to access.

4G.7 Ground and Surface Water Pollution

Water pollution can generally be described in terms of nonpoint source pollution and point source pollution. Point source pollution refers to pollution that is attributable to a single identifiable, localized source such as a discharge pipe. Nonpoint source pollution comes from many diffuse sources and is caused by rainfall or snowmelt moving over and through the ground. As the runoff moves, it accumulates natural and manmade pollutants that are eventually deposited into wetlands, lakes, rivers, and coastal waters, or find their way into underground water sources. Pollutants can include sediment from construction or other unprotected sites; fertilizers, oils, and other toxic chemicals; and bacteria and nutrients from pet and livestock waste or failed septic systems.

Nonpoint source pollution is a major cause of water quality problems in the State and nationwide. The most effective means of controlling nonpoint source pollution is through thoughtful land management and includes tools such as Low Impact Development and Smart Growth strategies and bylaws, protective zoning, and best management practices such as for stormwater management, construction, septic operations and road maintenance.

Although some pollution still makes its way into the Charles and Neponset Rivers, the water quality in both rivers has improved over the years as described in section 4C.2. In 2015, water samples from Mother Brook showed elevated levels of *E. coli* bacteria, as has been the case for many years. The Town, in partnership with NepRWA, received a grant from MassDEP and the US EPA to clean up the polluted stormwater entering Mother Brook. Since early spring 2017, the DPW has installed a series of bioretention areas on Colburn Street, Sawmill Lane, and Avery Street. These bioretention structures, also known as rain gardens, include bioretention cells and a subsurface infiltration system, and use soil and plants to filter and treat polluted runoff before it enters the watershed.^{88,89}

⁸⁸ www.neponset.org/happenings/dedham-cleaning-up-stormwater-for-mother-brook/

⁸⁹ Town of Dedham Master Plan, 2017 update.

CRWA and NepRWA continue to monitor water quality along the Charles and Neponset Rivers and Mother Brook. CRWA conducted comprehensive shoreline surveys covering over half of the 80-mile Charles River corridor to serve as baseline assessments. The surveys note locations and conditions of outfall pipes, erosion problems and other indicators of nonpoint source pollution and help identify and prioritize problems that might require immediate action.⁹⁰

Recent accomplishments and initiatives of the watershed associations include continued water quality monitoring, visual shoreline surveys, expanded federal and State regulations, and ecological restoration. Following a four-year effort in partnership with Conservation Law Foundation, the CRWA received commitment from federal and State agencies to expand their regulation of stormwater runoff which is the largest source of water pollution in the State. The new regulations target large commercial and industrial properties requiring existing as well as new facilities to manage their stormwater runoff. This will both intensify cleanup efforts and lessen the burdens on municipalities which have been responsible for stormwater cleanup at the end of pipes (where historically this runoff gathers and is released from).

In 2015, the Conservation Commission obtained Town Meeting approval for minor changes to the stormwater rules that provide regulatory relief for homeowners by ‘deregulating’ smaller residential projects by exempting the smallest projects and allowing other small projects to proceed with simplified administrative approval.⁹¹ In 2017, in anticipation of new federal stormwater discharge requirements initially set to take effect on July 1, 2017 (Municipal Separate Storm Sewer System/MS4), the Conservation Commission began reviewing its stormwater management rules to better align Town By-Laws with the MS4’s wider range of requirements.⁹² After some delays at the federal level, the MS4 permit was issued on July 1, 2018. The Conservation Commission updated the Town’s stormwater regulations for better consistency with federal regulations and approved the new regulations on November 15, 2018 (effective immediately).

Outstanding Resource Waters

One important tool that can be used to protect rivers and streams is the antidegradation provision of the Clean Water Act, which requires a high level of protection for high quality and high priority rivers. Under the Clean Water Act’s antidegradation laws, a state may designate high quality rivers as an “Outstanding Resource Water” (ORW). An ORW designation protects rivers by prohibiting the release of harmful pollution that impairs the high-quality nature of these rivers. There are currently no ORW designations in Dedham because none currently have the required excellent level of water quality.

Source Water Assessment Program

The Source Water Assessment Program (SWAP) was established in 1996 by the United States Environmental Protection Agency as part of the Safe Drinking Water Act. Amendments require

⁹⁰ Dedham Open Space & Recreation Plan, 2010.

⁹¹ Town of Dedham Master Plan, 2017 update.

⁹² *Ibid.*

states to compile reports for all public water systems to emphasize the importance of source water protection as a pollution prevention tool. By 2003, the MassDEP complied and submitted reports to each community with a public water system. The SWAP report delineates recharge areas for drinking water sources, inventories land uses within these areas, and assesses the susceptibility of water sources to contamination. This report is a planning tool to support local and State efforts to improve water supply protection. By identifying land uses within water supply protection areas that may be potential sources of contamination, the assessment helps to focus protection efforts on appropriate Best Management Practices (BMPs) and drinking water source protection measures.⁹³

The DWWD maintains and operates 17 wells, 11 of which are in Dedham, located in aquifers with a high vulnerability to contamination due to the absence of hydrogeologic barriers (*e.g.* clay) that can prevent contaminant migration. Land uses within these areas are therefore critical to monitor and control. While Dedham has done a great deal to protect these water sources, land uses that existed prior to the regulations, including homes, businesses, and roadways, present on-going challenges to protection efforts. Following the recommendations of the SWAP, the Water District has increased educational efforts with residents and businesses and promoted best management practices for protecting supplies. The District continues to promote protection and conservation measures with municipal boards, which approve new developments. The District has prepared a Wellhead Protection Plan and encourages regional cooperation in protecting supplies that cross municipal boundaries.⁹⁴

4G.8 Impaired Water Bodies

The goal of the United States Clean Water Act (CWA) is "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters" (33 U.S.C §1251(a)). Section 303(d) of the CWA requires states to create lists of impaired water bodies and assign priority ranking to develop Total Maximum Daily Loads (TMDLs) for these waters. A TMDL specifies the maximum amount of pollutants that can be present while still meeting quality standards.⁹⁵ In compliance with the CWA, MassDEP updates its Integrated List of Waters (ILW) every two years, which indicates if a water body is impaired for each of five designated uses:

1. Aesthetic
2. Fish Consumption
3. Fish, Other Aquatic Life And Wildlife
4. Primary Contact Recreation
5. Secondary Contact Recreation

Given the Town's historic use of waterways for industrial purposes and its urbanization in recent decades, it is not surprising that many of Dedham's water bodies are considered impaired for most designated uses (except Secondary Contact Recreation). The ILW lists the reason why an impaired water body does not support a designated use (*e.g.* non-native aquatic

⁹³ Source Water Assessment and Protection (SWAP) report for Dedham-Westwood Water District, 2003.

⁹⁴ Dedham-Westwood Water District Annual Water Quality Report, 2007.

⁹⁵ www.epa.gov/tmdl/overview-identifying-and-restoring-impaired-waters-under-section-303d-cwa

plants, excess algal growth, turbidity, water clarity/color/smell, PCB/mercury in fish tissue, phosphorus, *E. coli*) and indicates if a TMDL exists for the water body.

Most of the water bodies in Dedham are associated with either the Charles or Neponset River watershed, both of which have TMDLs (Total Phosphorus and pathogens for the Charles, pathogens for Rock Meadow Brook, and fecal coliform for the Neponset) and active watershed organizations that monitor water quality and work to raise awareness and effect policy change to improve watershed conditions. The water quality in both rivers has improved significantly in recent years due to the efforts of these organizations, community groups, and more stringent stormwater management regulations at the town and state level.

4G.9 Invasive Species

The Massachusetts Invasive Plant Advisory Group (MIPAG) is a collaborative group with scientific, conservation, industry, and municipal representatives that was charged by the State Executive Office of Environmental Affairs to identify invasive plants and advise the State about management strategies. MIPAG defines invasive plants as "non-native species that have spread into native or minimally managed plant systems in Massachusetts, causing economic or environmental harm by developing self-sustaining populations and becoming dominant and/or disruptive to those systems."⁹⁶ Invasive plants are often more tolerant of adverse conditions (*e.g.* drought, heat) than native plants and sometimes have beneficial reproductive strategies that give them an advantage. They may have extended growing seasons, their seeds may stay viable in the ground for longer periods of time, and they may be less appealing to native pests. Invasive plants grow rapidly, are difficult to remove or control once established, and can dramatically change ecological systems by forcing out native species that provide food and habitat for native species.

MIPAG has evaluated 104 plants thought to be invasive in the State, or to have the potential to become invasive, using existing and historic observations and biologically-based criteria. 35 plants have been categorized as *Invasive*, 31 as *Likely Invasive*, three as *Potentially Invasive*, and 35 did not meet the criteria for invasiveness.⁹⁷ At least 31 of the 35 *Invasive* species are found in Dedham, as well as more than half of the *Potentially Invasive* species. It is difficult to identify which invasive plants pose the greatest threat in Dedham. The Environmental Department has a small budget for invasive species management, most of which has been used in recent years to control Japanese knotweed, particularly at landings along the Dedham Water Trail. Table 4.4 lists some of the common invasive species found in Dedham and Figure 4.13 is a photo gallery of some of these species to assist with identification.

Disturbed areas along roadways, waterways, and near construction sites are particularly vulnerable to invasive species. Wigwam Pond, the abandoned rail corridor, and Mother Brook are locations that have been particularly hard hit by invasive plants and will likely require maintenance projects in the future. Some volunteer initiatives organized by the Environmental

⁹⁶ www.massnrc.org/mipag/

⁹⁷ *Ibid.*

Department and the Conservation Commission, with the help of Girl Scouts, Boy Scouts, and community groups, have helped to manage invasive species in localized areas including the banks of Mother Brook and Wigwam Brook.

Table 4.4 – Common Invasive Plants in Dedham

Common Name	Scientific Name	Description	Habitat
Asiatic bittersweet	<i>Celastrus orbiculatus</i>	Vine	All
Autumn olive	<i>Elaeagnus umbellata</i>	Shrub	All
Black swallowwort, Pale swallowwort	<i>Cynanchum louiseae</i> , <i>Cynanchum rossicum</i>	Vine	All
Burning bush	<i>Euonymus alatus</i>	Shrub	All
European/common buckthorn	<i>Rhamnus cathartica</i>	Tree/shrub	All
Garlic mustard	<i>Alliaria petiolata</i>	Flowering plant	All
Glossy buckthorn	<i>Frangula alnus</i>	Tree/shrub	All
Bishop's goutweed	<i>Aegopodium podagraria</i>	Flowering plant	All
Honeysuckle (Japanese, Morrow's)	<i>Lonicera japonica</i> , <i>Lonicera morrowii</i>	Shrub	All
Japanese barberry	<i>Berberis thunbergii</i>	Shrub	All
Japanese knotweed	<i>Polygonum cuspidatum</i>	Shrub	All
Lesser celandine	<i>Ranunculus ficaria</i>	Flowering plant	Wetlands
Mile-a-minute vine	<i>Persicaria perfoliata</i>	Vine	Wetlands
Multiflora/rambler rose	<i>Rosa multiflora</i>	Shrub	All
Norway maple	<i>Acer platanoides</i>	Tree	All
Phragmites/common reed	<i>Phragmites australis</i>	Grass	All
Purple loosestrife	<i>Lythrum salicaria</i>	Flowering plant	Wetlands
Tree of Heaven	<i>Ailanthus altissima</i>	Tree	All
Water milfoil (Eurasian, variable)	<i>Myriophyllum spicatum</i> , <i>Myriophyllum heterophyllum</i>	Aquatic	All
Yellow iris	<i>Iris pseudacorus</i>	Flowering plant	Wetlands

In Fall 2012, NepRWA and DCR concluded a five-year restoration project in the Fowl Meadow (Milton and Canton) within the Blue Hills Reservation. The major goal of the project was to reduce infestations of purple loosestrife (*Lythrum salicaria*), a rapidly spreading plant that degrades wildlife habitats. Once purple loosestrife establishes a foothold in a local wetland, it spreads until it dominates and essentially crowds out the native wetland vegetation relied upon by native wildlife. A wetland dominated by purple loosestrife does not provide the array of ecological benefits of a wetland full of native wetland plants.

To manage growth of purple loosestrife, NepRWA introduced biocontrol beetles, *Galerucella pusilla* and *G. californiensis* which feed exclusively on purple loosestrife. The biocontrol project was extremely successful. Self-sustaining populations of the beetles have been established in Fowl Meadow and in neighboring communities, including Dedham, and purple loosestrife populations have been significantly reduced. Importantly, other vegetation has been unharmed

by the beetles.⁹⁸ During the biocontrol project, volunteers visited Fowl Meadow to remove flower heads in an effort to prevent re-seeding (Figure 4.13).



Figure 4.13 – Volunteers remove purple loosestrife flower heads in Fowl Meadow⁹⁹

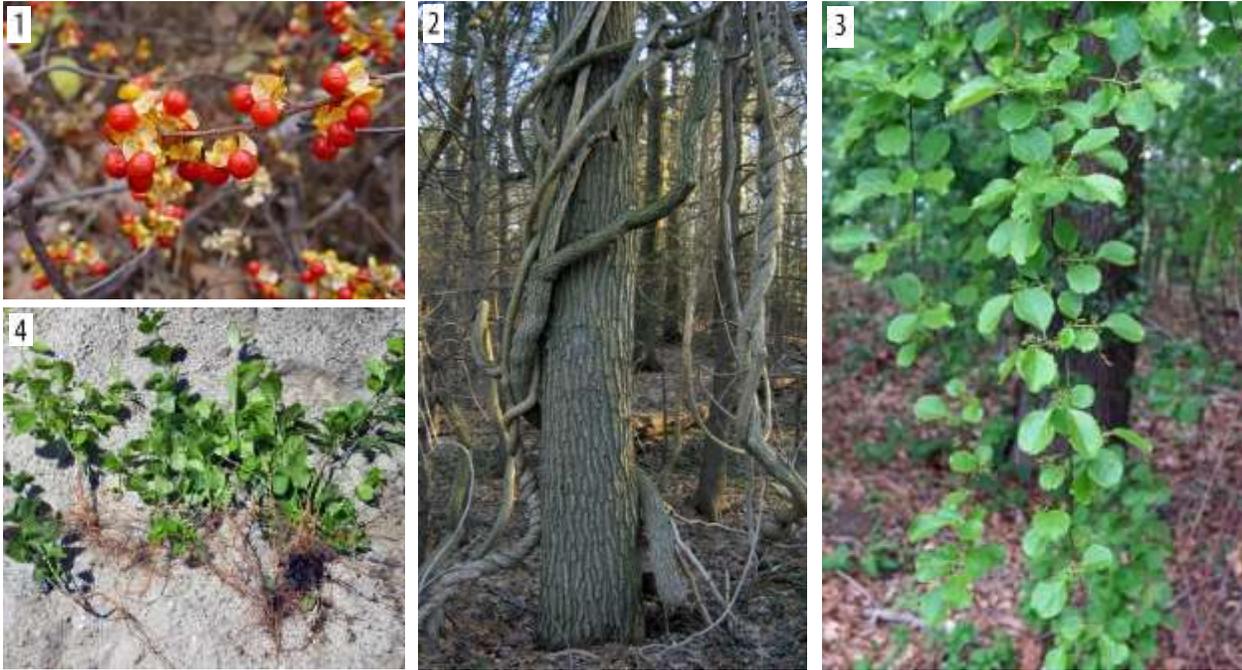
Mile-a-minute (MAM) vine (*Persicaria perfoliata*) is an invasive herbaceous vine that was first observed in Dedham in 2011. MAM is found in many areas of Fowl Meadow in Dedham, Canton, Milton and Boston. As its name suggests, MAM grows rapidly and can quickly cover other vegetation, blocking sunlight and pollinators. The Massachusetts Department of Agricultural Resources (MDAR) has released a biocontrol weevil *Rhinoncomimus latipes* with limited efficacy. The weevils have become established, but seem to prefer warmer climates. There are presently no other management plans for MAM vine. Images of mile-a-minute including key features for identification are included in the Invasive Species Photo Gallery (Figure 4.14).

⁹⁸ www.neponset.org/projects/ecological-restoration/controlling-invasives/purple-loosestrife/

⁹⁹ NepRWA photo gallery: www.flickr.com/photos/nepnwa/collections/72157620253554903/

4G.10 Invasive Species Photo Gallery¹⁰⁰

Asiatic Bittersweet (*Celastrus orbiculatus*)



Asiatic bittersweet is easily recognized by its abundant berries in the fall (1). Berries have yellow capsules that split 3-ways to reveal bright red seed-containing locules. The plant is a liana (woody vine) which will wrap around anything (e.g. trees, utility poles) (2). The vines can girdle a tree and their weight can take down a mature tree. The leaves are round to oval shaped with small, rounded teeth (3). Flowers/fruit grow out of the axils (where the leaf attaches to the stem). The bright orange roots may be familiar to gardeners who attempt to remove this persistent weed (4).

Autumn Olive (*Elaeagnus umbellata*)



Autumn olive is a small shrub that spreads rapidly into open areas and dry woods (1). The oval-shaped leaves and branchlets are covered with tiny scales that give them a silvery appearance, particularly the undersides of leaves (2). Bright red fruits appear in autumn and have scales that look like silver dots (3). The berries are edible and are harvested by foragers to make jam and fruit snacks.

¹⁰⁰ List of references and photo sources included in Section 11.

Bishop's goutweed (*Aegopodium podagraria*)



Bishop's goutweed is often planted in gardens and is difficult to remove once established. It spreads primarily by underground rhizomes and forms a dense colony that crowds out other species (1). Tiny white flowers are arranged in a flat-topped array (umbel) that resembles Queen Anne's lace (2). Leaves are compound with 3 to 9 leaflets and toothed edges (3).

Black swallowwort (*Cynanchum louiseae*) and pale swallowwort (*Cynanchum rossicum*)



Black swallowwort, also called dog-strangling vine, is an herbaceous, twining vine that spreads by both seed and underground rhizomes, forming dense colonies that are difficult to remove (1). The vine grows over and through other vegetation, crowding out other species. Leaves are shiny, opposite, and oval shaped, tapering to a point. Stems produce a milky latex. Plants produce milkweed-like seed pods (2), each containing many seeds (a square meter stand of swallowwort can produce up to 2,000 seeds). Flowers are small (1/4" diameter) with five dark purple petals (3). Pale swallowwort is similar to black swallowwort in both appearance and growth habit, but the flowers are a lighter color. Both species have a pungent smell which many people find unpleasant.

Burning-bush (*Euonymus alatus*)



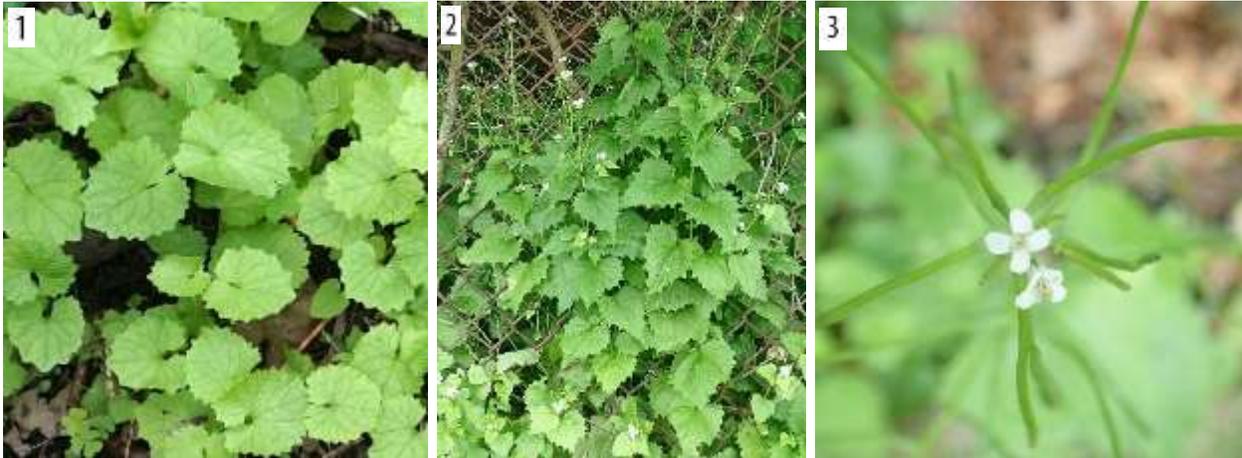
Burning-bush was used in landscaping as an ornamental shrub (1) before it was classified as invasive. Two characteristic features for identification are the winged branches (2) and the bright red fall foliage that gives rise to its name (3). Burning-bush is in the same plant family as Asiatic bittersweet, and has bright red/orange fruits that are similar to those of bittersweet (3). In the spring, burning-bush produces small yellow flowers with four petals (4).

European/common buckthorn (*Rhamnus cathartica*)



European buckthorn is a woody shrub with opposite leaves (sometimes slightly offset from opposite) that have finely toothed margins. The leaf veins arch outward so they are nearly parallel to the leaf margin (1). Its growth form is a small shrub, but it can grow to be a small tree up to 20 feet tall. It grows along roadsides, woodland borders, and abandoned pastures. Buckthorn produces abundant black fruits (2) that are edible but have powerful laxative properties. There is a terminal thorn-like appendage at the end of branches that is unique to common buckthorn (3). The bark is coppery brown and if scratched, it reveals orange colored inner bark. Crushed leaves and twigs have a bitter smell. Common buckthorn is native to most of Europe and is actually a threatened species in Ireland due to habitat loss.

Garlic mustard (*Alliaria petiolata*)



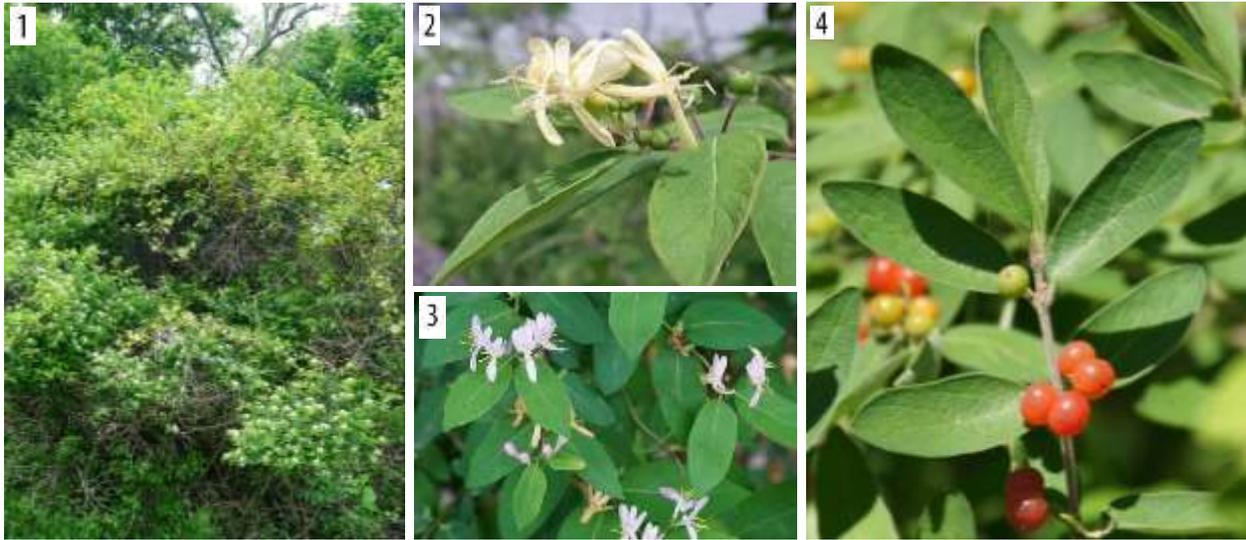
Garlic mustard is a twisting herbaceous vine that grows over and through other vegetation. It has a biennial life cycle (it takes two years to produce seeds). The first-year leaves are round to kidney shaped with rounded teeth and remain low to the ground (1). The second-year leaves are triangle shaped with sharper teeth, becoming smaller toward the top of the plant (2). Mature plants have small, white flowers with four petals which produce long, narrow seedpods, containing an average of 600 seeds per plant (3). Seeds germinate in one to two years and remain viable in the soil for up to five years. Garlic mustard is thought to alter the soil chemistry, inhibiting growth of other plants. The plant smells like garlic as indicated by its common name.

Glossy buckthorn (*Frangula alnus*)



Glossy buckthorn is a woody shrub that has a similar appearance to European buckthorn. Its growth form is a shrub, but it can grow to a 25-foot tall tree. It grows in a variety of habitats, from roadsides to forested wetlands, and can tolerate full sun or shade and different soil conditions (moist, dry, acidic, basic). Its shiny, oval-shaped leaves are alternate and the leaf margins do not have teeth. The lateral leaf veins are roughly parallel to each other reaching out toward the leaf margin (1). The bark has a very characteristic appearance with elongated white markings called lenticels (2). The fruit darkens from red to dark blue/black as it matures (3).

Honeysuckle (Japanese/Morrow's) (*Lonicera japonica/morrowii*)



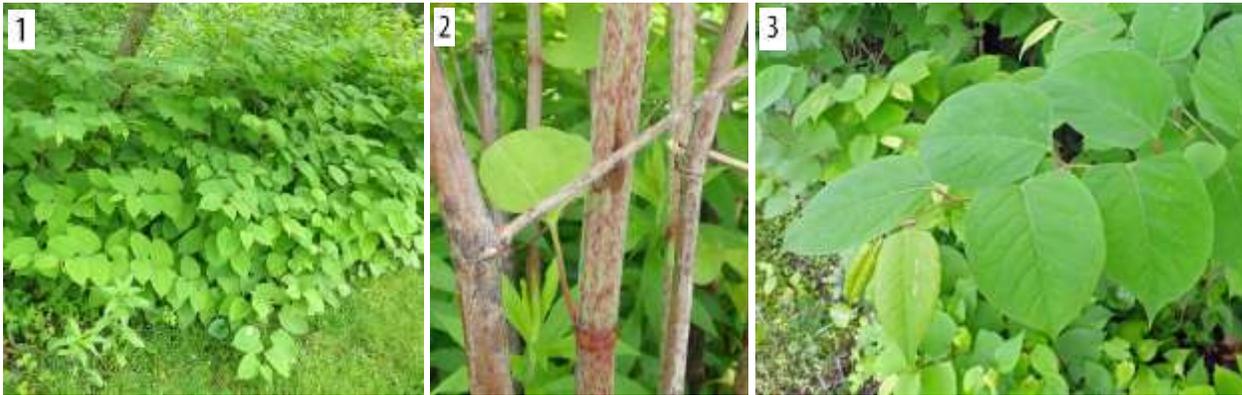
Japanese and Morrow's honeysuckle are woody shrubs that form dense stands up to 15 feet tall, crowding out other plants (1). They grow in a variety of habitats, including roadsides, woodlands, swamps, and floodplains, and they tolerate a wide variety of sun and soil conditions. The flowers are five-lobed and tubular, ranging in color from pale yellow to pink (2,3) and are often fragrant. The leaves are opposite and oval-shaped leaves with rounded to pointed tips. These species hybridize, along with other honeysuckle species that are categorized as potentially invasive. Hybrids have intermediate leaf and flower characteristics (shape, size, color) and are difficult to distinguish. Fruits are red to orange (4). The stems and branches of Invasive honeysuckles are hollow, while those of native honeysuckle species are solid.

Japanese barberry (*Berberis thunbergii*)



Japanese barberry is a small woody shrub with thorns that has been used as a landscaping shrub (1). The thorns and oval red berries are recognizable features (2). The small flowers, with six pale-yellow petals, are inconspicuous (3). Common barberry (*Berberis vulgaris*) is similar, and is considered potentially invasive.

Japanese knotweed (*Polygonum cuspidatum*)



Japanese knotweed is an alternate-leaved herbaceous plant that forms large, dense stands and can grow to 15 feet in height (1). Like many invasive plants, it is a generalist that grows in diverse habitats, including roadsides, stream and river shores, and along rail and power line corridors. It prefers sun, but tolerates shade. Japanese knotweed spreads primarily by underground rhizomes. The red and green mottled stems are hollow and are similar in appearance to bamboo (2). The alternate leaves are large, broadly egg-shaped with pointed tips (3). Two other invasive knotweeds are similar in appearance. Giant knotweed is, as described, much larger than Japanese knotweed (plant can reach 20 feet in height, leaves can be longer than 12 inches). Bohemian knotweed is a hybrid between Japanese and giant knotweed and has intermediate features.

Lesser celandine (*Ficaria verna*)



Lesser celandine is a low-growing herbaceous plant that prefers moist soils. It can grow in full sun or shade. It reproduces by bulb-like tubers at the base of the plant. Its kidney-shaped leaves emerge early in the spring, forming dense mats that crowd out native plants in forested floodplains and stream beds (1). The glossy yellow flowers have 8 to 12 petals (2). The flowers are abundant in early spring, covering large areas (3) of riparian habitats.

Mile-a-minute vine (*Persicaria perfoliata*)



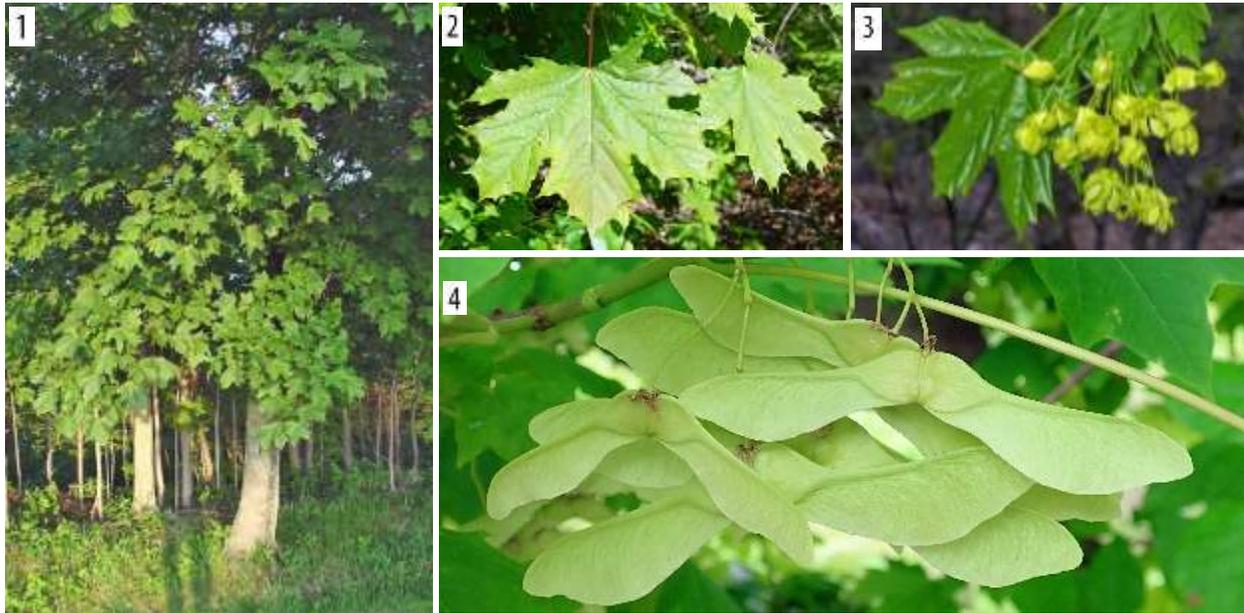
Mile-a-minute (MAM) is a perennial, herbaceous vine that grows vigorously, up to 6 inches per day, as indicated by its name. New growth usually emerges in May when temperatures no longer drop below freezing. Early features include pale green, triangle to sagittate (like an arrowhead) shaped leaves, downward curved barbs, and round, saucer-shaped appendages (ocrea) at the base of the stems (1). Mature leaves are nearly perfectly triangular (2) and the plant grows and twists upward, crowding out nearly all other vegetation, blocking sunlight and choking stems. By early summer, MAM can take over acres of land, including wet meadows, roadsides, and stream banks (3). The early fruit is green, but soon matures into a bright blue, pea-sized berry (4 - inset). MAM can conquer just about every other plant, including small trees. Other invasive plants, including phragmites, garlic mustard, and Asiatic bittersweet, succumb to this aggressive vine. The fruit are dispersed by water, birds and humans, and the seeds can remain viable for up to six years.

Multiflora/rambler rose (*Rosa multiflora*)



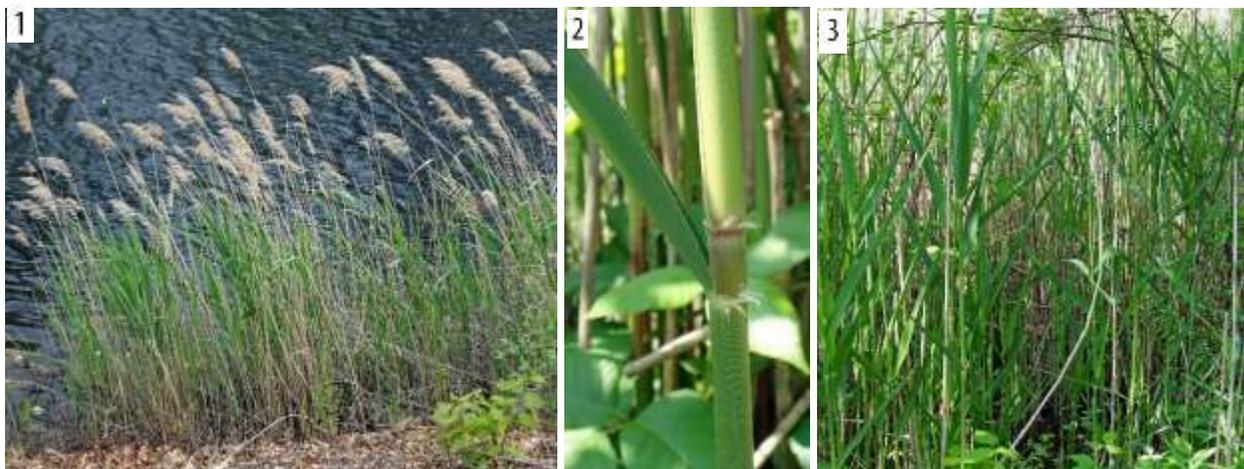
Multiflora rose is a woody shrub with curved thorns that thrives in sun and also tolerates shade. It's compound leaves, which have 5-9 oval-shaped leaflets, resemble other native and ornamental rose species (1). The two stipules (leaf-like appendages) at the base of each compound leaf with several slender, bristly teeth are a unique feature for identification of this species (2). Abundant white flowers appear in early summer (3) and give rise to relatively small (1/4") green fruits (hips) that turn red when they mature (4).

Norway maple (*Acer platanoides*)



Norway maple is a large, deciduous tree that can grow to a height of 60 feet (1). Native to Eurasia, it was brought to North America in the 1700s as a shade tree. Leaves are oppositely arranged with 5-7 sharply pointed lobes separated by rounded sinuses (2). The leaves of Norway maple are similar to other maple species, particularly sugar maple, but the broken leaf stalks (petioles) of Norway maple produce a milky sap, which is unique to this species. The leaves are somewhat shiny when new, and clusters of small yellow/green flowers appear in spring (3). Norway maple fruit (samaras) are wider than other maples (4). Norway maple is another generalist that grows in sunlight or shade and tolerates a variety of soil conditions. It grows in urban woodlots, floodplains, and disturbed areas.

Phragmites/common reed (*Phragmites australis*)



Phragmites, or common reed, is an invasive grass that grows to a height of 6-12 feet, sometimes up to 20 feet. Dried winter stems, leaves and seeds are persistent in spring as new growth begins (1). Stems are hollow and have fine vertical grooves, distinguishing this species from the rare, native species (2). It forms large, dense stands along roads and both freshwater and brackish water (3).

Purple loosestrife (*Lythrum salicaria*)



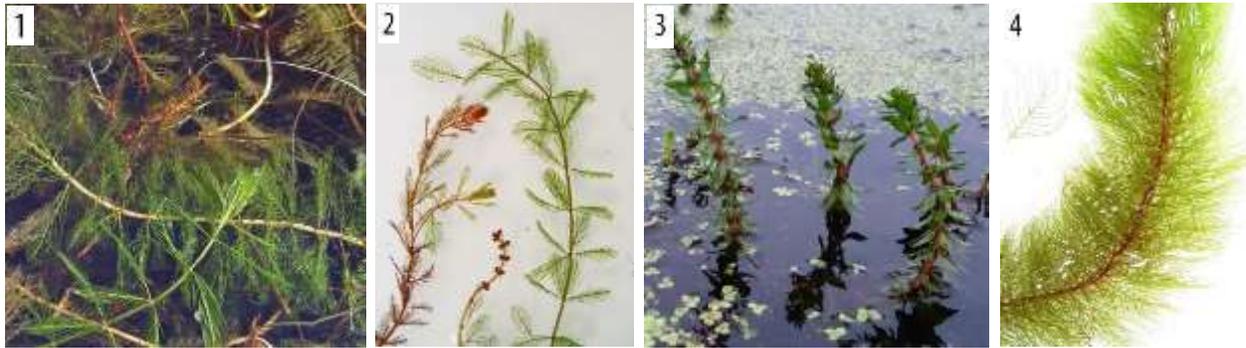
Purple loosestrife is a wetland plant with upright stems that produce spikes of bright purple flowers (1). Leaves are oppositely arranged that often clasp the four-sided, hairy stem or have no petiole (they are attached directly to the stem) (2). A biocontrol beetle was introduced by the Neponset River Watershed Association approximately ten years ago and has significantly reduced purple loosestrife populations in our area.

Tree of Heaven (*Ailanthus altissima*)



Tree-of-heaven is a fast-growing deciduous tree that can reach heights of up to 80 feet. It thrives in urban environments (1) as well as open, disturbed areas. Saplings appear in the spring with new leaves emerging with red coloring (2). The alternate, compound leaves have 11-25 leaflets, each with one to several coarse teeth at the base (3). The smooth, gray bark develops diamond-shaped fissures as the tree ages (4).

Water milfoil (Eurasian/variable) (*Myriophyllum spicatum* /*heterophyllum*)



Eurasian and variable water milfoil are two of several species of invasive aquatic plants that form dense mats in lakes and slow-moving streams. These plants may have arrived in some areas by accident through shipping or by being released from aquariums. Milfoils have elongated, submerged stems with whorls of 3-6 feathery leaves, depending on species. Plants have been described as resembling raccoon tails under water (1, 2, 4). Variable milfoil has emergent flowering spikes extending 4 to 6 inches above the surface (3).

Yellow iris (*Iris pseudacorus*)



Yellow iris is tall, perennial flower with alternate, grass-like leaves. This attractive flower blooms in late spring through early summer (1). It spreads by thick, branching rhizomes that form dense horizontal mats, blocking growth of other plants. It is found in moist soil, along rivers, streams, ponds, and in floodplains (2).

4G.11 Forestry Issues

Forests are important as they provide wildlife habitat and support biodiversity, help to regulate climate and assimilate pollution, protect water supply and quality, retain soil, and mitigate flooding. Forests also have important recreation and aesthetic value.

Protecting and Managing Forests

Much of Dedham's remaining open spaces (both public and private land) are forested. In addition to outright removal of trees to make room for development, trees are susceptible to air pollution, climate change, and pests, as well as natural disasters. In addition to protecting forested areas from development, it will be important to continue monitoring and managing the tree stands within these areas to ensure their long-term sustainability. DCR administers the Massachusetts Service Forestry Program, also known as the Private Lands Forestry Program, to provide technical assistance to private landowners in forest resource planning, management, and protection.¹⁰¹ The program is based on the belief that private landowners and municipalities both benefit when landowners can make educated decisions about how to manage forest resources. Informed planning decisions can prevent the loss of mature stands of trees during development. For landowners who want to protect forest land, there are tax incentives through the State's Chapter 61 program.

Forest Pests

The Asian longhorned beetle (ALB) (shown in Figure 4.15), an invasive pest of hardwood trees, including maple, birch, and elm, was discovered in Worcester, MA in August 2008 and in six trees in Jamaica Plain in 2010. The spread of this pest would be devastating to forests and street trees. The Commonwealth of Massachusetts and the United States Department of Agriculture have established a regulated area covering portions of Suffolk and Norfolk counties to monitor for potential spread of the beetle infestation. Although Dedham was outside of the regulated area, and ALB was declared eradicated from the Boston area in 2014, it is important to monitor for signs of ALB and other potentially destructive pests.^{102,103}



Figure 4.15 – Asian longhorned beetle (photo by Jennifer Forman Orth, MDAR)

¹⁰¹ www.mass.gov/service-details/service-forestry

¹⁰² www.prnewswire.com/news-releases/usda-declares-a-boston-massachusetts-area-free-of-the-asian-longhorned-beetle-258909731.html

¹⁰³ The Division of Crop and Pest Services provides public outreach and screening of potential ALB sightings to prevent the further spread of this invasive pest. More information can be found at massnrc.org/pests/alb

Emerald Ash Borer (EAB) is a wood-boring insect that can kill a young ash tree in as little as one to two years (Figure 4.16). Although its only host trees are ash, it is considered the most destructive forest pest in North America. Management costs for damage caused by EAB are more than \$10 billion. EAB was first observed in Dedham in late 2017. The Conservation Department and DPW are working with MDAR to survey vulnerable populations of ash trees and provide information about EAB to residents and landscape professionals.



Figure 4.16 – Emerald Ash Borer (photo by David Cappaert, Michigan State University; www.invasive.org)

Winter moths (*Operophtera brumata*) feed on many deciduous trees and shrubs found in Massachusetts, including oak, apple, elm, maple, ash, crabapple, cherry, and blueberry. Unfortunately, effective biological control is many years away. For recently defoliated trees, an application of a registered pesticide may be warranted.¹⁰⁴

The gypsy moth (*Lymantria dispar*) has had cyclical patterns of population increase and decline in Massachusetts, with several significant defoliation events since its introduction in 1869. Chemical and manual efforts have been used to manage gypsy moth populations in the past. Massachusetts has experienced a gypsy moth outbreak beginning in 2015 and expected to continue into 2019. A soil-borne fungus, *Entomophaga maimaiga*, had been effective at controlling gypsy moth populations since the 1980s, but drought conditions and have limited its effectiveness leading to population increase, along with increased defoliation.¹⁰⁵

A new threat is spotted lanternfly (*Lycorma delicatula*), first observed in Pennsylvania in 2014 (Figure 4.17). Since that time, it has spread to Virginia, Delaware, New Jersey, and New York. Spotted lanternfly causes significant damage by feeding on many different trees, shrubs, and woody vines.¹⁰⁶ In 2019, spotted lanternfly was reported in Boston. Only one dead adult insect was found in a poinsettia plant that arrived in Boston in a shipment that originated in Pennsylvania.¹⁰⁷ Spotted lanternfly does not survive extended periods of cold, so it does not appear that a population has been established, but the State is encouraging resident to check houseplants and keep a watch for this insect.



Figure 4.17 – Spotted lanternfly, photo from MassNRC.org

¹⁰⁴ ag.umass.edu/landscape/fact-sheets/winter-moth-identification-management

¹⁰⁵ www.mass.gov/guides/gypsy-moth-in-massachusetts

¹⁰⁶ massnrc.org/pests/pestFAQsheets/spottedlanternfly.html

¹⁰⁷ massnrc.org/pests/blog/?p=2350

Some other threats to Massachusetts forests are hemlock woolly adelgid (*Adelges tsugae*), southern pine beetle (*Dendroctonus frontalis*), and white pine needlecast (multiple fungal pathogens).¹⁰⁸ The Massachusetts Introduced Pests Outreach Project is a collaborative effort between MDAR and the Agriculture and Landscape program at UMass. The project is an excellent educational resource that provides information and outreach support to help communities identify forest pests and invasive plants, reduce the spread of existing threats, and prevent the introduction of new potentially invasive pests. The project website has fact sheets, reporting forms, links to internet resources, and contact information for residents who want to help protect the State's natural resources and native wildlife habitats.¹⁰⁹

4G.12 Environmental Equity

The Massachusetts EJ Policy guarantees equal protection and opportunities for all residents including access to environmental resources. Dedham has two block groups that meet the EJ criterion of having 25% or more residents identifying as a race other than white. The EJ block groups are in the Oakdale and East Dedham neighborhoods which have several parks, school and community playgrounds (see Section 3C.6), and natural areas (Wigwam Pond and Mother Brook). Although these natural areas are significant in size and ecological value, they are difficult to access because much of the land around them is developed and public access points have some challenging physical conditions (e.g. terrain, wetlands).

Improved access to water resources is a high priority in Dedham. During the public input process, many people listed access to Wigwam Pond as a high priority. Access to Mother Brook was not listed as frequently, possibly because several access points already exist and there is an ongoing project to create a historic walking trail in the area. The largest natural areas in the Town (Wilson Mountain, Cutler Park, Town Forest, Charles River) are in West Dedham, a significant distance from the EJ populations. Pedestrian safety improvements and marked bike lanes are coming soon with the support of MassDOT: the 2019 Complete Streets grant, the Ames Street/Bridge Street project, and the Rustcraft Road/Elm Street project slated to begin in 2020. The Town should continue to make its roads safer for pedestrians and bikes, and will continue to work with MassDOT to make improvements on State roads (High Street/Route 109 and Providence Highway).

If the Town were to move forward with the Dedham Rail Trail project, the East Dedham EJ neighborhood would be well served by that resource. The rail corridor runs parallel to Whiting Avenue and is directly aligned with the EJ census block group. Similar to other communities, the Rail Trail project has very strong support and opposition. Questions of land jurisdiction, abutter concerns (safety/privacy), and cost/benefit analysis are some of the challenges that need to be resolved before this project can move forward.

¹⁰⁸ More information about these pests can be found at <https://massnrc.org/pests/factsheets.htm>

¹⁰⁹ massnrc.org/pests/index.htm

Section 5: Inventory of Lands of Conservation and Recreation Interest

The open space and recreation areas in the Town of Dedham encompass a variety of land and water sites, as well as cultural and historic resources, both publicly and privately owned. The goals of this inventory are to identify areas of conservation and recreation interest in the Town, to evaluate current resources and conditions, and to determine future open space needs. Areas of interest include open spaces that are valued for one or more of the following factors: natural resources, recreation potential, historic value, cultural significance, and scenic character.

This inventory includes information about public and private open space with various levels of protection that may restrict land use and even prevent development. Protected open spaces are public or private properties that are permanently designated as conservation or recreation land by deed restriction or easement. Also included in this inventory are undeveloped parcels that are of interest to the Town for conservation or recreation use but are not currently protected by any restriction. Appendices 2 through 5 contain a detailed inventory of open space parcels, including information about ownership and management, current use, condition of the land, acreage, recreation potential, accessibility, and level of protection. Map 7 shows the distribution of protected and unprotected open space in Dedham.

The Value of Protecting Open Space

Dedham's natural resources and its history have contributed to a distinctive landscape and a richness of culture that makes the Town an attractive and interesting place to live and visit. Protection of natural resources ensures a healthy environment, safe drinking water, clean air, outdoor recreation opportunities, and healthy wildlife populations and habitats. Land use decisions that consider the Town's natural constraints, as well as its unique resources and opportunities, will improve the quality of life for residents by protecting and preserving surface and groundwater resources, reducing air and noise pollution, limiting erosion, reducing impact on climate, and protecting places of natural beauty and critical environmental concern.

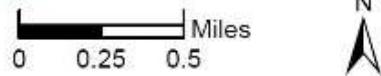
In many cases, open space protection is a reactive measure, mobilizing community funding to preserve the "last wetland" or "last farm." This method can be costly and lead to disconnected open spaces and fragmented habitats. Establishing criteria to prioritize open space parcels for protection would help the Town and conservation partners to be strategic about which lands to acquire and protect, with a focus on creating a network of larger, contiguous open space areas with higher ecological value. Because natural systems do not adhere to political boundaries, protection of natural resources is best accomplished through collaboration with neighboring towns, State agencies, and nonprofit organizations. This approach emphasizes connections between natural habitats and wildlife corridors and facilitates study and collecting inventory information for unique sites such as vernal pools or priority habitats for endangered species.

Town of Dedham Massachusetts



Map 7 Open Space Inventory

- Chapter 61 (Forestry)
 - Chapter 61B (Recreation)
 - Conservation Restriction
- Ownership/Management**
- Commonwealth of MA (DCR)
 - Commonwealth of MA (Flood Control)
 - Dedham Westwood Water District
 - MA DOT
 - Norfolk County
 - Private Cemetery
 - Private Conservation Org.
 - Private Historical
 - Private Recreation
 - Private School/Institution
 - Private Undeveloped
 - Town Conservation Comm.
 - Town Historical
 - Town Parks and Rec.
 - Town DPW (Cemetery)
 - Town Unassigned
 - US Army Corps of Engineers

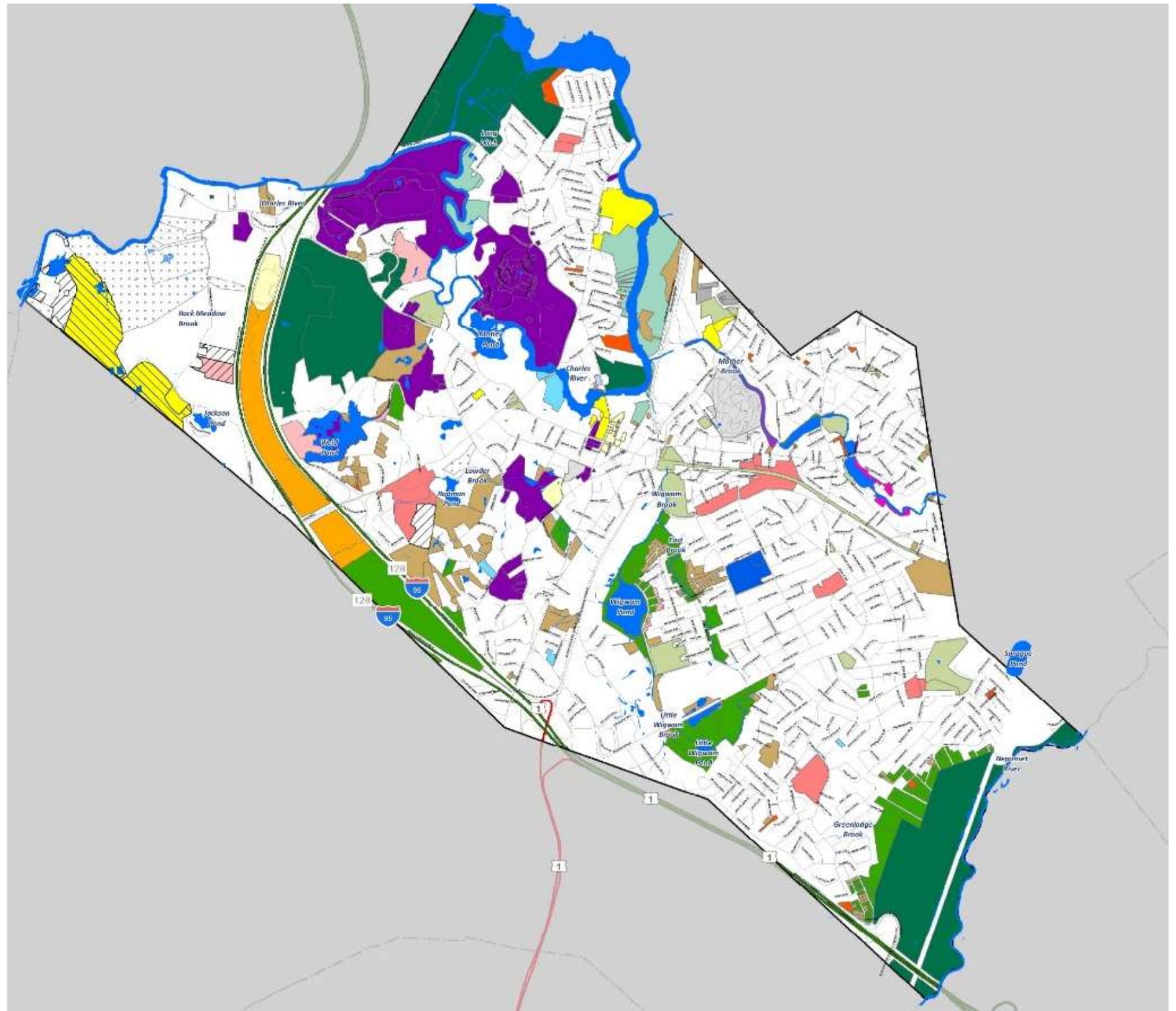


Data Sources: Town of Dedham, MassGIS

This document is intended for
Town of Dedham planning
purposes only.

Produced by:

Horsley Witten Group, Inc. May 2017



Open space provides multiple layers of benefits to the community: recreation, historical, civic, cultural, sustainability, and environmental. These benefits increase with greater connectivity between open space areas. Connectivity has health benefits to the community. In their 2014 Parks and Trails Health Impact Assessment Toolkit, the U.S. Center for Disease Control states that providing walkable/bike-able “access to appropriate sites motivates people to participate in physical activity and to do so more frequently.”¹¹⁰ For this reason, parcels that are adjacent to existing protected open space have been prioritized because they improve access and increase connectivity. In some instances, public access may be obtained through easements from private property owners.¹¹¹ The Conservation Commission and Open Space and Recreation Committee (OSRC) work to identify and monitor parcels of land for possible acquisition that would improve connectivity and increase the total acreage of protected open space in Dedham.

How Open Space is Protected

Chapters 61, 61A and 61B of the General Laws of Massachusetts are tax laws that allow for significant reduction of property taxes for landowners willing to maintain their land as managed forest, agricultural land, or for outdoor recreation. If a landowner chooses to withdraw land from this classification, the owner must pay a rollback tax to the municipality and possibly a separate conveyance tax. When the land is put up for sale, the municipality has a right of first refusal to purchase the land.¹¹²

A conservation restriction is a voluntary, yet binding legal agreement between a landowner and either a municipality or a land trust. Authorized by Sections 31-33 of Chapter 184 of Massachusetts General Law, a conservation restriction offers incentives (e.g. estate or federal income tax deductions, property tax relief) to landowners in exchange for keeping parcels in an undeveloped state, either in perpetuity or for a specified number of years. The landowner maintains control of the land, while the holder of the restriction enforces the terms of the agreement. Conservation restrictions preserve land without public ownership, leave land on the tax rolls, and, in some instances, allow for public access. In Massachusetts, conservation restriction applications must be submitted to and approved by the Secretary of Energy and Environmental Affairs.

Three other mechanisms for land protection are available under Massachusetts General Law. Preservation restrictions are legal agreements to preserve a structure or site for historical significance and must be approved by the Massachusetts Historical Commission. An agricultural preservation restriction applies to land actively used for farming or forestry and must be approved by the Commissioner of Food and Agriculture. Watershed preservation restrictions are used for protecting public water supplies and are approved by the Department of Conservation and Recreation.

¹¹⁰ www.cdc.gov/healthyplaces/parks_trails/parks-and-trails-health-impact-toolkit.pdf

¹¹¹ Town of Dedham 2009 Master Plan Update 2017.

¹¹² malegislature.gov/Laws/GeneralLaws/PartI/TitleIX/Chapter61B/Section1

Public open space and park lands can be acquired by different means including purchase, donation of land, or taking. In Massachusetts, these lands are generally referred to as Article 97 lands. In 1972, Massachusetts voters approved an amendment to the State Constitution (Article 97) requiring that any state- or city/town-owned land taken or acquired for conservation or recreation purposes shall not be used for other purposes unless the Massachusetts legislature approves the change by a two-thirds vote. Article 97 ensures that land acquired for these purposes is not converted to other inconsistent uses.

5A. Private Parcels

There are approximately 904 acres of privately-owned open space in Dedham (Table 5.1). This number is an estimate made using GIS maps of the properties listed in sections 5A.1 through 5A.9 and nonprofit conservation land listed in section 5B.2. Several of the private recreation and institutional properties are partially developed, so individual parcels that are developed with buildings or paved areas have been removed from the total acreage. The 2010 OSRP stated that there were 1,037 acres of “privately owned land of recreation or conservation interest.” It is unclear how that figure was calculated, but the current figure of 904 acres is based on the most recent parcel data available. Although much of this land is undeveloped open space, most of it is not protected or restricted. Acquisition or protection of some of this land could benefit the Town by expanding and connecting existing open space areas and providing additional recreation opportunities for the community.

Table 5.1 – Private and Nonprofit Open Space

Land Classification	Total Acres	Open Space	Reason for Adjusted Acreage
Chapter 61	137.82	137.82	
Water Resources (DWWD)	14.65	12.00	Office
Conservation Restrictions	150.87	150.87	
Historic	1.07	0.90	Museum
Private Recreation	139.47	30.00	Chapter 61 duplicate parcels removed
Private Institutional	457.75	310.00	Developed land removed (buildings/paved)
Private Cemeteries	11.04	11.04	
Private Vacant	218.33	218.33	
Nonprofit Conservation	33.38	33.38	
Totals	1164.38	904.44	

There are several categories of private open space listed in this section: forested land, aquifers, river corridors, wetlands, conservation restrictions, historic property, private recreation land, major institutional holdings, and large tracts of both residential and commercial land. Each category of land is of interest to the Town for different reasons. In some cases, the Town may consider acquiring open space for public use or to limit development. Open space held by private institutions has inherent value as a natural resource and the Town may seek an easement for public recreational purposes. Land that is eligible for reduced tax rates either under Chapter 61 or through a conservation restriction should be monitored annually to make sure it remains undisturbed. As the pressure of development results in this land being sold or

developed, the Town should be diligent about assessing the value of the land for tax purposes including future tax revenue and rollback taxes.

5A.1 – 5A.2 Agricultural and Forested land (Chapter 61, 61A and 61B)

Almost 138 acres of land in Dedham are eligible for reduced tax rates according to Chapters 61, 61A and 61B of Massachusetts General Law. Chapter 61 provides tax reduction for 39.64 acres of undeveloped forestry land in Dedham. 7.00 acres are enrolled in Chapter 61A as an active woodlot, and Chapter 61B provides tax reduction for 91.18 acres of land owned by the Dedham Country and Polo Club. Other than the 7 acres maintained as an active woodlot, there is no other land in Dedham enrolled for agricultural purposes under Chapter 61A and there is little potential for use of this program due to the lack of farmland in Town. The amount of Chapter 61 land has decreased in recent years due to the pressure of development. Land taxed under these classifications is listed in Table 5.2 below. A complete list of all Chapter 61, 61A, and 61B land identified by assessor’s parcel number and address is included in Appendix 2.

Table 5.2 – Chapter 61, 61A, and 61B Land

Tax Category	Land Use	Parcels	Acreage
Chapter 61	Forestry	43-2B, 66-6, 118-31	39.64
Chapter 61A	Productive woodlot	83-5B	7.00
Chapter 61B	Golf	64-1, 65-1B	91.18
		Total	137.82

Source: Town of Dedham Tax ID/Parcel data layer

5A.3 Water Resources

The Dedham Westwood Water District (DWWD) owns 14.65 acres in Dedham including land surrounding its wells and water towers. Table 5.3 lists DWWD properties and a complete list of DWWD land identified by assessor’s parcel number and address is in Appendix 2.

Table 5.3 – Dedham-Westwood Water District Properties

Address	Acreage	Use
75 Sandy Valley Road	2.25	Water tower
50 Elm Street	1.60	Office
52 Stoughton Road	0.69	Water tower
547 Bridge Street	1.40	Well
536 Bridge Street	8.63	Well, water treatment
445 Westfield Street	0.08	Water tower
Total	14.65	

Source: Town of Dedham Tax ID/Parcel data layer

5A.4 Priority Areas for Biodiversity

There are many locations in Dedham, both public and private, that have significant ecological value. The flood plains and watersheds along the Charles and Neponset Rivers are sites of great biodiversity, and the BioMap2 report for the town of Dedham produced by the Natural Heritage and Endangered Species Program indicates that more than 1,000 acres in Dedham is classified as



Figure 5.1 – River Birch Growing in the Charles River Flood Plain

both Core Habitat and Critical Natural Landscape.¹¹³ The Core Habitats extend into adjacent towns (Milton, Canton, Newton, Westwood, Needham, and Dover) encompassing a total of almost 5,000 contiguous acres of Core Habitat (Core 1497 is a 979-acre habitat in the Neponset River Reservation and Core 1868 is a 3,095 acres habitat along the Charles River).¹¹⁴

Without public access, it is difficult to definitively evaluate the ecological value of private land; however, it is a reasonable conjecture that land in Dedham supports comparable biodiversity as land in adjacent towns in the same Core Habitats. Several rare species have been observed in Dedham throughout history, and recent surveys on public land have confirmed the presence of previously known and newly identified populations of rare plants. There are numerous mature river birch (*Betula nigra*) growing along the Charles River in Dedham (Figure 5.1), a species that has been placed on the Massachusetts Plant Watch List, an unofficial list of species thought to be rare, declining, or vulnerable. Fowl Meadow, once called Purgatory Swamp, was described by Edmund Bacon as the “Mecca of the botanists of Eastern Massachusetts.” In 1897, Bacon wrote the following about this exceptional wet meadow habitat:

“The bloodroot, hepatica, anemone, anemonella, Caltha, start the procession which passes in review from spring until autumn: violets, white, blue, and yellow, here a copse studded with the pink-fringed polygala, there a clump of maiden-hair ferns, rare woodwardias, and botrychiums, large-flowered, painted, and nodding trilliums, Canada and Philadelphia lilies, clintonias, Solomon’s seal in variety, grasses, sedges in abundance, rare ferns, club-mosses, liverworts, mosses and lichens in profusion, and in wet seasons the greatest array of mushrooms to be seen in this section of the State.”¹¹⁵

Although the habitat described by Bacon had changed greatly in the past century, many of these species are still known to exist in Fowl Meadow and every effort should be made to

¹¹³ maps.massgis.state.ma.us/dfg/biomap/pdf/town_core/Dedham.pdf

¹¹⁴ www.mass.gov/service-details/biomap2-town-reports

¹¹⁵ Walks and Rides in the Country Round About Boston, by Edwin Munroe Bacon, published for the Appalachian Mountain Club by Houghton, Mifflin and Company, 1898.

protect and preserve what remains of this habitat, which has potential for supporting rare amphibians that have been observed in neighboring towns. Section 5B provides some biodiversity information about public land within Dedham.

5A.5 Conservation Restrictions and Historic Property

More than 150 acres of land in Dedham are protected from development by conservation restrictions. Conservation restrictions are typically placed on land to with the intention of protecting it from development in perpetuity, for current and future landowners. In Dedham, the Trustees of the Reservation (TTOR) holds the conservation restrictions for 144 acres and the Town and the Dedham Land Trust hold the restrictions for 2.25 and 4.1 acres, respectively. TTOR is a nonprofit organization that preserves land, nature, and historic places across Massachusetts. Management and stewardship of TTOR land is funded through an endowment run through the Trustees and volunteers monitor the land to assist landowners and ensure that the land remains undeveloped. Dedham land protected under conservation restrictions is listed in Table 5.4. A complete list of conservation restriction properties identified by the assessor’s parcel number and address is in Appendix 2.

Table 5.4 – Conservation Restrictions in Dedham

Address	Owner	CR Holder	Acreage
240 Schoolmaster Lane	River Bend INC	TTOR	88
3, 7, 9, and 13 Burgess Road	River Bend INC	TTOR	52
999 Country Club Road	235 Westfield ST Realty Trust	TTOR	4.52
242 Lowder Street	Gregory C Carlevale	Dedham Land Trust	4.10
311 West Street	Edward E Watts III	Town of Dedham	2.25
Total			150.87

Source: Town of Dedham Tax ID/Parcel data layer, Norfolk County Registry of Deeds online database, and Commonwealth of Massachusetts Executive Office of Energy and Environmental Affairs.

Dedham Historical Society and Museum

The Dedham Historical Society and Museum, a nonprofit educational institution and museum, was founded in 1859 by citizens who wanted to preserve the Town’s history and is supported by membership dues and private donations. Preservation of historic properties in Dedham accomplished through a combination of efforts from the Town, the Historical Society, and private citizens. Table 5.5 lists land owned by the Dedham Historical Society and a complete list of historic properties identified by the assessor’s parcel number and address is in Appendix 2.

Table 5.5 – Dedham Historical Society and Museum Properties

Name	Location	Acreage
WWI Memorial	498 East Street	0.01
Powder House	147 Ames Street	0.93
Avery Oak Historic Marker	446 East Street	0.00
Dedham Historical Society Museum	612 High Street	0.13
Total		1.07

Source: Town of Dedham Tax ID/Parcel data layer

The Powder House (Figure 5.2) is perhaps the most significant Dedham Historical Society property in terms of open space value. It is located atop a small hill on the west side of Ames Street overlooking the Charles River. This historic structure was built by Captain Fuller in 1766 as a powder magazine for the Town. While the historic structure is owned by the Town, the land on which it is located, almost one acre overlooking the Charles River, is owned by the DHS. The site has deteriorated over the years due to lack of maintenance; however, the DHS is interested in restoring the property, which has importance as both an historic and scenic resource.

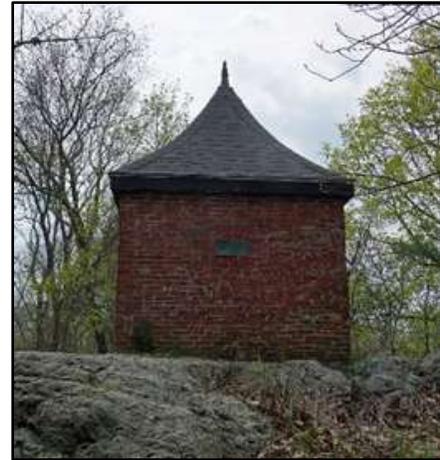


Figure 5.2 – The Powder House

5A.6 Private Recreation Land

There are several private recreation facilities in Dedham that require admission fees or membership for use. The largest private recreation property in Dedham is the Dedham Country and Polo Club (DCPC) which sits on approximately 97 acres of land in Dedham, and extends into Westwood on an additional 61 acres of land. Two parcels of land owned by DCPC in Dedham (about 91 acres) are eligible for reduced tax rates under Chapter 61B, which provides incentive to keep the undeveloped for outdoor recreational use. The smallest DCPC parcel in Dedham is not Chapter 61B eligible because it is developed with buildings and parking. Although the DCPC is a private club that is only open to members, the club allows the Dedham High School Golf Team to use the course and the grounds are open to the public in the winter for sledding and cross-country skiing.

The other private recreation properties are not enrolled in Chapter 61; therefore, there is no additional protection status for approximately 40 acres of land if the properties were to be sold or the use altered. Some of this land is already developed with buildings and parking lots, but much of it remains undeveloped. McGolf on Bridge Street is a public driving range and mini-golf course on 26 acres of land on the Charles River. The Dedham Health and Athletic Complex is a private health club with indoor tennis courts and a swimming pool. Although regular use of the facilities is only available to members, the club offers several fee-based programs to the public including swim lessons, health and wellness services, a summer camp, and a summer pool membership. The Dedham Tennis Club on Glenridge Road offers four outdoor clay courts, and new membership is limited to Dedham residents.

The Dedham Community Association, known to many as the Dedham Community House (DCH), was founded in 1922 with a twofold mission: to preserve the historic mansion previously owned by Judge Samuel Haven and to provide a recreation center for the community. The DCH campus consists of the Haven House on High Street (Figure 5.3), the William Bullard House, also known as the Stone House, on Bullard Street, a gymnasium, a swimming pool and pool house, and a soccer field, all on a total of almost seven acres with frontage on the Charles River.

Today, the DCH mission is to promote “educational, recreational and civic interests to enhance the lives of all residents of Dedham and neighboring towns through innovative programs, community leadership and the preservation of its historic campus.”¹¹⁶

DCH operates a highly regarded preschool, a popular summer camp, a summer pool, a variety of enriching classes for all ages, and several special seasonal events. DCH also offers a variety of programs during public school vacation weeks.



Figure 5.3 – Dedham Community House

Photo by Brian Cua - Own work, CC BY-SA 4.0, commons.wikimedia.org/w/index.php?curid=42116018

Popular youth programs include preschool sports, creative movement, yoga, and babysitting lessons. Exercise classes are most popular among adults, including Pilates and Zumba.

Although most DCH programs and camps are fee-based, DCH does provide significant financial assistance to low-income families. DCH updates its programs and facilities to meet the changing needs of the community. In 2010, DCH updated its pool facility with a new outdoor pool, a pool house with locker rooms, a large deck with grassy areas, and a shaded pavilion. A campus plan was created in 2015 which includes plans for a new multi-purpose recreational facility near the pool to replace the current gymnasium located behind the Haven House. Table 5.6 provides a list of private recreation properties; a complete list of private recreation land identified by the assessor’s parcel number and address is included in Appendix 2.

Table 5.6 – Private Recreation Properties

Owner	Location	Acreage
Dedham Country and Polo Club	124 Country Club Road	97.20
McGolf Driving Range	150 Bridge Street	26.32
Dedham Health and Athletic Complex	200 Providence Highway	7.86
Dedham Community House	671 High Street	6.97
Dedham Tennis Club	30 Glenridge Road	1.12
	Total	139.47

Source: Town of Dedham Tax ID/Parcel data layer

5A.7 Estates

The Endicott Estate is owned by the Town of Dedham and is described in section 5B.3.

¹¹⁶www.dedhamcommunityhouse.org/about-us/history-a-mission.html

5A.8 Major Institutional Holdings

There are approximately 465 acres of land held by private schools, universities, churches, and other nonprofit organizations in Dedham. These properties include large tracts of undeveloped land as well as developed areas with buildings, recreation fields and public commons areas. The undeveloped areas frequently abut other protected open space areas in Dedham which increases the size of natural habitats and contiguous green space and contribute to the rural character of the Town. Table 5.7 lists private schools and major institutional properties by area. A complete list of institutional land identified by assessor’s parcel number and address is included in Appendix 2.

Table 5.7 – Major Institutional Property

Owner	Location	Acreage
NewBridge on the Charles/Rashi School	NewBridge on the Charles	161.49
Noble and Greenough School	Bridge Street	130.21
MIT Endicott House	Westfield and Haven Street	54.90
Ursuline Academy & Convent	Lowder Street	28.59
Animal Rescue League/Pet Cemetery	Pine Street	22.34
Churches/Religious Organizations	Various	22.41
Northeastern University	Common Street	20.17
Dedham Country Day School	Sandy Valley Road	16.88
Dexter-Southfield School Boat House	Bridge Street	0.77
	Total	457.75

Source: Town of Dedham Tax ID/Parcel data layer

The natural areas on private institutional land are assets to the entire Town, not just to the students or members who use the space on private campuses, and development of these open spaces could significantly change the character of the Town. Many institutional holdings are large tracts of land adjacent to some Dedham’s ecologically valuable areas, particularly along the Charles River. Several of these organizations offer some public access to their natural resources and facilities, including the walking trails at NewBridge on the Charles, the ice rink at Noble and Greenough School, the MIT Endicott House Conference Center, church commons and meeting halls, and the field and track at Northeastern University.

5A.9 Other Resources

In addition to the three cemeteries owned by the Town and managed by DPW, there are an additional 11.04 acres of privately-owned cemeteries in Dedham. A complete list of all private cemetery properties identified by the assessor’s parcel number and address is included in Appendix 2. There are 218.33 acres of privately-owned vacant land in Dedham that do not fit into the previously listed categories. These properties, both residential and commercial, are classified by the Assessor as *Developable*, *Undevelopable* and *Potentially Developable* (although the origin and exact criteria of these terms is unknown). This land is vulnerable to development based on current market conditions. 136 undeveloped parcels, totaling over 178 acres, are either directly adjacent to existing open space, or are part of a larger area of contiguous open

space that is adjacent to existing open space. Appendix 5 lists these parcels, as well as several other categories of land that could be of interest to the Town. The Action Plan Map (Map 8) shows the locations of vacant properties in Dedham.

5B. Public and Nonprofit Parcels

5B.1 Public Conservation and Recreation Resources

Town Conservation Land

The Dedham Conservation Commission has jurisdiction over 271.38 acres of land. Public access is permitted on Town-owned conservation land and signs have been installed to mark many of these properties. While some of the Town’s conservation land is well suited for hiking, fishing, and wildlife viewing, access to some properties is difficult due to environmental conditions (*e.g.* wetlands, dense vegetation) and the lack of public access points. Table 5.8 provides a list of land under the jurisdiction of the Conservation Commission. A complete list of all Conservation properties listed by assessor’s parcel number and address is in Appendix 3.

Table 5.8 – Town Conservation Land

Location	Condition	acquisition date, funding source	Acreage
Dedham Town Forest	Forest and wetland, marked trails; bisected by service road utilized by public safety vehicles	1927, Town	76.49
Fowl Meadow (Neponset River Reservation)	Undisturbed wetlands, no established trails	Various, Town	68.68
Wigwam Pond area	Vacant, undeveloped with some unmaintained paths	Various, Town	57.59
Little Wigwam Pond area	Vacant, undeveloped with Some unmaintained paths	Various, Town	51.98
Court Street (along Lowder Brook)	Vacant, undeveloped	1983, Gift	5.80
Westfield Street at Meadowbrook Rd (near MIT Endicott House)	Vacant, wetland	Town	6.00
Stoney Lea Road	Vacant, forest, vernal pool	2007, Gift	2.19
Beech Street	Vacant, wetland	Town	1.60
Mother Brook Waterfront	Vacant, undeveloped; steep bank to Mother Brook	Town	1.06
Total			271.38

*** Note: All Town-owned conservation land is managed by Town of Dedham Conservation Commission with support from the Conservation Department and the Environmental Department. ***

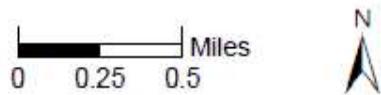
Source: Town of Dedham Tax ID/Parcel data layer

Massachusetts



Map 8 Action Plan

- Potential Connector Trail
 - Properties of Interest
- Ownership/Management**
- Private (Protected)
 - Private (Partial Protection)
 - Private (Unprotected)
 - Public (Protected)
 - Public (Partial Protection)
 - Public (Unprotected)



Data Sources: Town of Dedham, MassGIS

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Town of Dedham planning
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Dedham Town Forest

The Town Forest, Dedham’s largest holding of open conservation land, consists of almost 77 acres of land located between the north and southbound lanes of Interstate 95. The Dedham Town Forest has been an underutilized resource, in part due to its unusual location, and, until recently, the absence of marked trails. A fitness trail was created by an Eagle Scout candidate in the 1970s but was not maintained for many years and became overgrown. In 2015, an Eagle Scout candidate cleared and marked the trail and built a wooden boardwalk near the start of the trail as his service project, resulting in a significant increase in use by outdoor enthusiasts in recent years. In early 2018, another Eagle Scout candidate performed trail maintenance, improved signage, extended the boardwalk, and created a trail map. Although the Town Forest does not have a designated parking area, visitors can park on nearby roads and walk a short distance along a sidewalk to gain access through a gate on Washington Street (Figure 5.4). The Town Forest is a unique spot with varied natural resources and potential for an expanded network of trails.



Figure 5.4 –Dedham Town Forest
Photo by Jef C. Taylor

Fowl Meadow

Fowl Meadow is a large wetland area that extends into Boston, Milton, and Canton and into the Blue Hills Reservation. In Dedham, it is bordered by Route 95, the Neponset River (also the Canton town line), and the Greenlodge/Manor neighborhood. Some Dedham residents have suggested that the Town maintain existing paths and add new trails in Fowl Meadow. However, much of Fowl Meadow is swampy and densely vegetated and is also a priority habitat for rare species of plants and amphibians. While the public is welcome to visit this conservation area, it is unlikely that new trails will be created, although local wildlife will certainly continue to maintain paths through the vegetation that people can follow. In addition, it is possible to appreciate the flora and fauna of this wet meadow habitat simply by walking along the residential roads in the Manor neighborhood that border Fowl Meadow.

Wigwam Pond

Improved access to and development of trails around Wigwam Pond remains a high priority for the OSRC and for the community, as indicated by responses to the online survey and during the public workshops conducted during this planning process. The existing access point on Quabish Road near “A Tent For Rent” was negotiated as part of the Legacy Place development in 2011. When Legacy Place opened, L.L. Bean hosted canoe and kayak programs at this location, but these programs were relocated to the Dolan Center when the public boat launch was built as part of the Dedham Water Trail. Without active promotion and programming, the Wigwam Pond access point on Quabish Road has become an under-utilized resource and overgrowth of aquatic vegetation sometimes makes it difficult for kayaks and canoes to access the open water of the pond.

In 2015, State Representative Paul McMurtry earmarked \$100,000 for a canoe and kayak launch, a trail, and boardwalk at Wigwam Pond. Even with this financial support, the cost to complete the project would still be significant for the Town. The OSRC is working closely with the Conservation Commission, the Planning Department, and the Environmental Department to find an alternative access point. Several sites have been considered, but all are privately owned and would require an easement for public access. Two locations – one on Stergis Way and one on Providence Highway – have been considered in recent years. If the Town can find a viable access point, it is possible that the Office of Fishing and Boating Access (the agency that helped the Town build the launch at the Dolan Center) may provide some financial assistance.

Mother Brook Waterfront

In East Dedham there is a semi-contiguous network of open space along the banks of Mother Brook running from Mill Pond Park on Colburn Street, through the woods behind Condon Park to the area behind Delapa Plaza (270 Bussey Street). An Eagle Scout created a trail connecting Condon Park to Delapa Plaza several years ago, but it has become overgrown and could benefit from maintenance and improved signage. A narrow trail continues along Oakland Street toward the Stone Mill Condominiums and Dedham Housing Authority property.

Improving and maintaining the walking trails along Mother Brook is an important element of the mission of the Mother Brook Community Group (MBCG), formed in 2008 “to bring together the residents and business owners who are interested in promoting a vital and thriving community among the neighborhoods connected by historic Mother Brook.”¹¹⁷ In July 2014, the Town held a grand opening of Mill Pond Park after many groups and individuals joined together to remove invasive Japanese knotweed, install a handicap pedestrian accessible walkway and fishing/viewing platform, and commission Dedham’s first permanent public art installation, a steel largemouth bass created by Dedham sculptor Gints Grinsbergs (Figure 5.5).

The MBCG understands that Mother Brook, which served as the basis of the Town’s economy for three centuries, is a cultural and historic landmark that is a focal point of the East Dedham community.¹¹⁸ In Spring 2018, Town Meeting approved the use of some remaining funds from the Town’s 375th and Mother Brook 375th celebrations to build trails and parks along Mother Brook and place historical markers along these trails¹¹⁹. This project will help to connect the community and preserve the unique cultural heritage represented by Mother Brook.

In addition to the land along Mother Brook that is currently under the jurisdiction of the Conservation Commission, there are almost 50 acres of land (either undeveloped or partially developed) owned by the Town and the State which may be suitable for recreation purposes and possible trail development. This land should not be overlooked when considering the total acreage of open space along Mother Brook. Table 5.9 lists all undeveloped land along Mother Brook. A complete list identified by assessor’s parcel number and address is in Appendix 3.

¹¹⁷ www.facebook.com/motherbrook/

¹¹⁸ Mother Brook Community Group 10th Annual Meeting, April 25, 2018.

¹¹⁹ Town of Dedham 2018 Spring Annual Town Meeting Warrant, Article Seventeen.



Figure 5.5 – Fish Sculpture by Gints Grinsberts at Mill Pond Park

Photo source: Brianqua (creativecommons.org/licenses/by-sa/3.0)

Table 5.9 – Mother Brook Waterfront Open Space

Ownership/Jurisdiction	Description	Acreage
Conservation Commission	several small parcels	1.06
Parks and Recreation	Condon Park, Mother Brook passive park	8.69
Unassigned	Mill Pond, land behind Delapa Plaza	7.11
Board of Selectmen	Mother Brook Arts & Community Center	3.81
Dedham Housing Authority*	Undeveloped land near Veteran’s Road	14.67
Massachusetts Department of Conservation and Recreation	Flood Control, banks along Mother Brook from Providence Highway to Hyde Park	13.67
Total		49.00

Source: Town of Dedham Tax ID/Parcel data layer

* Dedham Housing Authority land acreage total does not include developed residential areas.

Town Parks and Recreation Land and Facilities

The Dedham Parks and Recreation Commission has jurisdiction over 96.11 acres of land, including athletic fields, playgrounds, recreation areas, facilities, undeveloped land, town commons, and several small open spaces and parks that serve as visually appealing breaks from developed areas and sites for small community gatherings and events. Two undeveloped properties currently under the jurisdiction of the Parks and Recreation Commission have potential for recreation use: the former Town Landfill located at 15 Lower East Street (off Washington Street) and the former Striar property/Manor Fields, located at 408 Sprague Street. Town-owned Parks and Recreation land is listed in Table 5.10. A complete list of Parks and Recreation properties identified by assessor’s parcel number and address is in Appendix 3.

Many of Dedham’s Parks and Recreation properties have been owned by the Town for decades, or even centuries. Table 5.10 indicates funding source used to acquire or renovate the land to the best of our knowledge, based on Norfolk County Registry of Deeds online search results.

Table 5.10 – Town Parks and Recreation Land

Parcel Name	Location	Description/Amenities/Condition	Funding source	Acreage
Manor Fields	Sprague Street	Vacant	Town (2001)	25.72
Barnes Memorial Park, Mary Ann Lewis Playground	Eastern Avenue	3 softball/baseball, 1 soccer, playground, concession, restrooms, lighting, benches	Town	14.89
Gonzalez Field	High Street, Eastern Avenue, East Street	1 synthetic turf field, ¼ mile walking path, lighting, benches, handicapped access (newly improved)	Town (1998)	6.30
Fairbanks Park	Rustcraft Road	3 baseball/softball, 1 soccer, restrooms, concession	Town (1957)	14.10
Dolan Recreation Center/Sugrue Field	Common Street	1 baseball/softball, dog park, boat launch, nature trails, community garden	Town (2006)	11.40
Former Landfill	Lower East Street	vacant	Town	7.68
Condon Park	Bussey Street	1 baseball/softball, 1 soccer, playground	Town	7.37
Paul Park (Greg M. Riley Playground)	Cedar Street	1 baseball/softball, 1 basketball/pickleball court, playground	Town (NPS grant for playground)	2.93
Dedham Common	Common Street, High Street, Bridge Street	town common, undeveloped	Town, historic	2.04
Mother Brook Park	Milton Street	passive recreation, undeveloped	Town	1.32
Churchill Park	Churchill Place	1 baseball/softball, 1 basketball/ pickleball court, playground	Town	0.92
Triangle Park	Hyde Park Street	grassy lot with rain garden	Town (1937)	0.91
Oakdale Common	River Street	landscaped fenced lot with Armed Forces monument, benches, passive recreation	Town	0.46
Mill Pond Park**	Colburn Street, Bussey Street	passive recreation, benches, public art, water access	Town, gifts	0.20
Hartnett Square	Milton Street	triangular landscaped lot with benches	Town	0.09
Total				96.11

*** Note: All Town-owned parks and recreation property is managed by the Town of Dedham Parks and Recreation Commission and Parks and Recreation Department. ***

** Mill Pond Park is a small park intended for passive recreation that is part of a larger parcel which extends along the bank of Mother Brook. Although the larger parcel is under the jurisdiction of the Conservation Commission, The Parks and Recreation Commission has care, custody, and control of the 0.2 acres of Mill Pond Park.

Source: Town of Dedham Tax ID/Parcel data layer

Dolan Recreation Center

The Dolan Recreation Center was acquired by the Town in 2006 and is a valuable resource for Dedham residents. The building contains offices for the Parks and Recreation Department, a gymnasium, and a dance studio that is used for various recreation programs. Outdoor amenities include the Town Dog Park, community gardening plots, one turf baseball/softball field, a boat launch allowing access to the Charles River, and a nature trail. The Dolan Center is used for community events and the boat launch is used by L.L. Bean for outdoor programs.

Dedham Water Trail

The Dedham Water Trail is a 7.2-mile trail along the Charles River in Dedham that connects many conservation areas and parks, passing through Motley Pond and Cow Island Pond then making a loop by way of Long Ditch in Cutler Park (Figure 5.6). There are five public boat launches along the Water Trail and many significant historic and ecological sites that are marked with signage along the route. A map of the Dedham Water Trail is included in Appendix 7. The Town's public boat launch at the Dolan Center connects the Water Trail to walking trails at Whitcomb Woods, NewBridge on the Charles and Wilson Mountain.

The Environmental Coordinator secured a grant through the Recreational Trails Program, a national program that is administered at the State level by DCR. The Recreational Trails Grant funded much of the construction cost of the canoe and kayak launch at the Dolan Center, and the Dedham Trails partnership secured tremendous financial support from the community to complete maps and signage, resulting in little cost to the Town. The Dedham Water Trail was designated a National Recreational Trail by the United States Department of the Interior in July 2014. National Recreational Trails are part of a national system of trails and greenways on water and over land combining nature, wildlife, outdoor activity and history.



Figure 5.6: canoes and a kayak following the Dedham Water Trail on the Charles River

Manor Fields

The Striar Property in the Manor neighborhood was purchased through a vote of Town Meeting and the citizens of Dedham in 2001. After several proposals for use of the property, the Manor Fields Scoping Committee was formed in 2012 with representatives from the Board of Selectmen, Planning Board, Conservation Commission, Parks and Recreation Commission, OSRC, and Town Meeting members. The Manor Fields Scoping Committee was tasked with developing a plan for the 24.65 acres with active, passive and leisure facilities to address the recreation needs in Dedham. Based on input from the Town's Master Plan, the 2010 OSRP, national recreation standards, Dedham Youth Sports organizations and the community, plans were submitted to and approved by the Planning Board and Conservation Committee with mitigation and Order of Conditions issued in 2014, although some of the permits have lapsed. In Fall 2019, the Parks and Recreation Commission have submitted a Town Meeting Warrant Article to seek funding for this project. The following amenities were included in 2014 plan:

- 1 regulation size lighted soccer/lacrosse field
- 1 regulation size lighted football/field hockey field
- 2 lighted basketball courts
- 5 lighted tennis courts
- 1 concession/restroom building
- 2 dog parks (small and large dog areas)
- 1 playground
- 1 Bocce court
- Approximately 1.5 miles of trails through conservation area
- Parking for 170 vehicles

Town Landfill

The former Town Landfill has a small frontage on Lower East Street and extends behind the Dedham Health and Athletic Club and the Dedham Mall. The land was originally considered for a solar farm; however, the Dedham Sustainability Advisory Committee determined that only half of the 8-acre site would be suitable for a solar installation and removing the forestland that has grown on top of the landfill would counteract any advantages to generating solar power there.¹²⁰ Also, the Landfill is not properly capped and would require expensive preparation before it could be used for recreation purposes.

Public School Property

The School Department has jurisdiction over 94.37 acres of land, which includes buildings, fields, playgrounds, recreation facilities and paved areas. Although there are many fields and playgrounds on school property, the land is not permanently protected as open space under Article 97. The School Department has discretion over use of the land and may need to make use of the surrounding open space for school expansion. In the future, if any schools are closed, sold, or leased, the Town should attempt to preserve the open space and recreation facilities. Table 5.11 provides a list of the public schools in Dedham by area; a complete list of all Dedham Public School properties identified by assessor's parcel number and address is in Appendix 3.

¹²⁰ Dedham Environmental Coordinator Interview.

Table 5.11 – Dedham Public School Property

Parcel Name	Location	Acreage	Description/Comments
Dedham High School	Whiting Avenue	11.39	1 turf field (football, soccer, lacrosse, field hockey); track, 1 basketball/volleyball (indoor)
Dedham Middle School	Whiting Avenue	8.61	1 baseball/softball, 1 basketball/volleyball (indoor)
Early Childhood Education Center (Opening 2019)	High Street	29.20	2 playgrounds
Capen School	Sprague Street	5.28	2 baseball/softball, playground, 1 basketball
Avery School	High Street	5.60	2 playgrounds, 1 basketball
Greenlodge School	Greenlodge Street	16.74	2 baseball/softball, 1 playground
Oakdale School	Cedar Street	6.90	2 baseball/softball, ½ court basketball, 1 playground
Riverdale School	Needham Street	6.11	1 baseball/softball, 1 soccer, 1 basketball, playground
Mucciaccio Pool, Pool Field, Tennis Courts	High Street	4.55	1 soccer, 3 tennis courts, indoor swimming pool
Total		94.37	

Source: Town of Dedham Tax ID/Parcel data layer

A Memorandum of Understanding (MOU) between the Parks and Recreation Commission and the School Committee details the joint maintenance agreement for 12.35 acres of fields and playgrounds on school property, as well as the Mount Vernon Street tennis courts. The MOU details the responsibilities of each Committee for care and maintenance throughout the year. According to the MOU, the Parks and Recreation Director will work with the Facilities Director and the Assistant Superintendent for Business and Finance to determine maintenance and care needs and to provide joint support for funds from the Annual Town Budget to cover expenses. Table 5.12 lists school properties, acreage and amenities covered by the MOU.

Table 5.12 – Memorandum of Understanding Properties

School Property	Location	MOU Acreage	Description
Dedham Middle School	Whiting Avenue	1.00	Loewen Field (softball)
Capen School	Sprague Street	1.90	2 baseball/softball, playground
Avery School	High Street	1.10	2 playgrounds, 1 basketball
Greenlodge School	Greenlodge Street	2.00	2 baseball/softball, playground
Oakdale School	Cedar Street	2.35	2 baseball/softball, playground
Riverdale School	Needham Street	2.80	1 baseball/softball, 1 soccer, playground
Mucciaccio Pool, Pool Field, Tennis Courts	High Street	1.20*	1 soccer, 3 tennis courts, indoor swimming pool
Total		12.35*	

* The Pool Field is 1.20 acres. The area of the Tennis Courts (approx. 0.35 acres) is not included in this figure.

A Joint Committee will oversee future development of school fields for recreation and will provide input to architects and/or engineers regarding such development. The terms of the MOU will be updated as conditions and needs change (e.g. changes will probably be made when the new Early Childhood Education Center on High Street opens in early 2019). The Parks and Recreation Commission also has jurisdiction over programming and most maintenance at the Mucciaccio Pool; this assignment of jurisdiction is separate from the MOU.

State, County and Federal Land

The Commonwealth of Massachusetts, Norfolk County, and the United States own more than 880 acres of vacant land in Dedham (listed in Table 5.13 and Appendix 3).

Table 5.13 – County, State, and Federal Land in Dedham

Name	Mgmt.	Location	Description	Acreage
Fowl Meadow	DCR	Neponset River floodplain	Conservation	205.69
Wilson Mountain Reservation	DCR	Common Street, Westfield Street	Recreation, preservation	198.43
Cutler Park Reservation	DCR	Needham St., Rosemary Rd.	Recreation, preservation, Canoe/kayak launch	184.31
Stimson Wildlife Sanctuary	DCR	Ames Street, Pleasant Street	Conservation, wildlife observation	17.50
Mother Brook Flood Control	DCR	Mother Brook Waterfront	Flood control	13.67
Whitcomb Woods	DCR	Common Street	Recreation, preservation	12.10
Riverside Park (Marie-Louise Kehoe Park)	DCR	Riverside Drive	Playground, tennis, 1/2 court basketball, field, canoe/kayak launch	8.35
Old Town Boat House	DCR	Pleasant Street	Preservation	0.14
Mass DOT	DOT	West Street	Highway median	107.21
			State/DCR Total	747.41
Norfolk County Wetlands	Norfolk County	Martin Bates Street	Vacant, wetlands	6.70
Charles River Flood Control	US Army Corps	Charles River Bank	Flood control	126.42
			Total	880.53

Source: Town of Dedham Tax ID/Parcel data layer

DCR manages 626.53 acres of State land in Dedham, including parks with land and facilities suitable for active recreation, conservation land, and flood control land along Mother Brook. MassDOT manages 107.21 acres of vacant land along the median strip of I-95. The larger MassDOT parcel is north of Route 109 and adjacent to the Norfolk County Correctional Center, which reduces its appeal for public recreation. The second MassDOT parcel is 28 acres adjacent to the Town Forest (south of Route 109). If the Town were to acquire this land from the State, it would significantly increase the area of the Town Forest (almost 37%) and a portion of the land could be used for parking.

Norfolk County owns 27.90 acres of land in Dedham, most of which is developed with County offices, District and Superior Courts, the Registry of Deeds, parking lots, and the Norfolk County Correctional Center. The County owns 6.7 acres of undeveloped wetlands in Dedham Village. The US Army Corps of Engineers has jurisdiction over 126.42 acres of flood control land along the Charles River.

Wilson Mountain Reservation

Wilson Mountain Reservation is the largest preserved open space in Town, covering almost 200 acres of open space. Managed by DCR in partnership with the Trustees of the Reservation, the Reservation has miles of marked trails through forests, wetlands, rocky outcrops and meadows. A trail map of Wilson Mountain Reservation can be found in Appendix 7. Wilson Mountain offers the highest terrain in Town with panoramic views of Boston skyline, the Blue Hills and surrounding communities. There is a small parking area on Common Street, and on-street parking in a residential neighborhood at the entrance on Westfield Street. A survey of Dedham residents conducted in 2017 as part of this planning process cited Wilson Mountain as the most popular recreation amenity in Dedham, used by residents of all ages, from all neighborhoods, and frequented by families with and without children. Additional information about Wilson Mountain Reservation is available on the DCR website.

Cutler Park Reservation

Approximately 184 acres of Cutler Park Reservation, a 700-acre park managed by DCR, is in Dedham's Riverdale neighborhood (the rest of the Reservation is in Needham). Cutler Park provides opportunities for hiking, fishing, boating, mountain biking, and nature study. Cutler Park's biodiversity makes it a spot that is well known by naturalists for bird watching, botanical study and herpetology. One of the primary access points to Cutler Park (with parking) is located on Needham Street in Dedham near Great Plain Avenue and Route 95. A short distance southeast of this parking area is the Needham Street Launch, a public boat launch with parking for several cars and access to the Charles River just prior to the Long Ditch intake.

Cutler Park has approximately 8 miles of hiking trails, some of which, mainly those in the Needham section, are also very popular for mountain biking. A main section of the trail through Cutler Park is part of the 9.5-mile long Blue Heron Trail, a multi-town trail that passes through five DCR properties and includes sections along public sidewalks outside the park system. The Blue Heron Trail exits Cutler Park at the corner of Vine Rock Street and Riverside Drive, follows Vine Rock Street to the east, then continues through Riverdale Park (Marie-Louise Kehoe Park) on Riverside Drive along the Charles River. The Blue Heron Trail leaves Riverside Park, crosses the Charles River on Bridge Street, then turns north on the VFW Parkway along the east bank of the Charles River.¹²¹ The Cutler Park Reservation Trail Map can be found in Appendix 7.

Fowl Meadow/Neponset River Watershed

More than 200 acres of the Fowl Meadow wetland system are in Dedham. The entire Fowl Meadow system, over 8,300 acres of land in seven different cities and towns, has been

¹²¹ www.mass.gov/service-details/blue-hills-complex

designated as an Area of Critical and Environmental Concern, recognizing the value of this area as a priority habitat for rare or endangered species. Fowl Meadow is a unique natural resource, and is a popular destination for hikers, paddlers, and nature enthusiasts. Although the lack of an established trail system makes this area difficult to access from Dedham, it remains a valuable natural area in the Town.¹²²

Stimson Wildlife Sanctuary

The State purchased the Stimson Wildlife Sanctuary from the Dedham Historical Society in 2001. Located at a bend in the Charles River off Ames Street, the Sanctuary protects over seventeen acres of freshwater wetlands, fifteen hundred feet of riverbank, and a small forested upland. There is no public access to this property, which is primarily densely vegetated wetlands. Across the river, a smaller parcel on Pleasant Street (once the home of the Dedham Boat Club) was also acquired by the State in 2001.

Massachusetts Flood Control Land

In addition to State Parks, DCR also owns 13.67 acres of land along Mother Brook, which currently functions as a flood control system for the Charles River. The Mother Brook Waterfront has significant historic value to the Town and has potential for recreational use, as described under the Mother Brook Waterfront heading in Section 5B.1. Some State-owned land along Mother Brook has potential for recreational use, and should be considered when plans for parks and trails are finalized.

United States Flood Control Land

The US Army Corps of Engineers has jurisdiction over 126.42 acres of land along the Charles River for flood control purposes and holds easements on many more acres of wetlands along the River. When the acreage of the Fowl Meadow, Cutler Park and land along the Charles River are combined, over 645 acres of land along Dedham's waterways are protected.

5B.2 Nonprofit Conservation Land

Dedham Land Trust

The Dedham Land Trust is a charitable organization that was established in 1989 to acquire and protect land for the benefit of conservation and public use. The Dedham Land Trust protects open space through purchase or gift of land, conservation restrictions, and conservancy partnerships. The Dedham Land Trust consists of a broad coalition of individuals, town officials, and local businesses who agree that the acquisition and protection of natural land is important if we are to retain and improve the quality of life in Dedham. The Dedham Land Trust operates entirely on a volunteer basis and is always looking for others to join. For more information about the Dedham Land Trust, visit: www.dedhamlandtrust.org.

The Dedham Land Trust owns approximately 21 acres of land in Dedham. A significant holding of the Dedham Land Trust is a portion of Whitcomb Woods located on Common Street, which

¹²² www.mass.gov/envir/massbays/pdf/moris/neponset_wetlands_restoration_plan.pdf

was added to the Wilson Mountain Reservation with help from the Trust for Public Land and DCR in 1998. Trails through Whitcomb Woods connect Wilson Mountain with the Dolan Center and the nature trails at NewBridge on the Charles. This property features approximately 500 feet of frontage along the Charles River as well as a certified vernal pool. The Dedham Land Trust also holds a conservation restriction on 4.1 acres of private land. Table 5.14 provides a list of Dedham Land Trust properties (including the conservation restriction); a complete list identified by the assessor’s parcel number and address is included in Appendix 2.

Table 5.14 – Dedham Land Trust Properties

Name	Description	Location	Acreage
Whitcomb Woods	Forest, vernal pool	9 Warren Road	17.29
Wigwam Pond	Pond shoreline/forest	Gibson Ave, Ice House Ln, Mac's Place, Powers St, Wildwood Dr, Wentworth St	2.45
Weld Pond	Pond shoreline/forest	51 Meadowbrook Road	1.43
Conservation Restriction	Forest, wetlands	242 Lowder Street	4.10
		Total	25.27

Source: Town of Dedham Tax ID/Parcel data layer

Massachusetts Audubon Society

The Massachusetts Audubon Society owns 12.21 acres of land with one quarter mile of frontage on I-95. The property is primarily an oak forest and maple swamp adjacent to Weld Pond and is not open to the public. Although there is currently no public access point, it could be beneficial to the Town to seek public access to this land from the Massachusetts Audubon Society.

5B.3 Other Public Land

Town Historic Property

Established in 1635, Dedham has a rich history that spans almost four centuries. Preservation of the Town’s history is truly a community effort; historic properties are maintained through a combination of efforts from the Town, the Dedham Historical Society and Museum (see Section 5A.5), and the efforts of private residents and organizations (*e.g.* restoration of the Old Village Cemetery, described in Section 5B.3 and operation of the Dedham Community House described in Section 5A.5).

The Endicott Estate (Figure 5.7), located at 656 East Street, was built in 1904 by Henry Bradford Endicott, founder of Endicott-Johnson Shoe Company. In 1955, Henry’s daughter Katherine bequeathed the estate to the Town and, after her death in 1967, the land and historic mansion were turned over to the Town to be used for “educational, civic, and recreational purposes.” The Endicott Estate is listed on the National Register of Historic Places.¹²³ The Estate consists of two parcels of land totaling 18.27 acres of land, listed in Appendix 3. The most prominent structure on the grounds is an elegant 19th century mansion that is used by Town Boards and

¹²³ www.endicottestate.org

The Endicott Estate (Figure 5.7), located at 656 East Street, was built in 1904 by Henry Bradford Endicott, founder of Endicott-Johnson Shoe Company. In 1955, Henry’s daughter Katherine bequeathed the estate to the Town and, after her death in 1967, the land and historic mansion were turned over to the Town to be used for “educational, civic, and recreational purposes.” The Endicott Estate is listed on the National Register of Historic Places.¹²⁴ The Estate consists of two parcels of land totaling 18.27 acres of land, listed in Appendix 3. The most prominent structure on the grounds is an elegant 19th century mansion that is used by Town Boards and Committees as well as community groups for meetings, activities, and events. The Endicott Estate can also be rented out for weddings, parties, corporate events.



Figure 5.6 – The Endicott Estate

The grounds of the Endicott Estate offer passive recreation space for the public. There are no formal trails or paths, and organized sports are generally not permitted; however, people enjoy walking and jogging on the property, as well as cross-country skiing, snowshoeing and sledding in the winter. The summer concert series hosted by the Dedham Junior Women’s Club, the James Joyce Ramble (a unique annual road race), and the Bay State Antique Auto Club Car Show are a few of the popular events that are held on the grounds of the Endicott Estate.

Three other structures are located on the grounds of the Endicott Estate: The Endicott Branch of the Dedham Public Library, a caretaker’s house, and the Endicott Community Greenhouse. The Greenhouse is operated by a nonprofit organization that offers horticultural, educational, and recreational opportunities to Dedham residents¹²⁵. The Endicott Community Greenhouse is an all-volunteer organization the generates most of its revenue from plant sales and donations,

¹²⁴ www.endicottestate.org

¹²⁵ endicottcommunityg.wixsite.com/endicott-greenhouse/

and all net proceeds are used for educational programs and scholarships for high school seniors pursuing agriculture or environmental science careers.

Town Cemeteries

Dedham has three cemeteries: The Old Village Cemetery, Brookdale Cemetery, and a small burial ground for the Dedham Temporary Home for Women and Children, a shelter founded in 1864 by Hannah Balch Chickering for women who had been discharged from prison. The Chickering Home burial ground is a small parcel which serves as a memorial to those who died at the Home. Dedham’s Engineering Department and DPW have created online viewers of the Old Village Cemetery and Brookdale Cemetery.¹²⁶ Table 5.15 provides a list of Town-owned cemeteries; a detailed list of Town-owned cemetery properties identified by assessor’s parcel number and address is included in Appendix 3.

Table 5.15 – Town Cemeteries

Cemetery	Location	Acreage
Brookdale Cemetery	Brookdale Avenue/Demetra Terrace	47.41
Old Village Cemetery	30 Village Avenue	4.10
Chickering Home	38 Pond Farm Road	0.07
	Total	51.58

Source: Town of Dedham Tax ID/Parcel data layer

The Old Village Cemetery (Figure 5.8) is Dedham’s oldest burial ground and one of the oldest in the State. Established in 1636, the four-acre cemetery on Village Avenue has more than one thousand gravestones under a canopy of mature trees. The gravestones and vaults in the Old Village Cemetery bear the names of individuals and families who were prominent in the Town’s history. The earliest marker is that of Hanna Dyar who died on December 15, 1678.

Community members have created a nonprofit organization, The Dedham Village Preservation Association, to raise funds for repair and maintenance of the Old Village Cemetery, to improve accessibility, and to establish an endowment fund for future maintenance.¹²⁷ The Old Village Cemetery has suffered the effects of time and weather and needs significant maintenance. The paths through the cemetery and gravestones have deteriorated, but it is a pleasant and interesting place to walk. The Old Village Cemetery is one of more than 30 stops on a self-guided walking tour of Historic Dedham Village created by the Dedham Historical Society and Museum.¹²⁸

The Brookdale Cemetery on Brookdale Avenue, established in 1880, is a 47-acre cemetery with approximately two miles of meandering paths and hilly terrain. The eastern edge of Brookdale Cemetery follows historic Mother Brook for more than a third of a mile. While not as old as the Old Village Cemetery, many prominent figures from Dedham’s history are buried in the

¹²⁶ www.dedham-ma.gov/departments/engineering/gis/gis-maps-applications/by-department/cemetery

¹²⁷ dedhamvillage.org/old-village-cemetery/

¹²⁸ dedhamhistorical.org/wp-content/uploads/2016/03/Historic-Dedham-Village.pdf

Brookdale Cemetery; their grave markers can be found using the online viewer. An annual ceremony honoring Dedham’s Veterans takes place at Brookdale Cemetery on Memorial Day.

Figure 5.8 – The Old Village Cemetery



Abandoned Rail Corridor

From 1835 until approximately 1967, the Boston and Providence Railroad and later, the MBTA, ran a train line from Readville Station to the train station that once existed where the Keystone Parking Lot is currently located in Dedham Square. In 1999, the Town acquired the abandoned rail corridor along with 6.3 acres referred to as the “soccer field” (currently Gonzalez Field) from the MBTA. The rail corridor in Dedham is approximately 1.3 miles long and the width varies from 50 to over 80 feet, creating a linear parcel that is approximately 10 acres. The original corridor has become segmented, initially when the Mount Vernon Street underpass was blocked and the bridge over River Street was removed, and more recently by the construction of the Avery School. There are, however, significant sections of the corridor still intact.

The land is under the jurisdiction of the Board of Selectmen and the School Department. The 2010 OSRP and the 2009 Town Master Plan both recommend the corridor be converted to a multi-use linear park. Conversion of this corridor to the Dedham Rail Trail was cited as a top priority for many Dedham residents in the online survey and at public workshops conducted for this OSRP update. If converted, the rail trail would be a major asset to the community,

providing an ADA compliant path that connects three schools and offers a safe pedestrian and bicycle route between several Dedham neighborhoods and Dedham Square. The rail trail would also serve one of the two Environmental Justice populations in Dedham.

In 2019, support for the Dedham Rail Trail remains strong. Copies of two letters written in 2010 by Mass DOT were obtained that outline Town's obligations when building the new Avery Elementary School. The Town agreed that the school would not "adversely impact any potential transportation use" and that the building must be sited "to allow the future construction of the Dedham Rail Trail." The Friends of the Dedham Heritage Rail Trail have requested that the ongoing School Traffic Study include the Dedham Rail Trail in the scope of its analysis regarding pedestrian safety, biking access, and safest routes to school. The MAPC LandLine project, which aims to "connect our greenways and trails into a seamless network" considers the Dedham corridor an important link in the LandLine trail network, lending further support to the advancement of the Dedham Rail Trail.¹²⁹

Unassigned Town Open Space Property

There are 27.42 acres of vacant land owned by the Town but have not been assigned to a specific management entity. Although many of these parcels are small lots with limited access, some are suitable for recreation purposes and several should be under the jurisdiction of the Conservation Commission. Some of these properties should be evaluated by either DPW or the Engineering Department because of proximity to public rights-of-way.

Several of these properties are small parcels that are either entirely bound by private property or are narrow parcels between residences. Twelve of the properties were transferred to the Board of Selectmen as surplus land by Town Meeting vote in May 2012, "for the purpose of conveyance, and to authorize the Board of Selectmen to convey such parcels by public auction or otherwise."¹³⁰ The OSRC recommends that the Board of Selectmen review these properties, as well as a few other parcels that were not included in the 2012 vote, and develop a plan to convey them to abutters. Appendix 4 contains a list of unassigned properties owned by the Town, along with recommendations from the OSRC about how they should be assigned.

Urban Land Assessment

After more than 375 years of development, Dedham is approaching buildout and only a relatively small amount of land remains undeveloped. The Urban Ecology Institute and the Trust for Public Land developed the Urban Land Assessment, a tool to help communities evaluate opportunities for additional open space to be used for conservation or recreation purposes. Dedham has not completed an Urban Land Assessment, but we have added it as a goal to help the town identify priority areas.

¹²⁹ www.mapc.org/transportation/landline/

¹³⁰ Town of Dedham May 2012 Town Meeting Warrant, Article Thirty-Eight.

Section 6: Community Vision

To determine what residents of Dedham value about open space and recreation, two public workshops, an online survey, and discussions with Dedham residents who either use or are interested in using Dedham’s varied open spaces and recreation facilities were conducted as part of the planning process. Residents also provided input at regular meetings of the Open Space and Recreation Committee and the Recreation Master Plan Steering Committee. Due to the unique nature of this project as two parallel, complementary projects - an Open Space and Recreation Plan (OSRP) Update and a Recreation Master Plan - the Project Team was afforded the opportunity to gather additional information through interviews with administrative, programming and maintenance staff; members of elected and appointed Boards and Committees; and community stakeholders with specific interests, including sports, active and passive recreation, conservation, and accessibility.

The public workshops and all committee meetings were posted at Town Hall and on the Town website in accordance with Massachusetts Open Meeting Law. Public workshops and links to the online survey were also advertised via social media and through targeted communication by email with neighborhood and other community groups. Importantly, the two EJ populations in Dedham are within the Oakdale and East Dedham neighborhoods, both of which have active neighborhood groups (Oakdale Square Alliance and Mother Brook Community Group). Contacts from these groups were included in list of more than 30 stakeholders who receive direct correspondence from the Steering Committee.

6A. Description of Process

6A.1 First Public Workshop

The first public workshop was held on March 7, 2017 at Dedham Middle School to give community members the opportunity to discuss what they feel the Town is doing well, what it could be doing better, and what programs or resources residents want that are currently not available in Dedham. The Project Consultant Team provided a brief overview of the project’s scope of work and timeline, celebrated completion of many action items from the 2010 Seven-Year Action Plan and engaged community members in facilitated workgroups to discuss their level of satisfaction with the Town’s parks, recreation, and open space resources.

Residents were asked to report where they live and where they recreate in Dedham to allow better understanding of demographic makeup of participants (Figure 6.1).



Figure 6.1 – Residents mark where they live in Dedham.

During the workshop, participants were asked three questions, which are listed below. A summary of responses follows each question. A full summary of all meeting materials is included in Appendix 9 (Figure 6.2). Participants worked in small groups to answer the following questions (Figure 6.3).

Question 1. What is the Town doing well? What is the Town doing well by way of protecting the natural environment and/or providing recreational opportunities for residents? The top 5 responses are listed here; all responses are in Appendix 9.

1. Creation of trails for recreation (Dolan Center, Wilson Mountain) (22)
2. Access to Charles River and the Dedham Water Trail (18)
3. Recreational and sports opportunities for kids/teens all year long (15)
4. Maintenance of fields/parks (12)
5. Awareness of open space amenities, and in turn, stewardship of sites (7)



Figure 6.2 – Residents discuss open space and recreation opportunities in Dedham.

Question 2. What could the Town do better? What existing recreation facilities could benefit from improvements? How could they be improved? What natural resource protection strategies being used by the Town could be strengthened?

Responses to Question 2 are presented in two formats. The Top 5 priorities summed across all groups are listed below (all responses are in Appendix 9). Because participants worked in small groups (8 – 10 individuals) to rank their priorities, Table 6.1 presents the top 3 priorities for each group. Interestingly, the highest priority item across all groups does not appear in Table 6.1 because it did not rank among the top 3 priorities for any individual group.

Top 5 Priorities (all participants):

1. Better clean-up/trash pick-up (43)
2. Better balance/maintenance of youth sports/fields (39)
3. Maintenance of fields (31)
4. Improved connectivity/bikes/pedestrians (21)
5. Better communication of programming for all demographics (10)

Table 6.1 – What could the Town do better?

Group	#1 Priority	#2 Priority	#3 Priority
1	Better balance/maintenance of youth sports/fields	Equal recreation opportunities for all demographics	Davis Field improvements
2	Better balance/maintenance of youth sports/fields	Better communication of programming for all demographics	Restroom facilities
3	Maintenance of fields	Better connectivity for bikes and pedestrians	Better balance/maintenance of youth sports/fields
4	Better connectivity for bikes and pedestrians	Improved access to and maintenance of waterways	Better balance/maintenance of youth sports/fields
5	Maintenance of fields	Access to Wigwam Pond	Better balance/maintenance of youth sports/fields

Question 3. What is the Town not doing? What are new recreational opportunities that the Town should consider? What natural areas need protection but are not? What are some new strategies to protect the natural environment?

Responses to Question 3 are also presented in two formats. The top 6 priorities (because of a 4-way tie) across all groups are listed below, and Table 6.2 lists the top 3 priorities for each group.

Top 6 Priorities (all participants):

1. Rail Trail (18)
2. Improved field maintenance (17)
3. More lacrosse fields (12)
- Safety (sidewalks, crosswalks, traffic lights) at/near parks (12)
- Improved communication on open space/programming amenities (12)
- Striar/Manor Fields property development (12)

Table 6.2 – What is the Town not doing?

Group	#1 Priority	#2 Priority	#3 Priority
1	More lacrosse fields	Safety (sidewalks, crosswalks, traffic lights) at/near parks	On-road bike lanes
2	More lacrosse fields	Safety (sidewalks, crosswalks, traffic lights) at/near parks	Swimming spots in summer
3	Striar property/Manor Fields development	Bike paths	Splash park/outdoor pool
4	Improved field maintenance	Improved communication on open space/programming amenities	Programming for growing senior population
5	Rail Trail	Programming for growing senior population	Bike paths



Figure 6.3 – Residents were engaged in small workgroups to discuss and prioritize what they feel the Town is doing well, what the Town could do better, and what the Town is not doing.

The first public workshop also included a children’s workgroup led by a member of the Steering Committee. Children were asked to identify the top 5 sports they (or their siblings or other family members) participate in on a weekly basis. Their top responses were (vote count in parentheses): Basketball (3), Soccer (3), Swimming (3), Baseball (2), and Cross Country (2). Children were also asked to draw a picture of three open space areas (parks) or recreational facilities (athletic complex/fields) they visit at least once each week (Figure 6.4).

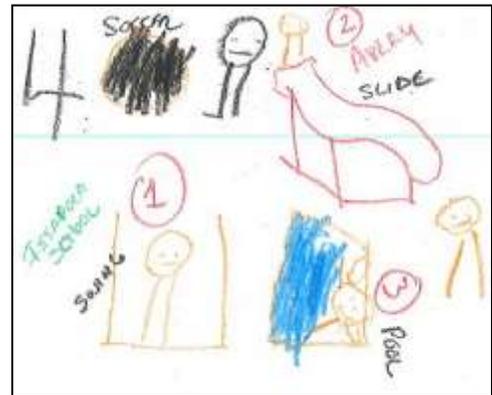


Figure 6.4 – Drawings from the children’s table at the first public workshop.

6A.2 Online Survey

An online survey was open for five weeks following the first public workshop. Just over 500 respondents participated in the survey. To better understand the input of survey respondents with respect to specific questions, several comparative analyses were performed. First, an analysis of responses across census block groups and neighborhood areas was done for select questions to determine if there is a difference in how respondents feel regarding:

- Activities/facilities not available in Dedham
- Proximity to open space/recreation facilities
- Amenities to enhance experiences at open space areas
- Amenities to enhance experiences at recreation facilities

Analysis of responses that considered age groups of household members was completed for select questions. Because 2015 population estimates reported household compositions in Dedham that include ‘Families’ (64.6%) and ‘1-Person’ (32%),¹³¹ it was important to differentiate responses from each group, and not assume that different types of households responded similarly. ‘Families with Children’ (respondents with household members under the age of 19) were separated from ‘Other Participants’ regarding:

- Open space/recreation facilities currently utilized
- Open space/recreation facilities Dedham needs
- Satisfaction with open space/recreation facilities
- Activities not provided sufficiently
- Amenities to enhance experiences at open space areas
- Amenities to enhance experiences at recreation facilities

Some observations from the survey include:

- Families with children primarily use three types of facilities:
 - 47% use trails and sidewalks
 - 47% use parks, including the Endicott Estate
 - 44% use athletic fields
- Families with children tend to cite ball fields and/or team sports locations in response to questions about which locations they use (*e.g.* Fairbanks Park, Dolan Center, Gonzalez Field) while households without children tend to cite park and conservation areas (*e.g.* Cutler Park, Wilson Mountain, Dog Park).
- More than two thirds of the households without children living at home report trails and sidewalks as the facilities they use most often.
- Most respondents generally support the preservation and/or acquisition of buildings, places of historical significance, and open space.
- In response to the question “How satisfied are you with existing open space and recreational facilities for the following age groups?” respondents more often report a higher level of satisfaction with facilities for younger children, and are more frequently dissatisfied with facilities for older age groups (Table 6.3).

¹³¹ American Community Survey, United States Census Bureau.

- Survey respondents suggest some improvements that would increase satisfaction:
 - Enclose playgrounds, both to meet a desire for more “tot lots” and to keep children from running into the street
 - Add trash and recycling barrels and/or increase frequency of pickup
 - Look for opportunities to add new uses and amenities to existing facilities, such as picnic tables, walking paths, benches, and bike racks
- Respondents suggest opportunities for improvements to how existing fields and parks are managed (*e.g.* establishing standards for cleanliness and maintenance).
- All areas and household groups consistently identify walking paths/trails and/or bike paths/trails as the top two activities/facilities not provided for sufficiently in Dedham.
- Most areas and household groups indicate they live within one quarter of a mile (56.4%) of the nearest open space or recreation facility and that the majority walk there (65.9%).
- Most respondents in Dedham Village and West Dedham report they live between one quarter and one half of a mile from the nearest open space or recreation facility.
- Almost half of respondents visit open space or recreation areas in Dedham at least 3 times a week (37% reporting 3 times per week, 11% reporting every day).
- When asked to select from a list of specific amenities that would enhance their experience when utilizing open space and recreational facilities in Dedham, all areas and household groups consistently include restrooms and parking among their top choices.

Table 6.3 – Level of Satisfaction with Facilities for Age Groups*

Age Group	5	4	3	2	1	Number of Respondents
Under 5 years	15%	29%	33%	16%	7%	452
6-12 years	11%	28%	32%	19%	10%	436
13-17 years	6%	20%	39%	24%	11%	423
18-29 years	3%	20%	41%	24%	12%	423
30-54 years	2%	22%	36%	26%	13%	444
55+ years	3%	15%	35%	28%	20%	428

* 5 = completely satisfied, 1=completely dissatisfied

Survey participants were asked, “What are the most important actions the Town should take in the next 5 years regarding open space and recreation opportunities?” Because this was an open-response question, many responses included more than one item. Analysis of responses was challenging because some responses used different terms (*e.g.* Rail Trail/Heritage Trail, Striar Property/Striar Fields/Manor Fields), some comments were negative (*e.g.* “Don’t build the ...”), and there were some spelling errors. The following counts are good-faith estimates; all raw survey data are included in Appendix 9.

- Approximately 86 responses were in support of the Rail Trail.
- Approximately 38 responses were in support of Manor Fields.
- Approximately 10 responses were in support of **both** the Rail Trail and Manor Fields.
- More than 50 responses included the words “maintenance” or “maintain.”
- Many responses indicate general interest in biking/walking trails, access to water resources, improved safety (*e.g.* sidewalks, crosswalks).

6A.3 Second Public Workshop

On June 6, 2017, a second public workshop was held at the Oakdale Elementary School to allow community members to provide input on what Goals, Objectives, and Action Items should be included in the 2019 OSRP Update. The objectives and action items were organized under three headings, based on the goals from the 2010 OSRP:

- Natural Resource Protection, Stewardship, Restoration and Enhancement
- Recreation Area Planning and Maintenance
- Land Acquisition, Funding and Management



Figure 6.5 – Residents arrive at the second public workshop, welcome presentation.



Figure 6.6 – At the second public workshop, residents were again engaged in small facilitated workgroups to provide input on their priorities for existing, proposed and ‘what’s missing’ regarding the Goals, Objectives, and Action Items for the update to the Open Space and Recreation Plan.

The second public workshop also included a workgroup for children led by a member of the Steering Committee. Children were asked to identify the open space areas (parks) or recreation facilities (athletic complex/field) they hear about the most on a daily basis. Children were also asked to draw a picture of three alternative activities they are interested in or currently involved in that are not sports-related.

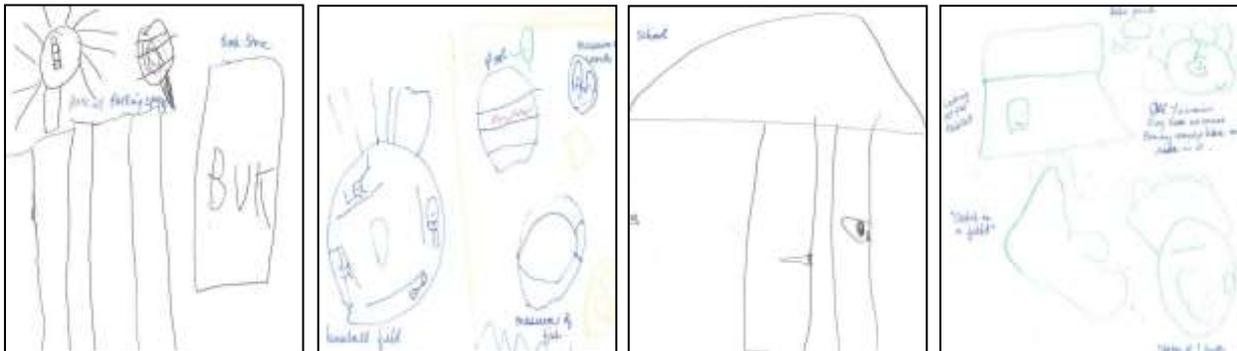


Figure 6.7 – Drawings by children at the second public workshop

Workshop participants were asked to select their top choices from more than 100 action items that they wished to see included in the OSRP update. Three lists of action items were provided for each of the three goals listed above:

- **EXISTING:** Actions in the existing 2010 OSRP that should be carried forward
- **PROPOSED:** Actions that were added based on input from the first public workshop, online survey, stakeholder interviews, and OSRC and Parks and Recreation Master Plan Steering Committee meetings
- **WHAT'S MISSING?** A blank sheet was provided for participants to suggest actions that were not included on the **EXISTING** or **PROPOSED** lists.

Goals related to natural resource protection and stewardship are listed in Table 6.4, goals related to planning and maintenance of recreation areas are listed in Table 6.5, and goals related to land acquisition and management are listed in Table 6.6. These tables include the action items that received the most votes for each of the three goals. The total number of votes is indicated in parentheses. A full list of the original choices and vote counts can be found in Appendix 9.

Table 6.4 – Goals: Natural Resource Protection, Stewardship, Restoration and Enhancement

EXISTING
1. Design a Town-wide greenway system that connects existing open space and recreation lands. Identify any gaps and work to protect and gain access. Coordinate with improvements to river access and extension of a linear park along the Charles River and Mother Brook. Link to neighboring communities. (37)
2. Extend/improve trail system between Wilson Mountain and the Charles River. Improve crosswalk and signage to Whitcomb Woods. Connect to walking trails at NewBridge. Complete NewBridge trail/wildlife corridor under Route 128. (29)
3. Develop guides to parks and publicly-accessible lands which show the trails, special features and access points for pedestrians and vehicles. Design brochures and trail guides. Create an information kiosk in the Square with maps, etc. (28)
PROPOSED
1. Continue efforts to develop the Manor Fields site for recreational use. (30)
2. Town Forest: expand trails, create trail map, figure out parking. (26)
3. Improve communication between and among major Boards and expand opportunities for coordination by Town professionals associated with those Boards. Increase civic engagement by improving technology and communications processes for Town Departments, Boards and Committees. (18)
4. Establish a ‘Dedham PROS (Parks, Recreation, Open Space)’ working collaborative to include municipal departments (Parks and Recreation, Environmental, Council on Aging, etc.) in addition to various community groups/organizations (Dedham Community House, Endicott Estate, and various neighborhood groups) to better understand what each group offers, future plans for expansion, and how each can complement each other to efficiently provide services to Dedham residents. (14)
WHAT’S MISSING?
1. Create the Dedham Rail trail for recreational use/linear park/opportunity for gardens/ educational program for children. (8)
2. Access to open spaces and natural areas to the public. (7)
3. Establish a dedicated fund for open space, parks and recreation. (6)

Table 6.5 – Goals: Recreation Area Planning and Maintenance

EXISTING
4. Create/expand bike routes/paths, consider: Abandoned rail line to Dedham Square, Bridge St. to Dedham Rotary, Dedham Square to Legacy Place. (71)
5. Create/extend sidewalk connections at the following locations: Connecting Legacy Place and Enterprise Drive, completing sidewalks on Rustcraft Road, creating safe crossing over Providence Highway/Route 1, create connections within Dedham. (44)
6. Explore multiple uses for waterways: ice-skating at Little Wigwam, outdoor classroom at Mother Brook (Mill Pond), historic water trail along Charles River. (20)
PROPOSED
1. Improve cycling and pedestrian infrastructure to support all forms of transportation. Implement a Complete Streets program to increase safety and accessibility for all modes of transportation in Dedham. (22)
2. Continue efforts to develop the Manor Fields site for recreational use. (21)
3. Look for opportunities to link neighborhoods, shopping areas, and open spaces. (12)
WHAT'S MISSING?
1. Implement the Rail Trail. (8)
2. Develop non-park space/recreation space to create better overall maintenance. (5)
3. Do not implement the Rail Trail. (4)

Table 6.6 – Goals: Land Acquisition, Funding and Management

EXISTING
1. Continue and expand efforts to promote seasonal clean-up days at neighborhood and Town-wide levels. (17)
2. Establish agreements with institutional landowners to give the Town right of first refusal on any pen space properties up for sale or change of use. (15)
3. Undertake annual review of Town owned properties and evaluate for sustainability for recreation, conservation or other OSRP goals. Develop a list of criteria for determining the highest and best use of unassigned properties. (14)
PROPOSED
1. Town Forest: expand trails, create trail map, figure out parking. (29)
2. Look for opportunities to link neighborhoods, shopping areas, and open spaces. (26)
3. Create a grant schedule so the Town is prepared to apply for funds as they become available. (15)
4. Develop a plan to provide universal access to recreation facilities, parks, and trails. (15)
5. Improve communication between and among volunteer Boards and Committees and coordinate efforts with professionals in associated Town Departments. Increase civic engagement by improving technology and communications processes for Town Departments, Boards and Committees. (15)
WHAT'S MISSING?
1. Develop and maintain the rail trail. (17)
2. No Community Preservation Act. (3)
3. More tennis courts. (3)
4. Respect abutters' concerns. (2)

6A.4 Public Committee Meetings

Several meetings of the Open Space and Recreation Committee and the Parks and Recreation Master Plan Steering Committee were held throughout the project timeline. All committee meetings were posted in advance and members of the public were invited to provide feedback and comments on project initiatives and findings from community outreach, research and trends. Open Space and Recreation Committee members and meeting dates are listed in Section 2.

6A.5 Key Findings

A summary of the ideas generated from the public workshops, online survey, Open Space and Recreation/Parks and Recreation Master Plan Steering Committees, and stakeholder discussions and is included in Appendix 9, and these ideas provided a framework for the discussion of needs in Section 7.

Key findings from the public include:

- There is widespread support for pedestrian improvements such as walking paths/trails, bike paths/trails, and sidewalks. This indicates an unmet need for connectivity and safety, as well as and greater coordination with all Town agencies to improve sidewalk access.
- There is a continuing need for the provision of fields for organized play and a desire for existing fields to be better maintained. This indicates that more work needs to be done to improve existing facilities as plans are developed for additional facilities.
- The most frequently mentioned project was the Dedham Heritage Rail Trail, citing walkability, safe biking areas for children and adults away from traffic, and better connections across the Town. This finding is an important consideration as the Town evaluates future development of the Dedham Heritage Rail Trail.
- The second most frequently mentioned project was the development of Striar property/Manor Fields, citing increased facilities, walking trails, and geographic equity for the Town.
- There is widespread support for adding park-like amenities at Dedham's fields (*e.g.* Gonzalez Field). This indicates that expanding the idea of making "every field a park" would go hand-in-hand with better maintenance to improve satisfaction with Dedham's open space and recreation facilities.

6B. Statement of Open Space and Recreation Goals

The goals of the 2010 OSRP provided a solid base and starting point for determining the goals of the 2019 OSRP update. The action items from the 2010 OSRP were reviewed to determine which had been accomplished, which had not, which were no longer relevant, and what new actions should be prioritized in Dedham. Based on analysis of public input gathered during the public workshops and through the online survey, as well as information collected through other public and user group outreach efforts described above, the goals of the 2019 OSRP Update were revised and expanded.

6B.1 New Goal: Communication

A new goal has been added to address an issue voiced by many residents who want improved communication throughout the Town, between all municipal Departments, Boards, Committees, and Commissions; private and nonprofit organizations; special interest and neighborhood groups; news media; State and Federal agencies; and the general public. The recommend action items related to this goal are listed in Section 9.

6B.2 Primary Goals

The primary goals of Dedham's 2019 Open Space and Recreation Plan are to:

1. Protect and manage open spaces in order to ensure that the Town's natural, scenic, and historic resources are preserved for future generations.
2. Provide outdoor recreational space to support a range of athletic activities for all skill levels and ages.
3. Provide ways to grow and support an appreciation for the natural world, to establish best practice guidelines for responsible stewardship of the Town's open spaces and natural resources, and support initiatives to create a more sustainable community.
4. Enhance communication throughout the community regarding the planning, coordination, implementation and marketing of all open space and recreation program offerings and facilities.

Section 7: Analysis of Needs

This section of the plan will assess what is needed to meet the community's open space and recreation goals that were outlined in Section 6. Building on the information that has been collected and summarized in this report, this section will examine any shortfalls between what resources the community has today and what it would like to have in the future. Specifically, this section will identify what needs are currently not being met and how to meet those needs through policies, programs, and services.

7A. Summary of Resource Protection Needs

Resource protection has many components, including:

- preserving and enhancing open spaces,
- improving water quality for public drinking water and watershed habitats,
- establishing guidelines for low-impact development,
- adopting best practices for sustainability and energy efficiency, *and*
- increasing biodiversity by protecting wildlife habitats and populations.

Protecting these resources is essential to maintaining the natural communities and landscape aesthetics that contribute to the Town's character and are integrally linked to the health and welfare of the community. The Town's approach to resource protection is driven both by the importance of the resource to the community and the guidelines established by regional and global conservation organizations. Threats and challenges caused by human actions and natural events will be considered when developing strategies and priorities for resource protection.

7A.1 Open Space

The residents of Dedham value their open space resources, as evidenced by community input and the goals outlined in previous Open Space and Recreation Plans (OSRPs). Preservation, connectivity, and access are top priorities among Dedham residents. The action items under the heading *Land Acquisition, Funding, and Management* in the 2010 OSRP include strategies to help the town establish guidelines for land preservation, including a recommendation that the Town establish a dedicated fund for land management and acquisition. In 2019, the Town lacks a comprehensive plan for identifying and prioritizing land for protection and for raising capital for land acquisition.

Inventory of Undeveloped Privately-Owned Property

A comprehensive inventory of Dedham property (using the Town's GIS Property Viewer¹³² and the Assessor's Property Database¹³³) was completed for this OSRP update to determine the acreage of privately-owned land in Dedham that remains undeveloped. A list of these parcels is included in Appendix 5 and should serve as a jumping-off point for creating a land preservation

¹³² gis.dedham-ma.gov/propertyviewer2/

¹³³ gis.vgsi.com/DedhamMA/

and acquisition plan for Dedham's future. This list also provides information on the amount of development that has occurred in Dedham since 2010.

The 2010 OSRP identified 114 acres of land categorized as *Private Undeveloped Properties that Abut Existing Open Spaces*. Of those 114 acres, 4 acres had already been developed and should not have been included in the 2010 inventory. Approximately 38 acres have been developed since 2010, primarily with single-family homes, meaning that almost 35% of the land identified as undeveloped in 2010 has been developed. This significant change in a relatively short period of time indicates that Dedham is a desirable Town in which to live. While new homes and residents are by no means undesirable, the Town is approaching buildout and Town officials should remain aware of the rapidly declining amount of open space.

The open space inventory yielded some interesting observations:

- An additional 116.3 acres of undeveloped land were identified that were not included in the 2010 inventory. These parcels were not developed in 2010; they were simply overlooked. A few of these parcels were included in the 2010 list of *Private Vacant or Parcels Over 4.5 Acres* in Appendix 3 and advances in GIS technology contributed to a more comprehensive inventory in 2019.
- Most of the new development was private residential. Although there has been some commercial re-development, there has been little new commercial construction.
- The 2010 OSRP did not include land owned by Norfolk County. Although most of this land is built with offices, courthouses, and the correctional facility, one 6.7-acre parcel of wetlands owned by Norfolk County in Dedham Village is undeveloped.
- MassDOT owns a total of 107.6 acres of land near Route 109 that was not included in the 2010 inventory. Much of this land is not suitable for recreation because it is wetlands, and another portion is not ideal for recreation due to its proximity to the Norfolk County Correctional Center, but its value as a natural habitat is important to recognize.
- There are several undeveloped parcels that are not directly adjacent to existing open space. Those parcels have been included in Appendix 5 in this OSRP update.
- The current inventory includes approximately 30 acres of undeveloped land that are on developed properties. The Town could advise property owners to protect the undeveloped space with Conservation Restrictions, or possibly create easements for residents to have access to natural areas.
- A new home was built on a large parcel on Lowder Street, but 4.1 acres of the property remains protected by a conservation restriction.
- We have a better understanding of Chapter 61 land and conservation restrictions which will help the Town monitor these properties with reduced tax rates.

In 2019, almost 192 acres of privately-owned undeveloped land (not including land owned by Norfolk County or MassDOT, land that is not adjacent to existing open space, or undeveloped tracts of land on developed property). Undeveloped parcels that are adjacent to existing open space could improve connectivity between resource areas and extend wildlife habitats and corridors. Undeveloped residential land is vulnerable when the housing market is strong. Land

along the Charles and Neponset Rivers, Mother Brook, and Wigwam Pond could provide better access to water resources, serving the interest of many community members. Institutional and private properties that qualify for reduced taxes under Chapter 61 or through a conservation restriction should be monitored so the Town can either acquire the land if it becomes available or restore regular tax rates if the current land use changes.

Priorities: Maintenance, Management, and Acquisition

Residents also see a need for better maintenance of open space and recommend stronger enforcement when private use encroaches on public land. There are different degrees and types of encroachment, including illegal dumping of yard waste, household trash, construction materials, and commercial debris as well as building fences, swimming pools, sheds and other outbuildings on public land. Some challenges to enforcement include jurisdiction (much of the open space in Dedham is owned by the State or Federal government) and identifying the responsible party. The Town should review its By-laws and work with other municipal agencies to develop a plan to reduce the problem of encroachment on public land.

Using the inventory of undeveloped property in Appendix 5, the Town can create a database or reference guide with information about property size, location owner/manager, protection status, landscape features, natural resources, and potential value to residents for open space and recreation purposes. This list will identify land along town borders and waterways to support coordination with neighboring towns for land preservation and/or acquisition. The Town can seek easements or encourage protection of large undeveloped tracts of land on developed property and attempt to secure right of first refusal on land that might be up for sale or change of use. Information about conservation restrictions could encourage private landowners to set aside portions of their properties as permanently protected open space. Finally, in collaboration with the Dedham Land Trust, Trustees of the Reservation, and Mass Audubon, the Town should work with private landowners to allow responsible public access to private lands or facilities through advocacy and education campaigns.

7A.2 Water Quality

As new development and redevelopment continues in Dedham and surrounding towns, so continues the pressure placed on existing water resources. The Town has local bylaws to help protect important water resources and mitigate potential development impacts, including a wetlands protection bylaw, a stormwater management bylaw and an aquifer protection overlay zoning district. The Conservation Commission revisits these bylaws periodically to evaluate their efficacy across various environmental conditions. The Town continues its effort to protect water resources through tools such as Low Impact Development, Smart Growth strategies, local bylaws, protective zoning, and best management practices.

The Commission completed minor changes to the stormwater bylaw in 2015 to ease filing requirements and facilitate expedited review by the Town and updated its local Stormwater Management regulations in 2018. In anticipation of new federal stormwater discharge requirements (Municipal Separate Storm Sewer System/MS4), the Conservation Commission,

DPW, the Engineering Department, and Parks and Recreation have worked to better align Dedham's local bylaws with the MS4's wider range of requirements.¹³⁴

Dedham-Westwood Water District

The Dedham-Westwood Water District (DWWD) website has suggestions for indoor and outdoor water conservation¹³⁵ and they can invoke both voluntary and mandatory water use restrictions when well field levels drop below certain thresholds (Rule 28).¹³⁶ One of the more recent DWWD regulations (Rule 31) is that customer with automated sprinkler systems must have rain sensors installed and maintained; violation can result in fines and discontinuation of water service. The DWWD has partnered with the CRWA to create an app for Android and Apple devices designed to help homeowners save water. The Dropcountr app allows DWWD customers to track water usage, set efficiency goals and learn about incentives and rebates for conservation appliances and technology.¹³⁷

Stormwater Management Retrofits

In 2015, the Engineering Department, in partnership with NepRWA, was awarded a grant from MassDEP to implement Best Management Practices (BMP) stormwater retrofits near Mother Brook. The grant provided funds for construction of bioretention cells, subsurface infiltration systems, and water quality swales at three sites to reduce pollution in Mother Brook. The structures, completed in 2017, are located on the corner of Sawmill Lane and Emmet Avenue, the corner of Colburn Street and Hyde Park Street, and on Avery Street. These structures will result in removal of up to 90% of pollution before it can make its way into Mother Brook.¹³⁸

The DWWD was awarded a grant from MassDEP to perform GIS analysis resulting in the identification of two potential sites for stormwater retrofits. The grant provided funds for topographic surveys, test pits and partial concept design for two Parks and Recreation sites – Paul Park and the Mucciaccio Pool parking lot. The Engineering Department presented this information to the Parks and Recreation Commission in 2017, but there are no immediate plans to pursue additional funding for these retrofits.

Two BMPs were designed for Paul Park: a rain garden in the northwest corner of the park and a dry swale to improve upon the existing depression near the basketball court. The next steps will be to determine if the existing catch basin at the corner of Tower and Cedar Streets could be modified or removed to verify the potential drainage area to be captured, conduct property line surveys as necessary, and advance the engineering design for permitting and construction.

The BMP proposed for the Mucciaccio Pool parking lot is a bioretention system with pretreatment sediment forebays, located on the largest island at the northern boundary of the

¹³⁴ 2009 Master Plan Update 2017.

¹³⁵ www.dwwd.org/seasonal-tips

¹³⁶ www.dwwd.org/wp-content/uploads/2018/02/DWWD-Rules-and-Regulations-01162018-part-2-of-2.pdf

¹³⁷ www.dwwd.org/dropcounter-app

¹³⁸ www.neponset.org/happenings/dedham-cleaning-up-stormwater-for-mother-brook/

parking lot. Runoff will enter the bioretention system via paved waterways and curb inlets. The next steps will be to coordinate implementation with future improvements or resurfacing of the parking lot, consider a partnership with schools for implementation and/or maintenance, advance the engineering design for permitting and construction, and develop educational programs at schools to increase awareness about stormwater management.

7A.3 Environmental Impacts of Development

Since Dedham is approaching buildout, pressure continues for development on marginal, sensitive lands. The Conservation Commission practices strict enforcement of Federal, State, and Town regulations to minimize environmental impacts during and after construction, including alteration of vegetation, erosion and sedimentation due to soil disturbance, and the effects of wind, rainfall and snowmelt during construction. Other impacts of development include increased impervious areas which can exacerbate flooding, reduce groundwater recharge, and increase stormwater runoff; pollution potential from industrial processes; and loss of open space, diminished tree canopy, and disturbance of wetlands.

The 2010 OSRP recommended establishing environmental standards for development, and community input reinforced the need to incorporate an Environmental Checklist into site plan regulations to provide consistency for project review by the Planning Board. At the time of this OSRP update, the Environmental Coordinator is working closely with the Sustainability Advisory Committee (SAC) to develop an Environmental Checklist. The SAC has also discussed the possibility of creating a Green Building Policy stating that all new municipal buildings and renovation projects should strive to meet for LEED Silver requirements.

7A.4 Sustainability and Responding to Climate Change

According to the United States Environmental Protection Agency, sustainability is based on the idea that “Everything that we need for our survival and well-being depends, either directly or indirectly, on our natural environment. To pursue sustainability is to create and maintain the conditions under which humans and nature can exist in productive harmony to support present and future generations.”¹³⁹

At the local level, sustainability is achieved by making lifestyle and policy choices and that reduce waste, minimize fossil fuel consumption, and reduce greenhouse gas emissions. By evaluating our transportation options, development and construction practices, energy choices, and how we buy goods and services, we can have a real and positive impact on the environment and improve sustainability in the community. The SAC works with the Town’s Environmental Coordinator to make Dedham a more sustainable community and SAC advises the Board of Selectmen on strategies for advancing local commitment to renewable energy, educates residents about energy conservation, and encourages smart energy choices that reduce pollution and minimize impact on climate change.

¹³⁹ www.epa.gov/sustainability/learn-about-sustainability#what

Dedham is a leader in sustainability initiatives. The Town was one of the first municipalities to be awarded designation as a Green Community through the program administered by the Massachusetts Department of Energy Resources. As a result of that designation, the Town received grants totaling over \$425,000 to fund conversion and replacement of streetlights with energy-efficient LED technology, saving the town an estimated \$75,000 annually. The streetlight project was completed in 2018. Also in 2018, Dedham began the process of becoming certified in the Municipality Vulnerability Program (MVP). As a certified MVP community, Dedham will be eligible for MVP action grant funds to help address climate vulnerability and develop a resiliency plan. The MVP program helps Massachusetts communities to:¹⁴⁰

- Define extreme weather and natural and climate related hazards
- Understand how their community may be impacted by climate change
- Identify existing and future vulnerabilities and strengths
- Develop and prioritize actions for the community
- Identify opportunities to take action to reduce risk and build resilience
- Implement key actions identified through the planning process

During two municipal workshops and a public forum, participants identified Dedham’s natural resources – primarily rivers, watersheds, and wetlands – as both strengths and vulnerabilities. Potential impacts of climate change include drought, severe weather events, and flooding, all of which could have significant effects on the Town’s water resources. The MVP program offers the town the opportunity to evaluate its preparedness and create a plan to build resilience. The Town received MVP certification on April 9, 2019.

7A.5 Wildlife and Vegetation

Conflicts Between Humans and Wildlife

The 2009 Master Plan predicted that conflicts between humans and wildlife would increase and recommended that the Town adopt a municipal wildlife management policy, with an associated budget, to address the costs associated with these interactions.¹⁴¹ No such policy or budget has been established at the time of this update, although there are some resources available to residents to assist with these conflicts. The Police Department employs a full-time Animal Control Officer whose official duties revolve around dog-related issues (licensing, leashes, nuisance calls); however, he frequently responds to calls related to other wildlife (raccoons, skunks, coyotes, deer, turkeys).

Encounters with wildlife seem to be on the rise, likely due to loss of habitat as a result of development. The Environmental Department has a small budget for beaver control, which may need to increase, based on the amount of tree damage and flooding caused by beavers in recent years. Finally, the Department of Public Works (DPW) responds to calls for the removal and disposal of deceased animals in roadways.

¹⁴⁰ www.mass.gov/service-details/mvp-program-information

¹⁴¹ Town of Dedham Master Plan 2009.

The 2009 Master Plan recommended a public education campaign to raise awareness of the types of wildlife conflicts that can occur in Dedham and offer solutions when problems occur. The Massachusetts Department of Fish and Wildlife website has information sheets about many species that are found in Dedham, including deer, turkeys, Canada geese, fisher, coyotes, skunks and raccoons.¹⁴² The Town should make use of these existing resources for public education.

As important as it is to address conflicts where wildlife is perceived to be the nuisance, it is also necessary to protect vulnerable wildlife habitats and populations that are sensitive to human activity. Vernal pools are ephemeral breeding habitats for several species of amphibians, insects, and fairy shrimp, some of which are endangered. Dedham has two certified vernal pools and several other vernal pools where obligate breeding species have been observed (species for these pools is being compiled for submission to NHESP). In total, there are more than 70 potential vernal pools (PVPs) in Dedham,¹⁴³ many identified in the aerial survey that was conducted by NHESP in 2001.¹⁴⁴ Dedham has a local bylaw that protects PVPs but until recently, the Conservation Commission did not maintain a list of the locations for reference when considering development projects. The Town's Conservation Agent now has a current list of PVPs listed by address and the Town GIS Department is adding a datalayer with this information for public access.

Urban Forestry and Tree Health

Following on the Town's Tree City designation, through the National Arbor Day Foundation and the Department of Conservation and Recreation (DCR) Urban Forestry Program, the Town has created several initiatives aimed at increasing the number and species diversity of trees. In 2016, the Parks and Recreation Department commissioned a survey and health assessment of trees at Dedham's public parks.¹⁴⁵ In 2017, Dedham's DPW completed an inventory of all trees along public streets, at the Endicott Estate, and at the Village Cemetery.¹⁴⁶ These surveys include valuable information about Dedham's trees and will help the Town develop strategies to maintain and enhance the Town's tree inventory. Recommendations based on these surveys include regular monitoring of tree health, better pruning and maintenance, removal of invasive species, increasing species diversity, and additional plantings at several public parks.

Invasive Plants and Forest Pests

Invasive plants, forest pests and disease pose a threat to Dedham's natural areas, including forests, wetlands, and waterways. Dedham is not unique in having its native habitats threatened by many aggressive invasive plants. Section 4 provides detailed information about

¹⁴² www.mass.gov/problems-with-wildlife

¹⁴³ docs.digital.mass.gov/dataset/massgis-data-nhosp-potential-vernal-pools

¹⁴⁴ www.mass.gov/files/documents/2016/08/no/ma-aerial-survey-pvp.pdf

¹⁴⁵ Tree Inventory and Assessment prepared for Dedham Parks & Recreation, Nature's Trees Inc. 2016. (this report can be found in the appendix of Dedham's Parks and Recreation Master Plan completed in 2019).

¹⁴⁶ www.dedham-ma.gov/departments/public-works-dpw/trees

the invasive plants that are found in Dedham and current forest health threats in the State. The Town has worked to establish a framework for comprehensive monitoring and management of invasive species in its forests and wetlands, but the problem of invasive species currently exceeds the available resources. Volunteer efforts supplement the small budget held by the Environmental Department for this purpose. A significant budget increase and coordination effort would be necessary for more aggressive control, including the use of pesticides, which requires licensed pesticide applicators and may require permits, particularly in wetland areas.

Education and Outreach

Educating the community about each of these topics is an important component of a plan to protect our natural areas and maintain a healthy relationship with the wildlife surrounding us. As described above, providing residents with fact sheets about wildlife conflicts and educating the public about how to identify and manage invasive plant species and recognize threats to forest health should be a priority. A great deal of information is available on the State website, and websites for various conservation organizations. Several community members asked for more public events related to nature, conservation, and biodiversity. The annual Dedham Trails Day is a great opportunity to share information, as is the weekly Dedham Farmer's Market which runs from early June to late October.¹⁴⁷ Conservation information can also be distributed on the Town and Dedham Trails websites, through local news outlets, and using social media.

7A.6 Scenic Areas

The Town contains many scenic resources that should be protected. The 1982 Massachusetts Scenic Landscape Inventory included one area in Dedham along the Charles River, beginning at West Street and following the Charles River and Rock Meadow Brook to the Needham and Westwood border. The scenic vistas along the Charles River are a welcome respite from the busy suburban activity just a short distance away. Paddlers have been enjoying the scenery along the Charles River and Long Ditch in recent years since the creation of the Dedham Water Trail, which has earned designation as a National Recreation Trail. Other water resources in Dedham should be protected for both scenic and historic value, including Long Ditch, most of the Charles River, Mother Brook, the Neponset River, and several ponds.

Other scenic resources worthy of protection include areas recognized for their historic and architectural significance by the Town's Historic District Commission. There are three Historic Districts in Dedham as described in Section 4F.3: The Franklin Square-Court Street District, also known of as Dedham Village; the Connecticut Corner District, near the Dedham Common at the intersection of High and Common Streets; and the Federal Hill District, extending along Highland Street toward Sandy Valley Road.¹⁴⁸ Demolition, alteration, and development in these districts are subject to review by the Historic District Commission. The Town should evaluate other neighborhoods to determine if they are appropriate for designation as Historic Districts.

¹⁴⁷ www.dedhamsquarecircle.org/farmers-market

¹⁴⁸ www.dedham-ma.gov/government/historic-districts-commission

The Massachusetts Scenic Roads Act (M.G.L. Ch. 40, Section 15C) provides protection of local roads to preserve community character. A list of streets in Dedham that could be eligible for protection under this law is included in Section 4F.1. After designation as a scenic road, any maintenance work on the public right-of-way cannot involve tree removal or destruction of stone walls without approval from the planning board after a posted public hearing. Most changes to private property along a scenic road are not restricted.

7B. Summary of Community's Needs

This section presents an overview of the recreation needs of the community. Analysis of how Dedham compares regionally, statewide, and nationally informed this process. Dedham's program offerings were compared with those of two neighboring towns (Norwood and Westwood) and recreation trends were identified based on the Statewide Comprehensive Outdoor Recreation Plan (SCORP) and the National Recreation and Park Association standards. The results of this research, combined with information gathered during the public input process, were used to benchmark for the level of service appropriate for Dedham.

Dedham's first Parks and Recreation Master Plan (PRMP) was developed concurrently with this OSRP update. Although the parallel timeline for the two projects presented some logistical challenges, it will ultimately help the Town understand present and future needs. Dedham's past OSRPs included detailed information about recreation programs and facilities; however, this update will include a *Summary of Community's Needs* as described in the State's OSRP requirements.¹⁴⁹ The PRMP is the primary source for more detailed, comprehensive analysis of the Town's recreation resources and needs.

7B.1 Statewide Comprehensive Outdoor Recreation Plan (SCORP)

The Massachusetts SCORP is a five-year planning document which details the supply of open space and outdoor recreation resources in the State and evaluates local, regional, and State recreation needs. The State must have an approved SCORP to be eligible for Federal Land and Water Conservation Fund (LWCF) grants. LWCF grant funds are administered by the EOEAA on behalf of the National Park Service, and a municipality must have an approved OSRP to apply for these grants. The Massachusetts SCORP was updated in 2017¹⁵⁰ and the public outreach campaigns demonstrated a variety of recreation needs and concerns as summarized below, which are closely aligned with input gathered during Dedham's OSRP update process, described in the next section 7B.2.

The SCORP Advisory Committee employed three different methods to gather public input:

1. Three online surveys (recreation users, municipal recreation providers, land trusts)
2. Public meetings throughout the State
3. A professional phone survey to ensure statistical validity of data

¹⁴⁹ www.mass.gov/files/documents/2016/08/tx/osrp-workbook08.pdf

¹⁵⁰ www.mass.gov/files/massachusetts-scorp-2017-for-submission.pdf

SCORP online user survey participants reported that their most frequent activities in the past 12 months fell into two categories: water-based recreation (e.g. boating, fishing, swimming) and trail-based recreation (e.g. hiking, biking, cross-country skiing, walking, mountain biking). Similarly, Dedham residents listed Wilson Mountain Reservation as the recreation area they visit most frequently, followed by several parks, playgrounds and water resources. When asked what projects they would like to see funded, SCORP survey top responses fell into three categories: trails, playgrounds, and water. Again, these align well with Dedham's top requests (e.g. rail trail, more/improved hiking trails, better maintenance of ball fields, development of Manor Fields, access to water resources).

The SCORP municipal employee survey indicated that there are relatively few recreation programs connecting children with nature and municipalities offer very few programming activities for people with disabilities. Across the State, the highest priorities for funding include playgrounds, ballfields, trail systems, and pedestrian safety improvements and expect that walking, rail trails, hiking and biking will increase in popularity in the next 5 years. Dedham's Parks and Recreation Department completed its first Master Plan in 2019 and residents expressed the need for better maintenance of existing sports fields as well as addition of new multi-use fields. In addition, the proposed Manor Fields project will include approximately 1.5 miles of walking trails, two dog parks, as well as tennis, basketball, and bocce courts. Although Dedham's prioritization of quality sports fields is not as consistent with SCORP goals as some of the other community needs, team sports are very popular with Dedham's residents so it is appropriate for the Parks and Recreation Commission to assign a high priority to these projects.

The survey of land trusts listed walking/jogging/hiking, dog walking, and nature study as the three most popular activities on land trust properties. Invasive species management is the greatest challenge for land trusts. Finally, an extremely simplified summary of the input gathered through the phone survey and at public meetings is that the results of the online surveys accurately reflect the needs of the communities across the Commonwealth.¹⁵¹

7B.2 Community Input

The information gathered from the community during the public input process is presented in both Section 6 of this OSRP and in the PRMP. Dedham's diverse population expressed interest in varied recreation opportunities, from organized sports to public gardening. Natural resource protection needs were discussed in section 7A. This section discusses the outdoor recreation needs of the community, which are generally consistent with those of other Massachusetts communities according to the 2017 SCORP.

Dedham residents would like more opportunities for informal, or unstructured outdoor recreation. While resources for team sports continue to be a priority in Dedham, many individuals want to be outdoors at times that work with their own schedules.

¹⁵¹ *Ibid.*

Several common themes were present throughout the public input process:

- Access to water resources
- Trail networks, access, connectivity
- Nature appreciation and education
- Park amenities for all visitors
- Bicycle and pedestrian safety
- Improved communication and access to information

Access to Water Resources

Dedham's history and economy have evolved around its waterways. Both the Charles and Neponset Rivers provided power for mills and factories, served as transportation routes, and were used for recreation and leisure. The popularity of canoeing and kayaking and improved water quality of both rivers contribute to the demand for more access points to waterways. The Dedham Water Trail has become a great asset to the Town and renting a canoe or kayak at the Dolan Center is a popular activity attracting many demographic groups. Even with the popularity of the Water Trail, residents are still asking for improved access to water resources.

There is also interest in having improved access to Wigwam Pond. There is an access point near the end of Quabish Way which serves many residents. However, this access point is not fully accessible and does not have dedicated parking. The OSRC continues to work with the Conservation and Environmental Departments to seek other access points. Much of the shore of Wigwam Pond is privately owned, so the Town needs to work with property owners to find a suitable location and negotiate easements for public access.

Trail Networks, Access, and Connectivity

A top priority among Dedham residents is improved access to the Town Forest, which has long been an underutilized resource. The Town Forest is a narrow, but large area of land (more than 70 acres) that became disconnected from the Town when Route 128 was built in the 1950s. It does not have a designated parking area and, until recently, there have been no marked or maintained trails. Several Eagle Scout candidates have made significant improvements in the Town Forest by clearing and marking trails and another Eagle Scout candidate, with direction from the Environmental Department, is creating a trail map.

Dedham residents are interested in improved trail networks and better connectivity within and between open space areas. Similarly, the 2012 SCORP reinforces the interest in local trails, with a focus on more access points that are closer to where people live. SCORP survey participants expressed interest in local trail systems, loop trails within long-distance trail networks, and urban trails that connect to water bodies. There are several State parks and Town conservation areas in Dedham that offer some of these features (*e.g.* Blue Heron Trail/Cutler Park, Fowl Meadow/Blue Hills Reservation, and the Charles and Neponset River watersheds). The Town should evaluate secondary access points for public access from different neighborhoods.

In cases where natural areas extend into adjacent towns, Dedham should work with those municipalities to ensure that contiguous open spaces remain protected, to establish and maintain trail connections, and to extend natural areas when opportunities arise for land acquisition. The inventory of undeveloped private land in Appendix 5 is a useful reference tool for Town officials and appointed Board/Committee members who oversee development. Although Dedham does not have a dedicated fund for land acquisition, the Planning Board and Conservation Commission can inform developers about options such as protecting a portion of land through a conservation restriction or granting an easement if the land connects existing recreation areas or wildlife habitats.

A success story for trail connectivity is the network of walking paths and hiking trails between the Dolan Center, Whitcomb Woods, Wilson Mountain Reservation, and NewBridge on the Charles. These walking and hiking trails, which cover miles of varied terrain and connect to the Dedham Water Trail at the Dolan Center, were consistently ranked among the Town's best resources for outdoor recreation. To build on this success, the Town should create a wayfinding system including signage to mark trails and parks, provide information about trail distances and difficulty, and educate visitors about natural, historical, and cultural features. Several towns in Massachusetts have received State funds to develop plans for both downtown and recreation areas. Dedham would benefit from a comprehensive branding and wayfinding plan to help residents find parks, trails, municipal buildings, parking lots, historic landmarks, art and cultural centers, and local businesses.

Nature Appreciation and Education

Dedham residents want more opportunities to observe, appreciate, and learn about nature, particularly in and around rivers, ponds, and wetlands. Although the online survey did not include specific questions about nature observation or education, many comments and open responses indicated a need for more community events, guided tours, nature-themed play areas, community gardens, open spaces for family and multi-generational activities, and more places to enjoy nature.

Participants at the second public workshop showed interest in similar opportunities, asking the Town to educate residents about natural resources, endangered species, native and invasive plants, and natural history; develop guides to parks and public lands, including access points, brochures, and trail maps; and restore public landings along the Charles River and improve access to Wigwam Pond.

Dedham Trails Day is a well-attended annual event featuring a 5K trail race, water activities on the Charles River, and information tables hosted by Town departments, local businesses, and community groups, and conservation organizations. Two biodiversity events (in 2011 and 2012) brought dozens of prominent area naturalists to Dedham for a day of nature appreciation and education. These events attracted many residents and provided important information about the Town's biodiversity, including identification of one rare plant population.

Interpretive signage is one way to educate the public about natural resources and conservation challenges. Signs can include information about wetlands and watersheds, native and invasive plants, pollinators, forest pests, vernal pools, natural history and geology, and historic/cultural landmarks. Educational signs can enhance how children experience nature, with information about habitats, wildlife, geology, and history. The use of natural play elements such as stones or boulders strategically arranged for climbing can provide the physical connection for children with nature. The Dolan Center could be a test location for a children's nature play area, with the potential to expand outdoor discovery play areas to neighborhood parks and playgrounds.

Park Amenities for All Visitors

Residents asked for programs and amenities at Town parks that meet the needs of all age groups and abilities. A common theme throughout the process was that families want to visit parks together, and different age groups have different interests and needs. Many comments in the online survey indicate a need for facilities that support intergenerational recreation. Amenities such as restrooms, trash receptacles, shade trees, and benches or seating areas would improve the park experience in Dedham. Some suggestions for alternative play areas and recreation options for different interests include a splash pad/water play area, community gardens, pocket parks, a bocce court, open fields for pick-up sports, or a skate park. These features should be considered for new park designs and added to existing parks where possible.

Many residents support the development of the Manor Fields project, which would incorporate many of these features. Playing fields would benefit youth sports organizations, a playground would keep the younger children entertained, and nature trails would be enjoyed by visitors of all ages. This project would also meet one common request from residents that the Town develop land that it already owns.

Although it is not always appropriate to assume that everyone in a particular demographic group has the same wants and needs (*e.g.* age, gender, level of ability), it is important to let people know that this plan takes into consideration all community members. Dedham will be opening its Senior Center in early 2020. Not all seniors will use the facility but they know the Town is aware of the aging population by its commitment to build the Senior Center in the first place. Likewise, Dedham offers recreation programs for people with disabilities, both physical and social. Dedham's Youth Commission offers excellent programs for the Town's young people, including recreational, social and academic programming. Unfortunately, Dedham does not have a dedicated facility for youth to gather and teens tend to congregate at playgrounds, convenient stores, and in natural areas to "hang out" with each other. A community center with space for teens and younger children would be a great addition to Dedham's resources, but it is not financially feasible at this time.

Bicycle and Pedestrian Safety

Improved safety for bicycles and pedestrians is one of the highest priorities among Dedham residents, as expressed in the online survey and at both public workshops. One question in the online survey asked respondents to select five activities or facilities (from a list of more than 30

choices) that they felt were not provided sufficiently in Dedham. The top two choices were 'Bike Trails/Paths' [62%] and 'Walking Trails/Paths' [57%]. Further analysis of responses for different household groups showed that these were also the top priorities for both families with children and households without children.

At the public workshops and in the open response/comment questions in the online survey, residents asked for improved infrastructure and safety for bicycles and pedestrians, including:

- Signage and street markings for on-road/shared bicycle rights-of-way
- Addition of bike racks to different locations around the town
- Sidewalks on Rustcraft Road [scheduled to begin in 2020]
- Sidewalks/safe connections between Legacy Place and Enterprise Drive
- Improved safety for pedestrians and bicycles at the Dedham Mall
- Requirements that new development and redevelopment provide access for non-motorized transportation and public transit
- Guidelines for commercial property owners to provide bicycle/pedestrian accommodations (sidewalks, bike paths/racks)
- Creation of a bike task force
- Enforcement of 'no parking' regulations on sidewalks and speed limits
- An Access Management Study that examines safety and access along Providence Highway (working with MassHighway)
- A Complete Streets program to increase safety and accessibility for all modes of transportation in Dedham
- Extension of the Neponset Greenway from Hyde Park into Dedham, creating a safe route to Boston Harbor (working with NepRWA and DCR)

Many residents support the Dedham Heritage Rail Trail, introduced in Section 5. Residents identified this as a priority in the online survey and at both public workshops. The Dedham Heritage Rail Trail would convert the abandoned rail into a path suitable for pedestrian and bike use, while also incorporating public art and community gardens. The anticipated benefits of the project also include a fully accessible level path for persons with disabilities and a safe off-road route for students who attend Dedham High School, Dedham Middle School and the Avery Elementary School. For the Dedham Heritage Rail Trail to be successful, the Town should work closely with neighbors to address privacy concerns.

Improved Communication and Access to Information

Dedham residents are dissatisfied with the Town's approach to communication about open space and recreation resources, facilities, and programs. The website for the Parks and Recreation Department has some information about programs and facilities, but there are errors, discrepancies, and the information is often outdated or incomplete. There is a lack of cohesiveness on the website. Some information is provided on pages that are maintained on the Town's website, while other queries direct users away from the Town website. The program registration link directs visitors to the SportsManSQL management software and the Dedham Trails link directs users to another external site. There is no centralized, organized source of

information for community members to learn about Dedham’s parks, programs, trails, and natural resources.

According to the results of the online survey, more residents receive information about parks, recreation and open space from social media, word of mouth, and newspapers than the Town’s website. The need for improved communication was mentioned in every stakeholder and user group interview, the online survey, both public workshops, and during Steering Committee meetings. Residents want access to comprehensive, clear, and accurate information on the Town’s website. Dedham needs to make improvements to the way it markets its program offerings.

Recommendations include:

- Develop a consistent and recognizable marketing/branding scheme for parks, open space resources, recreation programs, and special events
- Use a consistent style on the Town’s website and eliminate/reduce use of external links
- Where external links are necessary, work to make them seamless
- Use social media to publicize events – post registration links, reminders, updates
- Use email ‘blasts’ and newsletters to keep the community informed
- Offer free trial classes for new residents
- Create a collaborative group with representatives from Town departments, appointed and elected Boards and Committees, community and civic groups, and residents at-large to improve the planning, marketing, and implementation process of open space and recreation projects.

7C. Management Needs, Potential Change of Use

It is important for an OSRP to outline specific recommendations that will help the Town meet its open space and recreation goals in a strategic manner. Specifically, it is necessary for the Town to have the tools, policies, personnel, and financial resources necessary to implement the recommendations of the plan. Management needs in Dedham fall into four categories:

- Staffing and administrative capacity for planning, management, and maintenance of recreation facilities and open space areas;
- Regulations and policies to protect natural resources and create recreation and open space opportunities;
- Financial plan for land acquisition and maintenance;
- Public awareness of available facilities, programs, and resources, and opportunities to become involved in stewardship efforts.

Improved communication was listed as a priority during the public input process. Residents want to be made aware of recreation and stewardship opportunities available to them, and want the Town to improve its outreach efforts. As described in the next section, the specific responsibilities of various municipal bodies should be more clearly defined, and possibly redefined, to better align with the needs of the community.

7C.1 Staffing and Administrative Capacity Needs

The ability of the Town to maintain high-quality open space and recreation opportunities depends on staffing, technical resources and funding. Management responsibility for Dedham's open space and recreation resources is shared by several departments, in partnership with several appointed elected Boards, Committees, and Commissions.

- **Parks and Recreation Department** (Staff: Director, Assistant Director, and Administrative Assistant)
 - Administer recreation programs for the Town
 - Assist with annual events (*e.g.* Flag Day Parade, Dedham Day, Bike Rodeo)
 - Care, coordination, and maintenance of Town parks and fields
- **Environmental Department** (Staff: Part-time Environmental Coordinator)
 - Work to make Dedham a more sustainable community
 - Promote transportation enhancements, municipal and residential energy efficiency, land conservation and management, stormwater management, and recycling
 - Engage residents and businesses in environmental issues affecting the community
- **Conservation Department** (Staff: Part-time Conservation Agent)
 - Work to protect Dedham's resources
 - Provide guidance about environmental regulations, wetland resources, and stormwater management
 - Administer the Massachusetts Wetlands Protection Act and Town of Dedham Wetlands and Stormwater Bylaws
- **Planning Department** (Staff: Director and Administrative Assistant)
 - Work on long-term planning for land use, open space, economic development, and transportation in collaboration with Boards, Committees, community groups, professionals, and individual citizens
 - Provide administrative and technical support on the design and permitting of residential and commercial projects
 - Address regional planning issues with the Metropolitan Area Planning Council and neighboring cities and towns
- **Open Space and Recreation Committee** (7 members, appointed)
 - Conduct continuous review and oversight of the Open Space and Recreation Plan for the Town, keeping the Town current with opportunities and eligibility requirements for State funding
 - Review and revise a Five-Year Action Plan for open space and recreational needs
 - Increase public awareness and support of open space and recreation resources through education, advocacy, and promotion of land trusts and conservation restrictions for suitable properties
 - Submit an annual report to the Board of Selectmen
- **Parks and Recreation Commission** (5 members, elected)
 - Promote physical education, play, recreation, sport, and other programs for people of all ages
 - Appointment and oversight of the Director of Parks and Recreation Department

- **Conservation Commission** (7 members, 2 alternates, appointed)
 - Protection of wetlands, water resources, and adjoining land areas in Dedham
 - Enforce Federal, State and Town stormwater and wetlands regulations
- **Planning Board** (5 members, elected)
 - Studies and plans for the needs of the Town in relation to land uses and zoning for current and future real estate development
- **Board of Selectmen** (5 members, elected)
 - Chief executive office of the Town
 - Formulates policy directives and guidelines for all Town agencies
 - Oversees licensing
 - Makes appointments to Town offices, boards, and committees

Throughout the OSRP update process, it became clear that the responsibilities of the OSRC need to be more clearly defined. The OSRC is perceived by many to be the Town's lead for advocacy and stewardship of Dedham's open spaces. However, the OSRC is an appointed committee that serves an advisory role to the Board of Selectmen and has no real authority to create or enforce policy. The OSRC does not have a budget or a direct association with any Town Department, limiting its ability to perform some of the duties assigned to the OSRC when it was established in 2004. The Conservation Commission enforces wetlands and stormwater regulations, but its authority and capacity to protect other resources is limited. The Parks and Recreation Commission has traditionally focused on team sports and fields, neighborhood parks, and playgrounds, creating a gap in service to the Town's residents related to open space resources, informal outdoor recreation, walking trails, and access to waterways.

The Town should review the roles and responsibilities of the Departments, Boards, Committees, and Commissions listed above as they relate to open space resources. If the Parks and Recreation Commission continues to focus on parks and fields, the Town will need to assign oversight responsibility and authority to another municipal body. If the focus of the Parks and Recreation Commission is expanded to include these additional responsibilities, it will be important to evaluate the organization, composition, and directives of the Parks and Recreation Commission, Department, or both if the Town wants to achieve the goals stated in this OSRP.

A related challenge is the breakdown in communication that sometimes occurs between municipal departments, institutional organizations, private nonprofits, and residents. Residents, and sometimes municipal representatives, expressed frustration due to the lack of clarity regarding municipal processes and responsibilities. The residents of Dedham are looking for improved communication, better understanding of municipal processes and hierarchies, and clearly defined roles within the Town. They want information about the resources that are available to them and opportunities to become involved with stewardship efforts. Many people support the idea of creating a *Parks, Recreation, and Open Space **working collaborative*** with representatives from all interest groups (Town employees, Committee and Board members, residents, sports organizations, and conservation organizations). Such a collaborative would improve communication and encourage collaboration and transparency.

Improvements and General Maintenance

Maintenance of recreation facilities and open space areas involves a broad range of tasks, including mowing and landscaping at parks, turf management at playing fields, trail monitoring and maintenance, litter and debris cleanup, and repair of damaged equipment. The condition of many Town recreation areas, particularly the parks and playing fields, is unsatisfactory to residents. The Parks and Recreation Department is responsible for maintenance of all Town-owned parks and recreation facilities and shares responsibility for many of the school fields and playgrounds, so it is critical that the Department has the staff and budget to do their jobs. Private sports organizations have offered to help with groundskeeping services, but the Town is often unable to accept these offers due to contractual agreements. There should be a mechanism for individuals and private organizations to contribute to stewardship in the Town. There is a Memorandum of Understanding (MOU) between the Parks and Recreation Commission and the School Committee which establishes an agreement of shared responsibility for some school property. Similar agreements with non-municipal entities could be mutually beneficial to all parties.

Interviews with the School District indicate that they want to continue this collaboration to provide the best quality facilities, but they would like the MOU to be reviewed and updated to strengthen some of the language and expand on the details. When new schools open (*e.g.* the new Early Childhood Education Center on High Street) there will be changes in usage of school resources. This partnership was successful in negotiating the replacement of the Pool Field after it was damaged by snow storage. In addition, the School District has been working with the State to leverage funds for playground improvements (through the Districts' Facilities Manager).

The concurrent development of the PRMP will also clarify maintenance needs at recreation facilities and open space areas and establish priorities and standards of care for different park types in Dedham. The PRMP describes the different types of parks, the amenities and maintenance standards for each park type, and includes short-term and long-term plans for Town parks and recreation facilities. The PRMP does not address resources that are not under jurisdiction of the Parks and Recreation Commission (*e.g.* Town Forest, Dedham Water Trail). The Town should define standards, create maintenance plans, and assign municipal responsibility, and allocate resources for these other resources.

7C.2 Regulatory and Policy Needs

Regulatory and policy needs for open space and recreation should result in a coordinated and cohesive process where Town entities work together to protect natural resources and increase public access to recreational opportunities. As recommended in the 2009 Town Master Plan, a Project Review Committee composed of staff from municipal departments was established by the Town Manager. According to the 2017 Master Plan Update, the primary focus of the Project Review Committee is integrating the work of Town staff and “does not address the ongoing lack of communication and integration between major town boards. This is an issue that warrants continued attention as the Town strives to improve governance and take a more proactive

approach to planning and economic development.”¹⁵²

It is critical for the Town to comprehensively examine open space and recreation resources and their link to public health and economic development, which could identify different funding mechanisms for open space resources. The following suggestions could help establish policies to guide decision-making to meet community needs:

- Take a more comprehensive look at walking and biking opportunities
- Integrate open space and recreation into economic development plans
- Consider buy-in for statewide public health initiatives

Complete Streets

Residents showed support for increased opportunities to walk and bike in town. Safety was noted as a primary concern along with the absence of safe connections between open space and recreation areas, neighborhoods, and commercial areas. By providing these connections, the Town can promote alternative ways to support daily activities, which increases physical activity and public health, reduces congestion on local roads, and supports local businesses.

Complete Streets principles consider all modes of transportation (walking, biking, driving, and public transportation) in proposed development projects and integrate these modes into a comprehensive town-wide network. Adopting these principles creates a safer way to travel through town for people of all ages and abilities, and is shown to have safety, environmental, economic, and public health benefits.¹⁵³ Through the Complete Streets Program, MassDOT has a variety of technical resources and funding opportunities to assist communities in developing and implementing a Complete Streets.¹⁵⁴ The Town has enrolled in the Complete Streets Program and is currently working with a consultant to develop a “Prioritization Plan” which is the first step in the Complete Streets process.

Linkages with Economic Development

At the second public workshop, residents identified the need to look for opportunities to link neighborhoods, shopping areas, and open spaces. Residents specifically asked for sidewalks on Rustcraft Road, sidewalks connecting Legacy Place and Enterprise Drive, safe crossings over Providence Highway, and connections within Dedham Mall. There are economic and public health benefits associated with these enhancements, which the Town clearly recognizes because it has approved a plan to build sidewalks on Rustcraft Road, beginning in 2020. Improved safety measures also have a positive impact on property values, municipal revenues, and resident quality of life.

In October 2016, a Technical Assistance Panel (TAP) was assembled for a day-long session to evaluate a long-term sustainable development strategy that included improved connectivity between the MBTA Dedham Corporate station, Legacy Place, and Wigwam Pond. The TAP was a collaboration between the Town, Legacy Place, the Urban Land Institute’s Boston/New England

¹⁵² <http://www.dedham-ma.gov/government/master-plan-implementation-committee/master-plan>

¹⁵³ <https://smartgrowthamerica.org/program/national-complete-streets-coalition/what-are-complete-streets/>

¹⁵⁴ <http://www.massdot.state.ma.us/highway/DoingBusinessWithUs/LocalAidPrograms/CompleteStreets.aspx>.

District Council, real estate professionals, residents, developers, and business owners. The panel focused on long-term potential for the area, traffic in relation to bicycle and pedestrian safety, as well as what improvements could be made to allow for better public access to the rail station and Wigwam Pond.

The TAP report contained a comprehensive analysis of the Town's objectives, challenges, assets, recommendations, and implementation strategies.¹⁵⁵ The TAP report includes the following recommendations and analyses:

- Improve pedestrian access to/from Dedham Corporate station
- Extend Legacy Boulevard to Rustcraft Road
- Create access to Wigwam Pond
- Add open/green space
- Move utilities underground
- Zoning changes to support economic development
- Analysis of development and tax implications
- Possible businesses relocation

The area around Legacy Place and Wigwam Pond was developed and redeveloped many times, resulting in a challenging landscape in terms of infrastructure for creating a well-connected and livable community with housing; access to transit; retail, entertainment, dining, and office options; and the potential for accessible green space, all within walking distance. Complete Streets principles offer some solutions to this connectivity issue. The long-term possibilities described in the TAP report are encouraging. The study area offers a great opportunity for redevelopment which could also generate increased tax revenues, address some housing needs (e.g. senior housing, affordable housing), improve connectivity and safety, allow access to Wigwam Pond, and create green space.

Mass in Motion

Mass in Motion is a statewide initiative that promotes opportunities for healthy eating and active living where people live, learn, work and play. Mass in Motion works with communities, schools, childcare centers, and businesses to create changes that make it easy for people to think differently about what they eat and how much they move so they can make better choices to feel healthy and live well. Mass in Motion works with participating communities to illustrate how the built environment impacts how much physical activity people get each day, and how many healthy foods they eat.¹⁵⁶ Mass in Motion is just one creative example of partnerships the Town can pursue to improve the overall health and quality of life of Dedham

¹⁵⁵ <http://1mt62p4aprf32kqjtf1cn4gw-wpengine.netdna-ssl.com/wp-content/uploads/sites/12/2016/10/Dedham-TAP-Presentation-FINAL.pdf>

¹⁵⁶ <http://www.mass.gov/eohhs/gov/departments/dph/programs/community-health/mass-in-motion/mim-supports-active-communities.html>

residents by leveraging funds and resources not currently available without these types of collaborations.

7C.3 Land Acquisition and Funding

It is important for the Town to be able to assess the value of various parcels for acquisition and preservation; otherwise, it is likely to be placed in the position of reacting to individual parcels as they become available for acquisition. The 2010 OSRP recommended creating an acquisition plan that prioritizes areas for open space acquisition in the future. While the Town should have current data about vacant land for planning purposes, this approach has some downsides. One drawback of such a plan is that opportunities to acquire properties or conservation restrictions occur independently of their priority ranking on an acquisition list. Also, having a prioritized list reduces the Town's negotiating power, especially if the list has been made public.

Criteria for Acquisition

Based on recommendations received during the planning process, the criteria for acquisition were updated to include the following:

- Linkages to existing open space, recreation facilities, and similar areas in adjacent communities,
- Environmental sensitivity and value of the parcel (*e.g.* the presence of aquifers, rivers, wetlands, wildlife or scenic qualities),
- Location in neighborhoods that have limited access to open space or are threatened by continued development,
- Outdoor recreation potential, including locations suitable for community gardens, skate parks, spray park/splash pad, pocket parks, trails, water access, and wildlife observation,
- Cost and availability of the land, taking into consideration funding sources, the amount residents are willing to pay to purchase open space, and the overall benefit to the community,
- Financial impact for the Town if the property is no longer available for development, *and*
- Aesthetic value and preservation of community character.

Unassigned Town Open Space Properties

The Town owns approximately 32 acres of land for which no management entity has been defined (see Appendix 4). For each of these properties, the OSRC reviewed the location, characteristics, and development potential, and both potential and limitations for public access. Based on this updated inventory, the OSRC should use the Criteria for Acquisition described above for evaluating the suitability for conservation, recreation, or other public uses. Properties that are not suitable for public uses should be offered to abutting property owners.

The Town should consider conducting a periodic municipal review of all Town land. All Town departments should be asked to review unassigned Town-owned land and indicate if they have a specific interest in any parcels to for Department use. This review process would allow the Town to identify any property that could be used more effectively to meet the needs of the Department or the residents of Dedham.

Town Funds

The Town will have to determine what resources, if any, it will dedicate to management and acquisition of open space resources and should establish a dedicated fund for this use. Such a fund would make it possible for the Town to act quickly if land becomes available for purchase. Although voters rejected the CPA (see below), many residents felt strongly that open space acquisition should remain a priority for the Town, albeit through a different funding mechanism. To that end, a permanent, dedicated fund should be established by Town Meeting, with an annual contribution from Town funds. The fund will be held in reserve to be used only for specific purposes related to acquisition and maintenance of open space. The OSRC should monitor land use and advise the Board of Selectmen about parcels that would be appropriate for acquisition, utilizing the criteria as described above.

Community Preservation Act (CPA)

The CPA can be an important funding source for historic preservation, affordable housing, parks and recreation, and open space projects. The CPA allows communities to create a local Community Preservation Fund through a local property surcharge with additional funds from the State. Municipalities must adopt the CPA by ballot vote. If adopted, the CPA requires at least 10% of the monies raised to be distributed to each of three categories: open space (excluding recreational purposes), historic preservation, and community housing. The remaining 70% of funds may be allocated to any one or a combination of the three main categories (including public recreation) as recommended by a local CPA Committee and subject to the approval of Town Meeting. Up to 5% can also be spent on administrative needs of the local community preservation committee.

The CPA was rejected by Town Meeting in 2007 and 2011. In 2016, Town Meeting voted to put the CPA on the ballot for voters, but it was rejected by a significant margin in April 2017 (58% opposed). CPA supporters viewed the surcharge as an investment and contended that the Town should seek any available funds from the State, even if the match percentage is low. Opponents saw the CPA surcharge as another name for a tax increase and expressed concerns about the availability of State funds in the future due to the increasing number of cities and towns enrolled in the program. Regardless of the perceived merits or deficiencies of the CPA, both supporters and opponents feel that the dedicated uses for CPA funds – housing, historic preservation, and open space protection - are important investments for the Town.

In July 2019, Governor Baker signed off on FY20 state budget which includes an increase in fees at the Registry of Deeds to add funds to the CPA Trust Fund. Most fees will be more than double their current amount, resulting in a significant increase in the CPA fund, an estimated increase of \$36 million each year to \$60 million (compared to the current revenue of \$24 million).¹⁵⁷ In light of this revenue increase, Dedham should take another look at the CPA.

State and Federal Grants

¹⁵⁷ www.communitypreservation.org/home/news/cpa-trust-fund-increase-what-happens-now

An overview of some State and Federal grants available for acquisition or management of open space is provided below; a more detailed list is provided in Appendix 8. When this OSRP has been approved by the EOEEA, the Town will be eligible to apply for the following grants:

- **Local Acquisitions for Natural Diversity (LAND).** Grants to Conservation Commissions for acquisition of open space for conservation and informal recreation (formerly the Self-Help Program)
- **Parkland Acquisitions and Renovations for Communities (PARC).** Funds for acquiring and/or developing parks and recreation land (formerly the Urban Self-Help Program)
- **Land and Water Conservation Fund.** Federal funds (administered by the EOEEA) for up to 50% of the cost of acquiring, developing or renovating park, recreation, or conservation land.
- **Rivers and Harbors Grant Program.** State matching grant administered by DCR for design and construction to address problems on coastal and inland waterways, lakes, and great ponds. The Department of Fish and Game provides grants to public agencies and nonprofits through its Riverways Program to restore the river and stream ecology.
- **Recreational Trails Grants.** DCR funds 80% of the project costs for a variety of trail protection, construction, and stewardship projects.
- **Urban and Community Forestry Challenger Grants.** DCR assists in building support for the long-term protection and management of community trees and forests.
- **Conservation Partnership Program.** EOEEA grants for acquiring land suitable for conservation or recreation.
- **Drinking Water Supply Protection Grant Program.** MassDEP grants to assist in acquisition of land to protect the quality of public drinking water supplies.

Private Landowner Assistance Programs

Several programs have been developed to support landowners in recognition of the many public benefits private lands provide. Most programs can be used separately or in combination with others:

- **Landowner Incentive Program.** The Massachusetts Department of Fish and Game provides grants to private landowners, sportsmen's clubs, land trusts, and nonprofit groups to restore or create wildlife habitats for the benefit of species-at-risk.
- **Chapter 61, 61A, and 61B Current Use Tax Programs.** The State created the Chapter 61, 61A and 61B programs to assist landowners who want to keep their land undeveloped by offering reduced tax rates if the land is used for forestry or agriculture, or if they leave it in a natural, undeveloped state.
- **Forest Stewardship Program (FSP).** The Massachusetts FSP supports private forest landowners' efforts to manage, enjoy, and care for their land using a long-term approach. The FSP is a DCR program under the Bureau of Forestry which provides education and cost-share opportunities to forest landowners.
- **Environmental Quality Incentives Program (EQIP).** The EQIP is a voluntary conservation program administered by the USDA Natural Resources Conservation Service. Although

typically associated with more traditional forms of agriculture, the most recent farm bill includes funding for non-industrial forest land.

- **Landowner Incentive Program (LIP).** The LIP program, administered through the MA Division of Fisheries and Wildlife, provides technical and financial assistance for private landowners interested in developing and maintaining wildlife habitats on their property.
- **Conservation Restrictions.** A conservation restriction is a legal agreement between a landowner and either a municipal agency or a land trust that offers tax incentives for landowners in exchange for keeping parcels in an undeveloped state. Information about Conservation Restrictions is provided in Section 5.
- **Foresters for the Birds.** Modeled on a successful program in Vermont, Foresters for the Birds provides landowners with information about bird habitats on their land and recommendations about how to enhance these habitats in conjunction with other forest management goals. The program provides funding assistance for a trained private forester to evaluate the existing and potential habitats for birds that rely on the forests of Massachusetts for much of their breeding habitat. The birds were selected by Mass Audubon as conservation priorities, and cover a range of forest types. Foresters will provide landowners with forest management recommendations to improve or create new bird habitats which must be incorporated into a Forest Stewardship Plan. Private landowners with 10 or more wooded acres are eligible to receive funding assistance for the development of a Bird Habitat Assessment.

Environmental Stewardship

Environmental stewardship refers to the responsible use and protection of the natural environment through conservation and sustainable practices. Here, in particular, it refers to stewardship on behalf of the residents, neighborhood groups, schools and environmental organizations of Dedham to meet OSRP objectives. Creating this awareness of environmental stewardship is also a great way to empower residents and raise awareness about the open space and natural areas in Dedham. Several community groups contribute to maintenance of parks in their neighborhoods, and more residents are interested in volunteer opportunities. Because there is limited funding for open space maintenance in Dedham, the Town should foster these relationships and create outreach programs to inform citizens of stewardship opportunities. Some suggestions that were received through public outreach include:

- Create “Sponsor a Spot” locations as a fundraiser and educational program
- Create an association or network of neighborhood groups and civic organizations and provide tools for information sharing and community engagement (*e.g.* a website directory, public outreach events)
- Work with citizens to establish a “Friends of Dedham’s Open Spaces” organization, which has been successful in nearby towns
- Host more volunteerism events and programs (*e.g.* cleanup days, trail stewardship and maintenance programs, invasive species management)

Section 8: Goals and Objectives

Goals and objectives for the OSRP were developed from analysis of community input at the public workshops, online survey results, interviews with stakeholders and user groups, conversations with municipal staff, Open Space and Recreation Committee meetings, and Parks and Recreation Master Plan Steering Committee meetings. Goals represent a general vision or concept and objectives are more concrete ideas for accomplishing the stated goals. The action items in Section 9.0 are specific measures to help the Town achieve these goals and objectives.

Natural Resource Protection, Stewardship, Restoration, and Enhancement

Goal NR-1: Protect the Town's biological diversity, watersheds and ecosystems.

Objectives

- NR-1.1: Protect lands that have high ecological value for preservation of wildlife habitat, native vegetation, and water resources.
- NR-1.2: Contain and reduce spread of invasive plant species.
- NR-1.3: Minimize conflicts between humans and wildlife.
- NR-1.4: Reduce pollution, improve air and water quality, and clean polluted areas.
- NR-1.5: Preserve and restore waterways, ponds, and wetlands.

Goal NR-2: Promote sound environmental management of open spaces.

Objectives

- NR-2.1: Encourage responsible use among those who enjoy and access private and public open spaces.
- NR-2.2: Practice low environmental impact land management techniques.
- NR-2.3: Promote sustainability initiatives.

Goal NR-3: Encourage development that protects open space systems and enhances natural resources.

Objectives

- NR-3.1: Guide and regulate private development to preserve open areas and protect environmentally sensitive areas.
- NR-3.2: Encourage site design techniques that limit point and non-point source pollution to water resources.

Goal NR-4: Design a Town-wide greenway system/trail connectivity plan that connects existing open space and recreation lands. Identify any gaps and work to protect and gain access.

Objectives

- NR-4.1: Evaluate options for creating a system of trails and improving connectivity within Dedham on public and private land with linkages to existing trails in Dedham and neighboring communities.
- NR-4.2: Develop guides to parks and public lands which show trails, special features, and access points for pedestrians and vehicles.

Recreation Area Planning and Maintenance

Goal R-1: Provide recreation facilities and programs that serve the needs of the Town.

Objectives

- R-1.1: Seek opportunities to increase Town recreation lands and facilities.
- R-1.2: Collaborate with private landowners to allow responsible public access to private lands or facilities.
- R-1.3: Develop and implement a high standard of quality for all recreation areas. Adopt “Fix it First” and “Every Field a Park” policies.
- R-1.4: Expand places for children to play.
- R-1.5: Consider the development of new recreation facilities.
- R-1.6: Invest in upgrades to Dedham’s parks. Implement the “Every Field a Park” policy and determine how to define and implement full and equitable access.

Goal R-2: Increase access to and availability of recreation properties and programs, working toward the goal of universal access at all Town parks and recreation facilities.

Objectives

- R-2.1: Produce comprehensive guides and signage to open space and recreation resources (see NR-4.2).
- R-2.2: Cooperate and coordinate with State recreation planning efforts.
- R-2.3: Make improvements necessary to comply with ADA standards for all Town lands and facilities.
- R-2.4: Create, extend and enhance pedestrian and bicycle paths, trails, connectivity and amenities.
- R-2.5: Improve access to waterways.
- R-2.6: Implement infrastructure improvements to facilitate connectivity of open space to recreation areas, neighborhoods to destinations, and residents to public transit/employment.

Land Acquisition, Funding, and Management

Goal LM-1: Support Town efforts to protect and manage open space.

Objectives

- LM-1.1: Identify, prioritize, and (where necessary) acquire private lands of conservation and recreation interest.
- LM-1.2: Provide funding for open space acquisition and management.
- LM-1.3: Improve care, custodianship and policing of open spaces commonly used for illegal dumping, including monitoring, waste removal, signage and fines.
- LM-1.4: Implement best management practices.

Goal LM-2: Coordinate and support protection and management of private open space areas.

Objectives

- LM-2.1: Encourage private land conservation measures.
- LM-2.2: Develop partnerships with private landowners, nonprofit organizations, and recreation organizations.
- LM-2.3: Educate landowners about land stewardship.
- LM-2.4: Integrate historic and scenic resource protection into open space and recreation planning.

Communication

Goal C-1: Increase civic engagement by improving technology, communications and municipal processes for Town Departments, Boards, and Committees.

Objectives

- C-1.1: Engage in a process of continuous improvement for Town Boards and Committees.
- C-1.2: Establish a Dedham PROS (Parks, Recreation, Open Space) working collaborative to include municipal departments (*e.g.* Parks and Recreation, Environmental, Council on Aging) in addition to various community groups/organizations (*e.g.* Dedham Community House, Dedham Land Trust, Dedham Civic Pride, neighborhood groups) to share information about what each group offers, future plans for expansion, and how each entity can help provide excellent park, recreation, and open space opportunities to all Dedham residents.
- C-1.3: Develop and implement an effective communications plan for all open space and recreation programs and offerings.

Section 9: Seven-Year Action Plan

Table 9.1 – List of Abbreviations used in Section 9

APGA	American Public Gardens Association	ENV	Environmental Coordinator/Department
ATM	Annual Town Meeting	HDC	Historic District Commission
BD	Building Department	LAND	Local Acquisitions for Natural Diversity
BLF	Buy Local Food	LWCF	Land and Water Conservation Fund
BOA	Board of Assessors	LIP	Land Incentive Program
BOH	Board of Health	LSA	Livable Streets Alliance
CC	Conservation Commission	MassDOT	Department of Transportation (MA)
COA	Council on Aging	MBACC	Mother Brook Arts and Community Center
COD	Commission on Disabilities	MDAR	MA Department of Agricultural Resources
CP	Dedham Civic Pride	MET	MA Environmental Trust
CPA	Community Preservation Act	MVP	Municipal Vulnerability Program related funding
CRWA	Charles River Watershed Association	N/A	No funding needed (work done by staff/volunteers)
CS	Complete Streets	NHESP	MA Natural Heritage and Endangered Species Program
DCR	MA Department of Conservation and Recreation	NepRWA	Neponset River Watershed Association
DEP	Department of Environmental Protection (MA)	OSRC	Open Space and Recreation Committee
DFW	Department of Fish and Wildlife (MA)	PARC	Parkland Acquisitions and Renovations for Communities
DHRT	Friends of the Dedham Heritage Rail Trail	PB	Planning Board/Department/Master Plan Committee
DHS	Dedham Historical Society and Museum	PR	Parks and Recreation
DLT	Dedham Land Trust	SAC	Sustainability Advisory Committee
DOER	Department of Energy Resources (MA)	SEL	Select Board
DPS	Dedham Public Schools	THF	Tony Hawke Foundation
DPW	Department of Public Works	TM	Town Manager
DWWD	Dedham-Westwood Water District	TOWN	Town funds (general municipal budget)
EOEEA	Executive Office of Energy and Environmental Affairs (MA)	TTOR	Trustees of the Reservation

More information on Massachusetts grants and loans for open space and recreation is provided in Appendix 8.

The column labeled **Year 1-7, Priority** indicates the year (1 through 7) when it is expected that the Town will have resources to assign to a specific goal. The Priority indicates how important a goal is to the community (**H=High, M=Medium, L=Low**). In some case, a High priority item might not be assigned a low year number because resources are not anticipated to be available. If some effort has been put forth for any goal (by either municipal or civic groups), the word **ongoing** has been added.

Natural Resource Protection, Stewardship, Restoration, and Enhancement

Objective/Action	Town Agency	Year 1-7, Priority	Funding/ Partners
Goal NR-1: Protect the Town's biological diversity, watersheds and ecosystems.			
Objective NR-1.1: Protect lands that have high ecological value for preservation of wildlife habitat, native vegetation, and water resources.			
Action NR-1.1.1: Identify open space areas that extend beyond the Town line and work with neighboring towns to implement a coordinated plan for land management and acquisition.	OSRC	3, M	TOWN
Action NR-1.1.2: Educate private landowners about landscaping and property management techniques that use native plants, support wildlife, and decrease use of harmful pesticides and fertilizers.	CC	1, H, ongoing	LIP, MET, TOWN
Action NR-1.1.3: Identify priority wildlife habitats by conducting surveys and organizing public biodiversity events.	OSRC	4, M, ongoing	Mass Audubon, N/A, NHESP
Action NR-1.1.4: Protect land in critical habitat areas.	CC	1, H	LAND, LWCF
Action NR-1.1.5: Certify and protect vernal pools. Create a GIS datalayer with locations of certified and potential vernal pools. Educate municipal staff and board/committee members about using GIS tools and recognizing key landscape features when on site walks.	CC OSRC	2, M, ongoing	N/A, NHESP
Objective NR-1.2: Contain and reduce spread of invasive plant species.			
Action NR-1.2.1: Identify and target key species, provide information about management techniques for homeowners, and develop a plan to eradicate greatest threats involving manual removal when possible and chemical treatment when necessary.	CC	1, H, ongoing	CRWA, DCR, NepRWA, NHESP, TOWN
Action NR-1.2.2: Educate residents about forest pests and monitor vulnerable plant species for evidence (e.g. Emerald ash borer, Asian longhorned beetle, spotted lanternfly).	CC	1, H, ongoing	CRWA, DCR, MDAR, NepRWA
Objective NR-1.3: Minimize conflicts between humans and wildlife.			
Action NR-1.3.1: Educate residents about local wildlife and make available fact sheets describing steps they can take to reduce the risk of conflict. Provide contact information to assist when conflicts occur.	ENV	2, M	Mass Audubon, MET, N/A, NHESP
Action NR-1.3.2: Monitor wildlife populations and habitats to better prepare for encroachment issues. Implement measures to prevent conflicts before they occur (e.g. beaver traps, fences, hunting).	ENV OSRC	1, M, ongoing	DFW, TOWN

Natural Resource Protection, Stewardship, Restoration, and Enhancement

Objective/Action	Town Agency	Year 1-7, Priority	Funding/ Partners
Goal NR-1: Protect the Town's biological diversity, watersheds and ecosystems (continued)			
Objective NR-1.4: Reduce pollution, improve air and water quality, and clean polluted areas.			
Action NR-1.4.1: Encourage residents and businesses to regularly monitor and clean up litter on their properties. Provide information on the Town website about how to report 'nuisance' property as described in Article 16, approved by Fall 2018 Annual Town Meeting.	BD, CC, ENV	1, H, ongoing	N/A, TOWN, NepRWA
Action NR-1.4.2: Secure funds to implement stormwater management improvements at the Mucciaccio Pool parking lot and at Paul Park (as described in Section 7A.2).	PR	2, L	DWWD
Objective NR-1.5: Preserve and restore waterways, ponds, and wetlands.			
Action NR-1.5.1: Work with partner organizations and volunteer groups to monitor water quality. Encourage residents to become involved in monthly water sampling programs with CRWA and NepRWA.	ENV	1, M, ongoing	CRWA, DEP (Clean Water Grants), DWWD, NepRWA, MET
Action NR-1.5.2: Identify sources of pollution and implement strategies to reduce pollution and improve water quality (<i>e.g.</i> Mother Brook).	CC	1, H, ongoing	
Action NR-1.5.3: Inform residents about the Dropcountr app to help homeowners track usage and conserve water.	CC, ENV	1, M	
Goal NR-2: Promote sound environmental management of open spaces.			
Objective NR-2.1: Encourage responsible use among those who enjoy and access private and public open spaces.			
Action NR-2.1.1: Continue to organize Town-wide cleanups of waterways (CRWA/Town of Dedham annual Earth Day Cleanup).	ENV	1, H, ongoing	CRWA, TOWN
Action NR-2.1.2: Create and maintain a list of stewardship projects for interested groups and coordinate volunteer efforts by community groups (<i>e.g.</i> youth groups, boy/girl scouts, religious organizations, civic organizations, community/neighborhood groups).	ENV	2, H	DCR, LIP, NHESP, TOWN
Action NR-2.1.3: Create a 'Sponsor A Spot' program (similar to the Dedham Civic Pride program) as a fundraiser and educational program to support conservation efforts.	ENV	2, L	CP, DLT, TOWN

Natural Resource Protection, Stewardship, Restoration, and Enhancement

Objective/Action	Town Agency	Year 1-7, Priority	Funding/ Partners
Goal NR-2: Promote sound environmental management of open spaces (continued)			
Objective NR-2.2: Practice low environmental impact land management techniques.			
Action NR-2.2.1: Adopt a Town-wide policy to reduce water consumption and protect water resources. Incorporate Best Management Practices and Low Impact Development design standards for both public and private lands.	CC, ENV, PB	5, M	DWWD, TOWN, NepRWA
Objective NR-2.3: Promote sustainability initiatives.			
Action NR-2.3.1: Adopt environmental and energy performance standards for new development (design/construction/operation) that incorporate the latest model building energy codes and standards (International Energy Conservation Code of the International Code Council and Standard 90.1 of the American Heating, Refrigeration, and Air Conditioning Engineers).	ENV, PB, SAC	5, H	EOEEA, DOER
Action NR-2.3.2: Encourage recycling at local businesses and provide incentives to recycle.	ENV	2, H	DEP
Action NR-2.3.3: Encourage use of biodegradable food service products at local businesses and schools.	ENV	3, M, ongoing	DEP
Action NR-2.3.4: Create community gardens (consider Colburn Street, Condon Park, Dolan Center, and other Town properties).	ENV, PR, SAC	1, H, ongoing	N/A, TOWN, CP
Action NR-2.3.5: Encourage existing large commercial developments to incorporate 'green' improvements to their buildings.	ENV, PB, SAC	1, H	TOWN
Action NR-2.3.6: Develop an Environmental Checklist to assist with Development Review.	CC, PB	1, H	TOWN
Action NR-2.3.7: Develop and promote public conservation efforts relating to water resources with implementation by the Planning Board.	CC, PB	1, M	DWWD, MFW
Action NR-2.3.8: Develop and promote public conservation efforts relating to energy resources with implementation by the Planning Board.	ENV, PB, SAC	1, M	EOEEA, DOER
Action NR-2.3.9: Promote and advocate for non-motorized transportation options and public transit.	ENV, OSRC, PB	3, H, ongoing	TOWN, DOT
Action NR-2.3.10: Assess the Town's vulnerabilities to climate change as part of the MVP Program and create a climate action plan that includes short- and long-term actions to enhance community sustainability and resiliency.	ENV, SAC	1, H, ongoing	EOEEA, MVP

Natural Resource Protection, Stewardship, Restoration, and Enhancement

Objective/Action	Town Agency	Year 1-7, Priority	Funding/ Partners
Goal NR-3: Encourage development that protects open space systems and enhances natural resources.			
Objective NR-3.1: Guide and regulate private development to preserve open areas and protect environmentally sensitive areas.			
Action NR-3.1.1: Review Town's Aquifer Protection regulations to ensure effectiveness, particularly during and after new development.	CC, PB	3, M	DWWD
Objective NR-3.2: Encourage site design techniques that limit point and non-point source pollution to water resources.			
Action NR-3.2.1: Complete changes to Stormwater Management regulations to match the local bylaw changes made in 2016.	CC	1, H, ongoing	NepRWA, TOWN
Action NR-3.2.2: Make changes in Stormwater bylaw and regulations to conform to upcoming MS4 permit rules.	CC	3, H, ongoing	NepRWA, TOWN
Goal NR-4: Design a Town-wide greenway system/trail connectivity plan that connects existing open space and recreation lands. Identify any gaps and work to protect and gain access.			
Objective NR-4.1: Evaluate options for creating a system of trails and improving connectivity within Dedham on public and private land with linkages to existing trails in Dedham and neighboring communities.			
Action NR-4.1.1: Identify utility corridors and potential sites for easements to create greenways and expand trail networks.	ENV, OSRC	1, H, ongoing	DCR, DLT, MassDOT, TOWN
Action NR-4.1.2: Coordinate with neighboring towns to create and protect contiguous natural areas.	OSRC	3, L	DCR, DLT
Action NR-4.1.3: Create new trails within the Town Forest and increase accessibility through the creation of a safe access point on Washington Street and other suitable locations. Investigate possible easement/access through MassDOT land.	ENV	2, L	DCR, MassDOT, TOWN
Action NR-4.1.4: Create and maintain walking/biking trails and cleanup/maintenance plan at Manor Fields for use until further site development occurs.	PR	1, H, ongoing	DCR, TOWN
Action NR-4.1.5: Coordinate improvements to river access and extension of a linear park along the Charles River and Mother Brook, extending across and along Providence Highway.	ENV	5, H	CRWA, DCR, LWCF, LAND, EOEEA Cons. Partnership
Action NR-4.1.6: Continue efforts to develop the Dedham Rail Trail.	ENV, OSRC	1, H, ongoing	DCR, DHRT, DLT, MassDOT, TOWN

Recreation Area Planning and Management

Goal/Objective/Action	Town Agency	Year 1-7, Priority	Funding/ Partners
Goal R-1: Provide recreation facilities and programs that serve the needs of the Town.			
Objective R-1.1: Seek opportunities to increase Town recreation lands and facilities.			
Action R-1.1.1: Adopt a "Fix It First" policy to improve existing fields as a way to build support for future park additions/expansions.	PR	1, H	PR, TOWN
Action R-1.1.2: Add more tennis courts, in addition to those proposed at Manor Fields.	PR	5, M	ATM, TOWN
Action R-1.1.3: Plan and attract special events to Town to generate revenue and provide a variety of events and activities for all ages (e.g. Special Olympics, bike race/tour).	PR	4, L	PR, TOWN
Action R-1.1.4: Increase availability of multi-use fields for youth recreation programs. Work with youth leagues to identify needs. Use "Fix it First" program to improve facilities.	PR	2, H	LWCF, PARC
Action R-1.1.5: Continue efforts to develop the Manor Fields for recreational use.	PR	1, H, ongoing	ATM, TOWN
Action R-1.1.6: Collaborate with Dedham Council on Aging to investigate creative funding opportunities that consider public health and to improve recreation opportunities and programming for Dedham's aging population.	PR	1, M	COA
Objective R-1.2: Collaborate with private landowners to allow responsible public access to private lands or facilities.			
Action R-1.2.1: Seek opportunities to expand Dedham's use of private institutional and recreation properties (e.g. Northeastern, NewBridge, Nobles, Dedham Country and Polo Club) for regular programming and special events (as noted in R-1.1.3).	PR	1, M	N/A, TOWN
Action R-1.2.2: Partner with businesses, sports organizations, and youth groups to help improve and maintain Town parks and fields.	PR	4, M	PR, TOWN
Objective R-1.3: Develop and implement a high standard of quality for all recreation areas. Adopt "Fix it First" and "Every Field a Park" policies.			
Action R-1.3.1: Create a strategic plan for Town recreation facilities to improve parks with a "Fix it First" policy and provide amenities to make "Every Field a Park."	PR	1, H, ongoing	PR, TOWN
Action R-1.3.2: Continue to seek new funding opportunities for playing fields and park maintenance and improvements.	PR	1, H, ongoing	PR, TOWN
Action R-1.3.3: Obtain funding for needed improvements and equipment at Dedham's parks, playing fields, and open spaces.	PR	2, H	CPA, PR, TOWN

Recreation Area Planning and Management

Goal/Objective/Action	Town Agency	Year 1-7, Priority	Funding/ Partners
Goal R-1: Provide recreation facilities and programs that serve the needs of the Town (continued)			
Objective R-1.4: Expand places for children to play.			
Action R-1.4.1: Add new and varied play areas and equipment.	PR	2, M	PR, TOWN
Action R-1.4.2: Add nature play elements to existing parks or Town-owned natural areas.	PR	1, M	CPA, PR, TOWN
Action R-1.4.3: Develop a town-wide destination play area at Manor Fields or another Town property.	PR	2, H, ongoing	ATM, PR
Objective R-1.5: Consider the development of new recreation facilities.			
Action R-1.5.1: Identify locations to add community gardens.	ENV, PR	1, M	BLF, APGA
Action R-1.5.2: Consider the siting and construction of a skate park.	PR	7, L	THF
Action R-1.5.3: Consider the siting and construction of a Spray Ground or Splash Pad.	PR	3, M	PARC, TOWN
Action R-1.5.4: Determine locations and develop plans to create a neighborhood park or pocket park in Dedham Village.	PR	1, M	PARC, TOWN
Action R-1.5.5: Consider completing a feasibility study for an indoor community recreation center.	PR	7, L	TOWN
Objective R-1.6: Invest in upgrades to Dedham's parks. Implement the "Every Field a Park" policy and determine how to define and implement full and equitable access.			
Action R-1.6.1: Replace and add diversified equipment to playgrounds such as swings, new climbers, spinners and other innovative play structures. Possible locations include Paul Park, Barnes Memorial Park, Churchill Park, and Condon Park).	PR	2, M	PARC, TOWN
Action R-1.6.2: Continue to partner with the Dedham Public Schools to utilize their properties as public parks when school is not in session. Evaluate and update the existing MOU agreement as recreation interests and usage change.	PR	1, M, ongoing	DPS
Action R-1.6.3: Consider adding new playgrounds at the following locations: Fairbanks Park, Dolan Recreation Center, Municipal Campus, Public Library locations.	PR	1, M	PARC, TOWN
Action R-1.6.4: Implement scheduled resurfacing at existing sports courts including Dedham High School and Churchill Park.	PR	1, M	PARC, TOWN
Action R-1.6.5: Consider the addition of park amenities (shelters, trees, benches, restrooms) at all Town parks consistent with "Every Field a Park" policy.	PR	1, H	PARC, TOWN

Recreation Area Planning and Management

Goal/Objective/Action	Town Agency	Year 1-7, Priority	Funding/ Partners
Goal R-1: Provide recreation facilities and programs that serve the needs of the Town (continued)			
Objective R-1.6: Invest in upgrades to Dedham's parks. Implement the "Every Field a Park" policy and determine how to define and implement full and equitable access (continued)			
Action R-1.6.6: Add restrooms as needed at the following locations: Paul Park; Condon Park; Dolan Recreation Center.	PR	3, M	TOWN
Action R-1.6.7: Develop a formal marketing and communications plan for Dedham Parks and Recreation.	PR	1, H	TOWN
Action R-1.6.8: Develop maintenance plan standards to create sustainable recreation areas.	CC, PR	1, H	CC, TOWN
Goal R-2: Increase access to and availability of recreation properties and programs, working toward the goal of universal access at all Town parks and recreation facilities.			
Objective R-2.1: Produce comprehensive guides and signage to open space and recreation resources (see NR-4.2)			
Action R-2.1.1: Action items listed under NR-4.2 address this objective.	PR	See NR-4.2	
Objective R-2.2: Cooperate and coordinate with State recreation planning efforts.			
Action R-2.2.1: Address recreation needs identified in the 2017 SCORP including swimming, bicycling, walking, playground, and tennis facilities.	PR	3, H	TOWN
Objective R-2.3: Make improvements necessary to comply with ADA standards for all Town lands and facilities.			
Action R-2.3.1: Provide clear access, signs and directions to Gonzalez Field.	PR	1, H	TOWN
Objective R-2.4: Create, extend and enhance pedestrian and bicycle paths and trails, connectivity and amenities.			
Action R-2.4.1: Improve signage for on-road bicycle rights-of-way.	DPW	1, H, ongoing	MassBike, LSA, Walk Boston, MassDOT CS, TOWN
Action R-2.4.2: Continue adding bike racks at key locations around town.	DPW	1, H, ongoing	
Action R-2.4.3: Require new development/redevelopment to create/provide access for non-motorized transportation (including pedestrian and bike amenities) and public transit.	PB	2, M	
Action R-2.4.4: Encourage existing commercial property owners to add bicycle and pedestrian accommodations (sidewalks, bike paths, bike racks).	ENV, PB	3, M	
Action R-2.4.5: Create a bike task force (coordinate with Livable Communities Task Force).	ENV	1, H	

Recreation Area Planning and Management

Goal/Objective/Action	Town Agency	Year 1-7, Priority	Funding/ Partners
Goal R-2: Increase access to and availability of recreation properties and programs, working toward the goal of universal access at all Town parks and recreation facilities (continued)			
Objective R-2.4: Create, extend and enhance pedestrian and bicycle paths and trails, connectivity and amenities (continued)			
Action R-2.4.6: Encourage the implementation of the pedestrian, bike, and other public access components in the recommendations identified in the Dedham Legacy Place TAP Report, including a feasibility study for boardwalk access over wetlands.	ENV	1, M	MassBike, Livable Streets Alliance,
Objective R-2.5: Improve access to waterways.			
Action R-2.5.1: Improve access to Wigwam Pond.	ENV, PB, PR	1, H	CPA, DEP, DFW Riverways, MET, TOWN
Action R-2.5.2: Improve access to Dedham's waterways. Add signage and restore/improve public landings along the Charles River at Motley Pond, Mother Brook, and Pine Island. Improve access for fishing.	ENV	3, M, ongoing	
Action R-2.5.3: Improve Wigwam and Little Wigwam Ponds. Enforce cleanup by abutting property owners, implement measures to protect water areas from development.	CC, OSRC	3, H	
Action R-2.5.4: Explore multiple uses for waterways; ice skating at Little Wigwam; outdoor classroom at Mother Brook (Mill Pond); historic water trail along Charles River.	ENV, OSRC	4, M	
Objective R-2.6: Implement infrastructure improvements to facilitate connectivity of open space to recreation areas, neighborhoods to destinations, and residents to public transit/employment.			
Action R-2.6.1: Improve sidewalk connections between Legacy Place and Enterprise Drive. Completing sidewalks on Rustcraft Road. Improve safety for crossing Providence Highway. Create safe connections within Dedham Mall.	DPW, PB	1, H, ongoing	MassDOT, TOWN
Action R-2.6.2: Strengthen enforcement of existing 'no-parking' regulations on sidewalks.	SEL	1, H	TOWN
Action R-2.6.3: Maintain sidewalks and keep them free, clear, and safe for pedestrians. Consider impacts of cut-through traffic on resident parking practices.	DPW	1, H	TOWN
Action R-2.6.4: Work with MassDOT to prepare an Access Management Study for Providence Highway that examines access and safety along the roadway as a whole.	PB	3, M	MassDOT, TOWN
Action R-2.6.5: Implement a Complete Streets program to increase safety and accessibility for all modes of transportation in Dedham.	DPW	1, H, ongoing	MassDOT, CS, TOWN

Land Acquisition, Funding and Management

Goal/Objective/Action	Town Agency	Year 1-7, Priority	Funding/ Partners
Goal LM-1: Support Town efforts to protect and manage open space.			
Objective LM-1.1: Identify, prioritize, and (where necessary) acquire private lands of conservation and recreation interest.			
Action LM-1.1.1: Identify parcels that may become available for acquisition or protection by other means.	OSRC	1, M, ongoing	CPA, TOWN
Action LM-1.1.2: Prioritize lands for acquisition based on ownership, development potential, size, and connection to existing open space.	OSRC	1, M	DLT
Action LM-1.1.3: Maintain database of private lands of interest for conservation and recreation. Include photo, type of open space, size, protection status, manager, location, precinct, and ownership contact information.	OSRC	2, M	TOWN
Action LM-1.1.4: Establish agreements with institutional landowners to give the Town right of first refusal for undeveloped properties up for sale or change of use.	OSRC	4, M	TOWN
Action LM-1.1.5: Undertake annual review of Town-owned properties and evaluate for suitability for conservation or recreation. Develop a list of criteria for the highest and best use of unassigned properties.	OSRC	3, M	TOWN
Action LM-1.1.6: Continue to identify parcels to form a system of paths and trails.	ENV, OSRC	1, H	TOWN
Action LM-1.1.7: Complete an Urban Land Assessment through the Urban Ecology Institute and the Trust for Public Land.	ENV	2, H	DCR, TOWN, TPL
Objective LM-1.2: Provide funding for open space acquisition and management.			
Action LM-1.2.1: Evaluate Dedham's desire to adopt the Community Preservation Act, taking into consideration the benefits and costs and FY20 increase in Registry fees.	OSRC, SEL	1, H	N/A
Action LM-1.2.2: Establish a dedicate fund and process for open space management and acquisition.	OSRC, SEL	1, H	ATM, SEL
Objective LM-1.3: Improve care, custodianship and policing of open spaces commonly used for illegal dumping and litter, including monitoring, waste removal, signage and fines.			
Action LM-1.3.1: Monitor known "problem" locations: Pine Island (underage drinking), the Pits (Little Wigwam Pond); Candy Island (Riverdale); wetlands between Legacy Place and Rustcraft Road; abandoned rail line; Fairbanks wetlands, Manor Fields, Mother Brook.	CC	1, M	DCR, PR, TOWN
Action LM-1.3.2: Post 'No Dumping' signs and enforce fines.	CC	2, M	DCR, SEL
Action LM-1.3.3: Consider installation of cameras at above locations.	CC	2, L	DCR, SEL

Land Acquisition, Funding and Management

Goal/Objective/Action	Town Agency	Year 1-7, Priority	Funding/ Partners
Goal LM-1: Support Town efforts to protect and manage open space (continued)			
Objective LM-1.4: Implement best management practices.			
Action LM-1.4.1: Consider adoption of Open Space Design subdivision.	PB, TM	3, M, ongoing	ATM, N/A
Action LM-1.4.2: Schedule regular OSRC meetings to review implementation of this OSRP.	OSRC	1, H, ongoing	N/A
Action LM-1.4.3: Improve Town website to provide comprehensive and easy-to-find information about open space resources, volunteer opportunities, meetings, and events.	CC, ENV, OSRC, TM	2, H	TOWN
Action LM-1.4.4: Develop notification procedure for Town “option to buy” for Chapter 61 and 61B properties should the property owner decide to remove land from the program.	SEL	3, L	BOA, SEL
Goal LM-2: Coordinate and support protection and management of private open space areas.			
Objective LM-2.1: Encourage private land conservation measures.			
Action LM-2.1.1: Undertake comprehensive review of all protected land in Dedham (Conservation Restrictions; Chapter 61, 61A, 61B; Article 97) as part of the Dedham Master Plan. Evaluate applicability of tax incentive programs for current land use.	PB	4, H	OSRC, TOWN
Action LM-2.1.2: Work with landowners to set aside portions of their properties as permanent open space	OSRC	3, M	DLT, TTOR
Action LM-2.1.3: Educate private landowners about conservation restrictions.	OSRC	3, M	DLT, TTOR
Objective LM-2.2: Develop partnerships with private landowners, nonprofit organizations, and recreation organizations.			
Action LM-2.2.1: Support neighborhood/friend groups to preserve and enhance open spaces in their neighborhoods.	OSRC	1, M	CP, SEL
Action LM-2.2.2: Add institutional partner(s) to OSRC (e.g. Legacy Place, Nobles, Northeastern, General Dynamics) to improve visibility, outreach, conservation, and fundraising.	OSRC	1, M	N/A
Action LM-1.3.3: Support efforts of the Dedham Land Trust and expand outreach efforts.	OSRC	1, H, ongoing	N/A

Land Acquisition, Funding and Management

Goal/Objective/Action	Town Agency	Year 1-7, Priority	Funding/ Partners
Goal LM-2: Coordinate and support protection and management of private open space areas (continued)			
Objective LM-2.3: Educate landowners about land stewardship.			
Action LM-2.3.1: Continue and expand efforts to promote seasonal cleanup days at neighborhood and Town-wide sites.	ENV	1, H, ongoing	CRWA, NepRWA
Action LM-2.3.2: Provide public education/information about groups and organizations that protect private land.	OSRC	2, M	TOWN
Objective LM-2.4: Integrate historic and scenic resource protection into open space and recreation planning.			
Action LM-2.4.1: Coordinate protection of open space and historic resources. Install informational signs about properties that have historic significance. Develop a self-guided tour, identifying significant natural and historic features in the Town. Seek funding for historic landscape preservation and management for the Historic Powder House. Support preservation and restoration of Village Cemetery. Inventory archeologically significant sites and add criteria for open space protection priorities.	OSRC	2, L	HDC, DHS
Action LM-2.4.2: Consider scenic road by-law and designate a network of scenic roads.	PB	5, L	N/A
Action LM-2.4.3: Create demolition delay by-law for historic properties.	PB	1, M	N/A

Communication

Goal/Objective/Action	Town Agency	Year 1-7, Priority	Funding/ Partners
Goal C-1: Increase civic engagement by improving technology, communications, and municipal processes for Town Departments, Boards, and Committees.			
Objective C-1.1: Engage in a process of continuous improvement for Town Boards and Committees.			
Action C-1.1.1: Support members of Town Boards and Committees by developing clear expectations for meeting attendance and participation, recording requirements, timely production of meeting minutes, and communications with the public.	SEL	1, H	N/A
Action C-1.1.2: Improve communication between and among major Boards and expand opportunities for coordination by municipal staff associated with these Boards.	SEL	1, H	N/A
Action C-1.1.3: Establish trainings about requirements and good practices such as Open Meeting Law compliance, email and communication norms, and decision-making processes.	SEL	1, H	TOWN
Action C-1.1.4: Confirm that all commissions, committees, boards, and pertinent municipal staff identified in this plan receive a copy of it and understand their role in implementation.	OSRC	1, H	N/A
Action C-1.1.5: Investigate if software is available to identify people associated with different actions and connect people who may not know each other.	PR	3, L	TOWN
Action C-1.1.6: Review implications of changing demographics on Town services and Departments including Housing, Transportation, Health, and Parks and Recreation in Town of Dedham Master Plan.	PB	2, H	TOWN
Action C-1.1.7: Provide training opportunities for Town employees including communication, customer service, coalition building and outreach to the public.	SEL	3, M	TOWN
Action C-1.1.8: Clearly communicate to the public the purpose of this Plan and clarify the role and responsibilities of the Open Space and Recreation Committee.	OSRC	1, H, ongoing	N/A

Communication

Goal/Objective/Action	Town Agency	Year 1-7, Priority	Funding/ Partners
Goal C-1: Increase civic engagement by improving technology, communications, and municipal processes for Town Departments, Boards, and Committees (continued)			
Objective C-1.2: Establish a Dedham PROS (Parks, Recreation, Open Space) working collaborative to include municipal departments (<i>e.g.</i> Parks and Recreation, Environmental, Council on Aging) in addition to various community groups/organizations (<i>e.g.</i> Dedham Community House, Dedham Land Trust, Dedham Civic Pride, neighborhood groups) to share information about what each group offers, future plans for expansion, and how each entity can help provide excellent park, recreation, and open space opportunities to all Dedham residents.			
Action C-1.2.1: Identify a primary contact at Town Hall to communicate with neighborhood and civic groups, maintain contact information, and post information about groups to the Town's website, including volunteer/stewardship opportunities throughout the Town.	ENV	1, H	CC, ENV, SEL, TM
Action C-1.2.2: Hold annual meeting of Dedham's community groups and civic organizations.	ENV	1, H	TOWN
Objective C-1.3: Develop and implement an effective communications plan for all open space and recreation programs and offerings.			
Action C-1.3.1: Develop and implement an effective communication plan for all open space and recreation programs and offerings.	ENV, OSRC, PR	2, H	ENV, OSRC, PR, SEL, TM
Action C-1.3.2: Review the websites of the Town and Recreation Department (The Sportsman) and consider improvements to increase visibility and access to information about open space and recreational resources and programming.	PR	1, H	PR
Action C-1.3.3: Establish OSRC presence on social media and active communication with local media outlets, including a calendar, weekly or monthly "What's On" column or information about recreation, nature, parks, programs, invasive species, gardens, and other open space opportunities.	OSRC	1, M	OSRC

Section 10: Public Comment

10A. Letters of Review

The following pages include letters of review from the following persons, boards, committees and groups:

Marc D. Draisen, MAPC Executive Director
Dedham Board of Selectmen
Dedham Planning Board
Dedham Conservation Commission
Dedham Sustainability Advisory Committee
Dedham Parks and Recreation Commission
Oakdale Square Alliance



August 19, 2019

Melissa Cryan
Executive Office of Energy and Environmental Affairs
100 Cambridge St. – Suite 900
Boston, MA 02114

Dear Ms. Cryan:

The “2019 Dedham Open Space and Recreation Plan” was recently submitted to the Metropolitan Area Planning Council (MAPC) for review.

The Division of Conservation Services (DCS) requires that all open space plans must be reviewed by the applicable regional planning agency. This review is advisory and only DCS has the power to approve a municipal open space plan. While your office reviews open space plans for compliance with your guidelines, MAPC reviews these plans for their attention to regional issues generally and more specifically for consistency with *MetroFuture*, the regional policy plan for the Boston metropolitan area.

Consistency with *MetroFuture* - *MetroFuture* is the official regional plan for Greater Boston, adopted in 2008 in accordance with the requirements of Massachusetts General Law. The plan includes 65 goals and objectives as well as 13 detailed implementation strategies for accomplishing these goals. We encourage all communities within the MAPC region to become familiar with the plan by visiting www.mapc.org/get-involved/metrofuture-our-regional-plan. (We also note that MAPC and its member communities are now in the process of developing a new regional plan, which will look out to 2050, and is accordingly called *MetroCommon 2050*.)

We are pleased to see that the Dedham Open Space and Recreation Plan (OSRP) will actually help to advance several *MetroFuture* goals and implementation strategies that relate specifically to open space, recreation, trails, and the environment generally. In fact, the Dedham OSRP identifies many positive connections with *MetroFuture*, and specifically cites several strategies, goals and actions from *MetroFuture*.

The OSRP also directly recognizes sustainability and climate change as a pressing environmental challenge and discusses the efforts undertaken by the Town, such as its designation as a Green Community and becoming certified in the Municipality Vulnerability Program. The OSRP further includes the implementation of initiatives to promote sustainability in its Action Plan.

Surrounding communities - Several important regional protected parks and conservation areas are located within Dedham, which are under the jurisdiction of the Massachusetts Department of Conservation and Recreation (DCR), while others are managed through



SMART GROWTH AND REGIONAL COLLABORATION

partnerships with land trusts, local governments, and conservation organizations. Additionally, of the six major rivers in the Boston Harbor Watershed, the Charles and Neponset wind their way through Dedham and along its borders. We positively note that the OSRP encourages Dedham to work with adjacent municipalities to ensure that contiguous open spaces remain protected, to establish and maintain trail connections, and to extend natural areas when opportunities arise for land acquisition.

Community Preservation Act - Adoption of the Community Preservation Act (CPA) is a key strategy recommended by *MetroFuture*. We note that Dedham has not adopted the CPA, but we are encouraged to see that the OSRP continues to recommend that Dedham “evaluate [its] desire to adopt the Community Preservation Act” given the recent failed votes.

We think the Town should be aware of the fact the Legislature and Governor recently adopted an increase to the deeds fee that will substantially increase the state match for CPA. Without adopting CPA, Dedham residents and businesses are paying into the state matching fund, but receiving no benefits. This should encourage the Town to reconsider participation in CPA.

The Dedham Open Space and Recreation Plan provides a great deal of detail regarding its parks and open spaces, which includes an assessment of their current condition and future needs. It should serve the Town well as it continues its efforts to preserve open space and provide for the recreational needs of its residents.

Thank you for the opportunity to review this plan.

Sincerely,

Marc D. Draisen
Executive Director

cc: Stephanie Radner, Dedham Open Space and Recreation Committee Chair
Virginia LeClair, Environmental Coordinator

Dennis J. Guilfoyle, Chairman
Dennis J. Teehan, Jr., Vice Chairman
James A MacDonald
Sarah E. MacDonald.
Dimitria Sullivan

James A. Kern
Town Manager

Nancy A. Baker
Assistant Town Manager



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freshideas@dedham-ma.gov

May 29, 2019

Stephanie Radner, Chair
Open Space and Recreation Committee
Dedham, MA

Dear Stephanie,

The Board of Selectmen has reviewed the 2019 Open Space and Recreation Plan update prepared by the Open Space and Recreation Committee and the consulting firm of Horsley Witten Group.

The Board of Selectmen agrees in general with the Open Space and Recreation Plan's goals and recommended actions. In addition, the Board will work cooperatively with other Town Departments, Boards, Committees, and residents to help implement the Plan's recommendations. The Board of Selectmen supports adoption and implementation of the Open Space and Recreation Plan by the Town of Dedham.

Sincerely,

Chair of the Board of Selectmen

PLANNING BOARD
John R. Bethoney, Chair
Michael A. Podolski, Esq., Vice Chair
Robert D. Aldous, Clerk
James E. O'Brien IV
Jessica Porter
Ralph I. Steeves, Associate



Town Hall
26 Bryant Street
Dedham, MA 02026-4458
T: 781-751-9242

Planning Director
@dedham-ma.gov

**TOWN OF DEDHAM
PLANNING BOARD**

March 22, 2019

Stephanie Radner, Chair
Dedham Open Space and Recreation Report
c/o Dedham Town Hall
26 Bryant Street
Dedham, MA 02026

RE: 2019 OPEN SPACE AND RECREATION REPORT

Dear Stephanie,

The Planning Board has received and reviewed the recently completed above captioned Report. The Board truly appreciates all the time and effort put into making this Report comprehensive, educational and inclusive in describing the many Open Space and Recreational opportunities here in Dedham. The Planning Board looks forward to working together with other Town Departments as well as Dedham citizens to implement the Plan's recommendations. On behalf of our Board, I commend you and your Committee members for all your diligence and hard work in putting this Report together.

The Planning Board will support both the adoption and implementation of your Plan by the Town of Dedham. Thank you!

Sincerely,

A handwritten signature in black ink, appearing to be "John R. Bethoney".

John R. Bethoney, Chair
Planning Board

Laura Bugay, Chair
Andrew Tittler, Vice Chair
Stephanie Radner, Associate
Michelle Kayserman, Clerk
Leigh Hafrey, Associate
Nick Garlick, Associate
Eliot Foulds, Associate
Nathan Gauthier, Alternate
Sean Hanley, Alternate
Elissa Brown, Agent
Renee Johnson, Administrator



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TOWN OF DEDHAM CONSERVATION COMMISSION

April 4, 2019

Stephanie Radner, Chair
Open Space and Recreation Committee
Dedham, MA

Dear Stephanie:

The Town of Dedham Conservation Commission has reviewed the 2019 Open Space and Recreation Plan update prepared by the Open Space and Recreation Committee and the consulting firm of Horsley Witten Group.

The Conservation Commission agrees in general with the Open Space and Recreation Plan's goals and recommended actions. In addition, the Conservation Commission will work cooperatively with other Town Departments, Boards, Committees, and residents to help implement the Plan's recommendations. The Conservation Commission supports adoption and implementation of the the Open Space and Recreation Plan by the Town of Dedham.

On Behalf of the Conservation Commission,

A handwritten signature in black ink that reads "Elissa Brown".

Elissa Brown
Conservation Agent

John Gorham, Chair
Deb Harrison
Emily Walton
Chuck Kabat
Leigh Hafrey
Matt Simonson
Andrew Belden
Virginia LeClair, Environmental
Coordinator



TOWN OF DEDHAM

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SUSTAINABILITY ADVISORY COMMITTEE

September 10, 2019

Mrs. Stephanie Radner
Open Space and Recreation Committee, Chair
Town Hall
26 Bryant Street
Dedham, MA 02026

Dear Mrs. Radner,

The Sustainability Advisory Committee has reviewed the Open Space and Recreation Plan prepared by the Open Space and Recreation Committee and commends the committee on its continued foresight into the preservation of open space and natural resources in Dedham. As you know we are at a critical juncture in the climate crisis and municipalities are on the forefront with the opportunity to help communities adapt and become more resilient. The preservation of open space is an important element combating climate change. The world's leading climate scientists have warned there is an increasingly short window for global warming to be kept to a maximum of 1.5oC , beyond which even 0.5oC will significantly worsen the climate crisis and increase the risk of drought, floods, extreme heat, and poverty for hundreds of millions of people.

The Sustainability Advisory Committee looks forward to working with the Open Space Committee and other town departments, boards, committees, and residents to help implement the Plan's recommendations. Thank you for all your work to preserve and protect Dedham's open spaces.

Sincerely,

A handwritten signature in cursive script that reads "John Gorham".

John Gorham
Chair, Sustainability Advisory Committee

TOWN OF DEDHAM

Parks & Recreation Department

Jonathan Briggs
Commission Chair

Tye Donahue
Commission Vice Chair

Lisa Moran
Commission Secretary

James Maher
Commissioner

Chuck Dello Iacono
Commissioner



Robert Stanley
Department Director

Debra Anderson
Department Program Director

Tracey White
Department Administrative Assistant

September 28, 2019

Dear Ms. Radner,

I have had the personal pleasure, along with the other members of the Parks & Recreation Commission, to review this new Open Space and Recreation Plan. We are grateful for the insight which this plan provides, specifically as it pertains to our programming and facility needs. We understand that this was a well vetted, inclusive process and believe that the recommendations put forward will have a positive impact on the community it serves.

The Parks and Recreation Commission looks forward to working with all other Town entities and its residents to enact the strategies and goals of this plan. We are grateful to live in a Town that takes such care to preserve its natural surroundings. Therefore, the Parks and Recreation Commission is proud to support the adoption and implementation of this Open Space and Recreation Plan by the Town of Dedham.

Sincerely,

Jonathan J Briggs
Dedham Parks & Recreation Commission – Chairperson
269 Common Street
Dedham, MA 02026

August 22, 2019

Stephanie Radner, Chair
Open Space and Recreation Committee
Dedham, MA

Dear Stephanie,

Oakdale Square Alliance has reviewed the 2019 Open Space and Recreation Plan update prepared by the Open Space and Recreation Committee and the consulting firm of Horsley Witten Group.

The leadership team of Oakdale Square Alliance neighborhood group agrees in general with the Open Space and Recreation Plan's goals and recommended actions. In addition, we will work cooperatively with other Town Departments, Boards, Committees, and residents to help implement the Plan's recommendations. We fully support the adoption and implementation of the Open Space and Recreation Plan by the Town of Dedham.

Congratulations and thank you on a job well done. The final report is thorough and well thought out. We appreciate all the time and effort that went into this document.

Sincerely,

Oakdale Square Alliance
Martha Zeolla
Paul Zeolla
Rich Campagna
Joan Campagna
Paul Reynolds
Cara Crisafulli
Chris Ryan

10B. Comments from Municipal Review Period

Comments from Andrew Tittler, Conservation Commissioner (received April 2, 2019)

In 4.C.2 you don't distinguish between great ponds and other ponds. You reference private ownership, but the rights of public access are quite different. It is probably worth distinguishing those ponds designated as Great Ponds under state law.

OSRC response: The following text was added.

In Massachusetts, any pond or lake that contains more than 10 acres in its natural state is defined as a great pond. Wigwam Pond is the only great pond in Dedham. Chapter 91 of the Massachusetts General Laws, the Public Waterfront Act, protects waterways – including great ponds - for public use. The law dates back to 1866, but the ideas it represents go back to Colonial times. Efforts to provide public access to Wigwam Pond may benefit from the requirements of the Public Waterfront Act. MassDEP administers and enforces Chapter 91 to:

- *Protect and promote the public's interest in waterways;*
 - *Protect the public health, safety and general welfare as it may be affected by any project near great ponds;*
 - *Ensure that public rights to fish, fowl and navigate are not unreasonably restricted and that unsafe or hazardous structures are repaired or removed;*
 - *To protect the legal rights of adjacent water property owners to approach their land from the water;*
 - *Support public and private efforts to revitalize unproductive property along urban waterfronts, in a manner that promotes public use and enjoyment of the water.*
- [www.mass.gov/guides/waterways-permitting-frequently-asked-questions]

In 4.C.5 and then again later on you refer to the U.S. Army Corps of Engineers lands in Cutler Park as being owned by the Corps, or "under the jurisdiction of" the Corps, which is not quite the same thing (there are at least three types of jurisdiction, and the differences can matter, mostly for law enforcement purposes, which isn't really relevant). I was under the impression that these lands were subject to flowage easements only. not owned in fee. I'm not sure how much it matters. In any case the interest is owned by the United States, not the Army Corps, the Corps merely administers it.

OSRC response: According to the Town's GIS system and some research on the registry of deeds, there is a great deal of land owned by the United States of America. I do understand there is a difference between ownership and jurisdiction, and that there are different types of jurisdiction, but I don't think that level of detail (or level of accuracy?) is necessary for this document. In other words, I think I refer to land as being "federally owned" and "under jurisdiction of the Army Corps."

Under 4.G.7 you haven't brought the description of our local regulation up to date, since we have now adopted regs under the Bylaw. You do mention them under 7.

OSRC response: Text was updated accordingly in response to this comment and with input from the Conservation Agent.

You state that the Fowl Meadow aquifers are used for our drinking water supply, but all the wells listed are over by the Charles. Seems inconsistent.

OSRC response: The DWWD wells in Fowl Meadow are in Westwood, not Dedham.

The paragraph introducing the Rail Trail ends in a sentence fragment.

OSRC response: This has been corrected.

Many of the tasks set for the CC seem outside our usual activities. As a group we have been focused on the permitting side, not on the various other things that a conservation commission can do, but many of those things require time commitment beyond the meetings and evening time to prepare for them.

OSRC response: Assigning responsibility is new in this plan. That's one piece of the project that I didn't actually do myself, so I'll review the list. If there are specific items you think should be changed, please let me know.

Overall, I found the plan very informative and well written, with some wonderful objectives and thoughts. My only critique is that it seems to be repetitive in places, with background information about certain resources repeated in many places. That may be an unavoidable consequence of the format, and is not by any means fatal.

OSRC response: Regarding repetitive information, there have been edits to improve this issue. There are still some areas where a professional document writer could make improvements; however, but we are a volunteer Committee and we have limited resources for this level of proofreading.

Comments from Elissa Brown, Conservation Agent (received April 10, 2019)

Section 2A: Indicate that some permits for the 2014 Manor Fields project have lapsed.

OSRC response: added "although some permits have lapsed"

Figure 3.1: Neighborhood map - where does that leave all the residents of Jefferson Station and the other complex? Are they included in Oakdale?

OSRC response: Yes, they are included in Oakdale. This map is now Figure 3.2 in the final version of the OSRP. It was updated to reflect current census data after a comment from Jessica Porter a member of the Planning Board.

Section 3D.2: Add information about MS4.

OSRC response: Text updated as recommended by Agent Brown.

Section 4A.1: Geology – there are rocky outcrops in West Dedham

OSRC response: Text updated as recommended by Agent Brown.

Section 4C: Separate Blue Cities/Neponset Greenway into its own paragraph

OSRC response: Text updated as recommended by Agent Brown.

Section 4C.2: It might be worth mentioning the water quality testing in Mother Brook and recent issues, likely related to the presence of the Transfer Station.

OSRC response: Text updated as recommended by Agent Brown.

Section 4C.5: Wetlands – add comment about the Commission having the discretion to allow certain work, such as when a landowner has no alternative access to upland areas, to proceed although work may not meet the performance standards.

OSRC response: Text updated as recommended by Agent Brown.

Section 4D.3: Public Shade Trees – do we have a tree board? or a tree care ordinance? or a tree

budget of \$2 per capita?

OSRC response: Joe Flanagan is Tree Warden and he works closely with tree professionals. The Town does have a tree care ordinance and a tree budget of \$2 per capita. I made edits to Sections 4D.3 (Public Shade Trees), 4G.10 (Protecting and Managing Forests) and 7A.5 (Urban Forestry and Tree Health) to correct minor errors and reduce redundancy.

Section 4G.1: Hazardous Waste Sites – rail line in Dedham went through an environmental cleanup prior to ownership being transferred to the Town.

OSRC response: Text updated as recommended by Agent Brown.

Section 4G.2: Landfills – has there been any testing of leachate? or air sampling?

OSRC response: Uncertain, this should be added as an action item.

Section 4G.3: Erosion – recommended minor changes to text to describe the role of the Conservation Commission related to construction projects and to highlight the problem with erosion along the banks of the Town’s water bodies.

OSRC response: Text updated as recommended.

Section 4G.4: Chronic Flooding – add “when a threat to public health or safety exists.”

OSRC response: Text updated as recommended.

Section 4G.5: Sedimentation – recommended minor changes to text to clarify challenges related to sedimentation.

OSRC response: Text updated as recommended.

Section 4G.7: Ground and Surface Water Pollution – add dates for MS4 and describe changes to town regulations.

OSRC response: Text updated as recommended.

Section 4G.8: Impaired Water Bodies – mention Total Phosphorus and pathogens for the Charles, pathogens for Rock Meadow Brook, and fecal coliform for the Neponset.

OSRC response: Text updated as recommended.

Section 4G.10: Protecting and Managing Forests – specify “publicly-owned trees”

OSRC response: Text updated as recommended. See comment for Section 4D.3.

Table 5.2: Chapter 61, 61A, and 61B Land – should 65-01 be included?

OSRC response: According to the 2018 Assessor database, this parcel is no longer chapter 61B.

Section 5A.6 Private Recreation Land – The Dedham Country Polo Club no longer allows ice skating on the pond.

OSRC response: Text updated as recommended.

Section 5A.9 Other Resources – comment regarding the terms *Developable*, *Undevelopable*, and *Potentially Developable* in the Town GIS system: the origin of these terms and exact criteria are not known.

OSRC response: Will leave text as it is because sorting this out is beyond the scope of our

research.

Section 5B.1 – Public Conservation and Recreation Resources ... regarding Town Landfill – are there state requirements to cap the landfill?

OSRC response: It will need to be evaluated and either hazardous material will need to be removed or site will need either capped or hazardous material Yes, if it will definitely if it will be used for another purpose but

Section 5B.1 – comment regarding Rail Trail – “It would be great to note here that the path has been capped precluding the possibility of human exposure. Ginny/Ken knows details.” ... **The Town Meeting article that authorized purchase required a satisfactory 21E report. Some cleanup was done, and money exchanged hands between the Town and the MBTA (another special Town Meeting happened to accept the check). A conditions of purchase was basically that we never break ground. Friends of the Dedham Heritage Rail Trail requested documents from the state about Avery School and it seems that the town did not adhere to this condition. Also, developing the Rail Trail for school transportation was a condition of State approval to build the Avery School; also ignored by the Town.**

Section 7A.1 Open Space – comments regarding Conservation Restrictions ... I added the recommendation that property owners protect the undeveloped space with Conservation Restrictions.

Section 7A.1 Open Space –we could recommend the conservation restrictions be required to be open to the public with access and signed by the Secretary of EOEA making them in perpetuity – **I’m not sure how this would work; will present to Jessica Porter for consideration with Master Plan. I’d like to see a review of CRs and Chapter 61 as part of that process. I’m not going to make any changes to this OSRP.**

Section 7A.2 Water Quality - departments (Engineering, DPW, Environment, and Parks and Rec) - fixed

Section 7A.4 – Sustainability ... We received Certification on 4/9/19! ... added this.

Section 7C.1: Staffing ... added part-time (2x)

Goal R-1 - can you mention improved maintenance to protect and increase usage at existing fields? I Two of the objectives cover this idea, and several of the action items address maintenance, sustainability, etc..

- R-1.3: Develop and implement a high standard of quality for all recreation areas. Adopt “Fix it First” and “Every Field a Park” policies.
- R-1.6: Invest in upgrades to Dedham's parks. Implement the “Every Field a Park” policy and determine how to define and implement full and equitable access.

Vernal Pools – added OSRC

Monitor wildlife – changed to ENV, OSRC

NR-1.4.1 Encourage residents and businesses to regularly monitor and clean up litter on their properties. Provide information on the Town website about how to report 'nuisance' property as described in Article 16, approved by Fall 2018 Annual Town Meeting. ... who?? – building department, I think but we should follow up with BOS.

NR-1.5.3 dropcountr ... add ENV (kept CC, but put ENV first)

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The following sources were used to compile the information contained in the invasive species photo gallery (Figure 4G.10). Photo credits are listed below.

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Somers, Paul; Kramer, Rachel; Lombard, Karen; and Brumback, Bill. *A Guide to INVASIVE PLANTS in Massachusetts*, 2nd Edition. Massachusetts Division of Fisheries & Wildlife. 2008.

Invasive Gallery Photography credits:

© 2019 Donald Cameron (gobotany.nativeplanttrust.org): Asiatic bittersweet 1; Norway maple 1; Eurasian/variable water milfoil 1, 2, 3, 4.

© Salicicola.com (Alexey Zinovjev and Irina Kadis): Asiatic bittersweet 2, 4; autumn olive 1, 2, 3; European buckthorn 2; glossy buckthorn 1, 3; honeysuckle 4; Japanese barberry 2, 3; lesser celandine 2, 3; mile-a-minute 3, 4; multiflora rose 2, 4; Norway maple 3; tree-of-Heaven 3, 4.

© Christine Ryan: Lesser celandine 1.

© Sarah Radner: Tree-of-Heaven 1.

© Stephanie Radner: Asiatic bittersweet 3; Bishop's goutweed 1, 2, 3; black swallowwort 1, 2, 3; burning-bush 1, 2, 3, 4; European Buckthorn 1, 3; garlic mustard 1, 2, 3; glossy buckthorn 2; honeysuckle 1, 2, 3; Japanese barberry 1; Japanese knotweed 1, 2, 3; mile-a-minute 1, 2; multiflora rose 1, 3; Norway maple 2, 4; phragmites/common reed 1, 2, 3; purple loosestrife 1, 2; tree-of-Heaven 2; yellow iris 1, 2.